

Final Evaluation Report

Your Details	
Full Name	Le Thi Thu Ha
Project Title	Assessing the awareness and attitudes of local community toward wildlife conservation in Phong Dien Nature Reserve, Central Vietnam
Application ID	36484-1
Date of this Report	10th February, 2023

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Objective 1: Assessing the knowledge and skills on wildlife conservation of Phong Dien NR's staff.				To obtain this objective, we contacted the Phong Dien Nature Reserve management board to present the objectives and contents of our project, and to obtain their permission to carry out the interview with 15 staff working in the nature reserve according to the designed questionnaire
Objective 2: Assessing the awareness and attitude toward wildlife conservation of local communities in the buffer zone of Phong Dien NR.				This objective was carried out with the support of the staff of the Phong Dien Nature Reserve and local authorities in the buffer zone villages. Prior to conducting household interviews, the research team investigated the basic characteristics of the selected buffer zone villages to have an appropriate approach. The study surveyed 239 households in seven buffer zone villages in Phong Dien and A Luoi districts (Phong Xuan, Phong My, A Luoi town, Hong Kim, Trung Son, Hong Van, and Hong Thuy). After conducting household interviews, the results of this survey were analysed and processed to understand the community's perceptions of wildlife conservation in the buffer zone villages and to develop a plan for a public awareness campaign for the community as proposed in objective number three.
Objective 3: Implementing rising conservation activities, and education programs for local communities.				The results of a survey on the community's awareness of wildlife conservation have been analysed to develop a community awareness program tailored to the selected buffer zone villages. We have prepared pictures and posters related to endangered species that need

			<p>protection in the Phong Dien Nature Reserve and its buffer zones for propaganda activities. Training programs have been conducted in seven buffer zone villages with the support of local forest rangers and government authorities to raise awareness of the importance of conserving wild animals among the community.</p> <p>In addition, the research team collaborated with some primary schools in the conservation area to organise a drawing contest and integrate games with the theme of raising awareness of wildlife conservation to promote love for animals among young children, and it received positive responses from students.</p>
<p>Objective 4: Proposing appropriate recommendations for building community-based conservation for Phong Dien NR.</p>			<p>The research has identified some remaining issues and challenges for the future conservation of wildlife in the Phong Dien Nature Reserve, such as weaknesses in the staff's ability to recognise endangered species and rescue wildlife animals. The awareness and understanding of local inhabitants in buffer zone villages also remain limited. Hence, some proposals will be developed to better current conservation activities by enhancing the relationship and connection between the local community and the nature reserve's staff.</p>

2. Describe the three most important outcomes of your project.

a). The knowledge and skills on wildlife conservation of Phong Dien NR's staff

We conducted interviews with 15 officers, including civil servants, public employees, and contract workers, out of a total of 73 officers at Phong Dien NR to assess their knowledge and skills regarding wildlife conservation. The results are presented in Table 1.

Table 1. Characteristic of the interviewees in Phong Dien NR in 2022

Categories (n=15)	Socio-demographic characteristic	
	n	%
1. Gender		
- Men	14	93.3
- Women	1	6.7
2. Age group		
- From 18 to 35	7	47
- From 36 to 45	8	53
3. Ethnic minority		
- Kinh	10	66.7
- Paco	4	26.7
- Kotu	1	6.7
4. Education level		
- High school	3	20
- Vocational training education	2	13.3
- University	9	60
- Postgraduate	1	6.7
5. Experience in forestry and wildlife conservation		
- 1 to 5 years	8	53.3
- 6 to 10 years	2	13.3
- Over 10 years	5	33.3

Of the officers interviewed in the nature reserve, 93% were male, and 66.7% belonged to the Kinh ethnic group. Additionally, 30% of contract staff for forest management and protection were ethnic minorities residing in buffer zone communes. Over 60% of those surveyed had completed higher education. Most officers had worked in the nature reserve and wildlife conservation field for 1 to 5 years (53.3%), and about 33% of staff have more than 10 years of experience.

The results of the interview revealed that all the interviewed staff had received training courses to enhance their knowledge and skills related to wildlife conservation, such as identifying rare and endangered species, conducting surveys using photo traps, patrolling activities, monitoring illegal hunting, wildlife rescue, and community awareness raising. However, some interviewees mentioned that they had not been able to apply these skills in practice due to short and mainly theoretical training periods, and a lacking practical experience. Most interviewees expressed a desire for further training courses to improve their capacity in wildlife conservation (as shown in Fig. 1). About 80% of NR staff wanted to improve their ability to recognise endemic and rare species, and almost 70% of respondents wanted to participate in learning experiences focused on biodiversity conservation and rescuing animals from other national parks and sanctuaries.

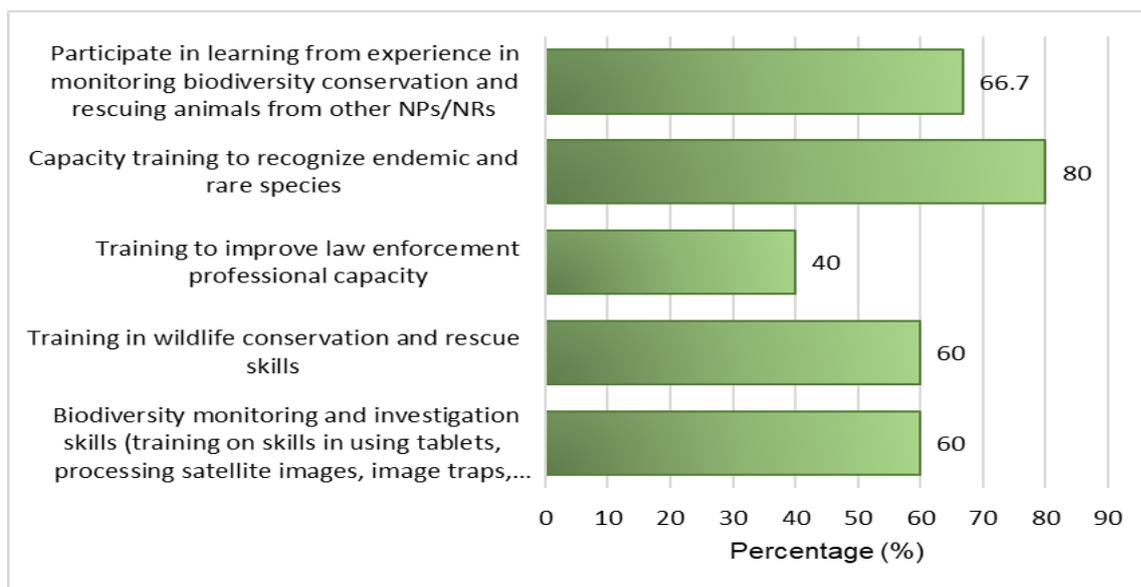


Fig. 1. Desire capacity-building activities in wildlife conservation

b). The awareness and attitude toward wildlife conservation of local communities in the buffer zone of Phong Dien NR

Household interviews were conducted in seven communes within the buffer zone of Phong Dien NR to assess the community's awareness and attitudes toward wildlife conservation. To conduct the interviews, we chose one village from each buffer zone commune. These villages include Ha Long village in Phong My commune, Vinh Phu village in Phong Xuan commune, in Phong Dien district, and Residential Group 1 in A Luoi town, Dut 2 village in Hong Kim commune, Adeeng Parleng 1 village in Trung Son commune, TaLo A Ho village in Hong Van commune, Tru Pi village in Hong Thuy commune, in A Luoi district. A total of 239 households were interviewed among seven buffer zone communes (Table 2) (Fig. 2).

Table 2. Characteristic of the interviewees in the buffer communes in 2022

District	Phong Dien		A Luoi				
Commune	Phong Xuan	Phong My	A Luoi town	Hong Kim	Trung Son	Hong Van	Hong Thuy
Village	Vinh Phu	Ha Long	Residential group 1	Dut 2	Adeeng Par Lieng 1	Talo A Ho	Tru Pi
Total household interviewees in each village	35	32	40	30	35	32	35
Total household interviewees	239						

The research team first learned about the socioeconomic and cultural context of the local communities, as well as the historical context and current state of wildlife populations and conservation efforts in the area as perceived by the locals, before delving into people's awareness and attitudes toward wildlife conservation. We also included inquiries to learn more about local wildlife-related activities. The results we found are only largely indicative because this is such a sensitive subject, many people do not admit to hunting or trading in animals. Over 80% of the locals in the buffer zone hunted fish and amphibians for food, while 63.7% of them hunted weasels, squirrels, and mice for sale. Approximately 17.6% of species of large animals are still hunted, and some are in danger of slowly going extinct (Fig. 3). The number of large animal species and certain uncommon wild creatures in the region, including deer, monkeys, and some bird species, has allegedly gradually declined in comparison to 30 years ago, in the view of the residents.

Different communities within the NR's buffer zone had different answers when asked how much they understood and knew about the importance of conserving wildlife. More than 60% of the population in Ha Long, Phong My, and Dut 2, Hong Kim, on the other hand, had a good understanding of wildlife conservation, compared to the majority of people in the other communities, who either had only average knowledge or none at all (Fig. 4). Noticeably, in Tru Pi hamlet, Hong Thuy commune, more than 80% of the locals either comprehended the value of wildlife protection on a normal level or not at all. (Fig. 4). Because there is no conservation training had been conducted in this area; instead, Phong Dien Nature Reserve only sometimes coordinated mobile communication activities on wildlife protection. Therefore, the need to safeguard wild creatures is still not well understood by the general public. Although several conservation consciousness-raising programmes have been established in the past in various buffer zone communes to increase public understanding, these programmes have not been as successful as they could have been. This is because of a variety of reasons, such as local inhabitants seeing no benefit from wildlife conservation, and they refused to participate. Additionally, some individuals may be aware that hunting wild animals is illegal, but due to their difficult economic circumstances, they may feel compelled to continue doing so as a means of survival.

We used pictures of some rare and endangered animals in the Nature Reserve to ask local people about their ability to identify them and whether they knew that these species are rare and endangered animals to determine the community's understanding of the wildlife species in the Nature Reserve. The results showed that only the Chinese pangolin (*Manis pentadactyla*), king cobra (*Ophiophagus hannah*), and Indian rock python (*Python molurus*) were recognisable by more than 60% of respondents (Fig. 5). However, they were unaware that these species were endangered and instead mentioned their potential high value if caught and sold. The ability to recognise and differentiate between remaining species is limited among the population (Fig. 4), and there is a lack of awareness and understanding regarding the concept of endangered and rare species. As a result, conducting this survey is a crucial step in laying the groundwork for designing effective awareness campaigns aimed at educating people on this important issue.

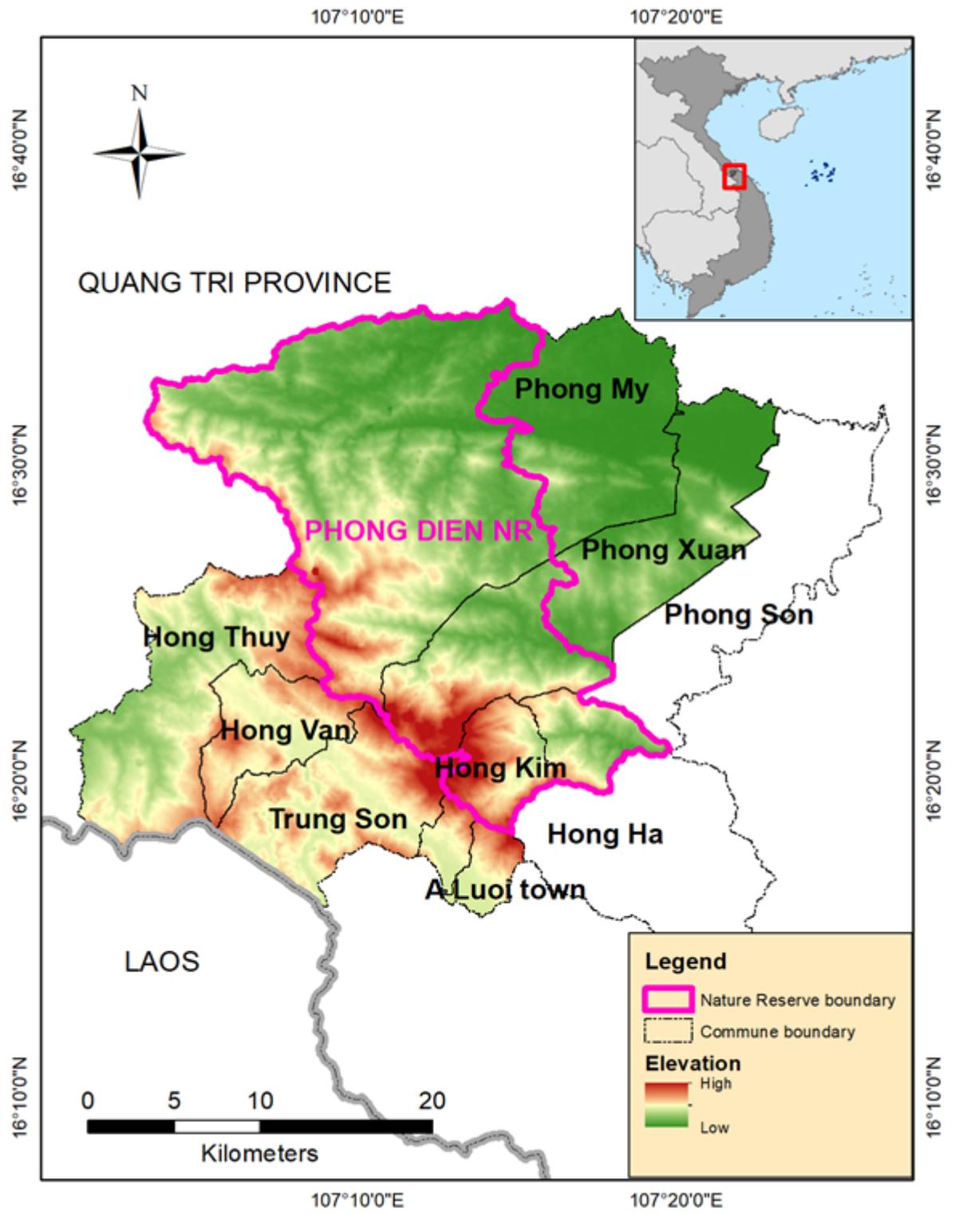


Fig. 2. Map of the study sites

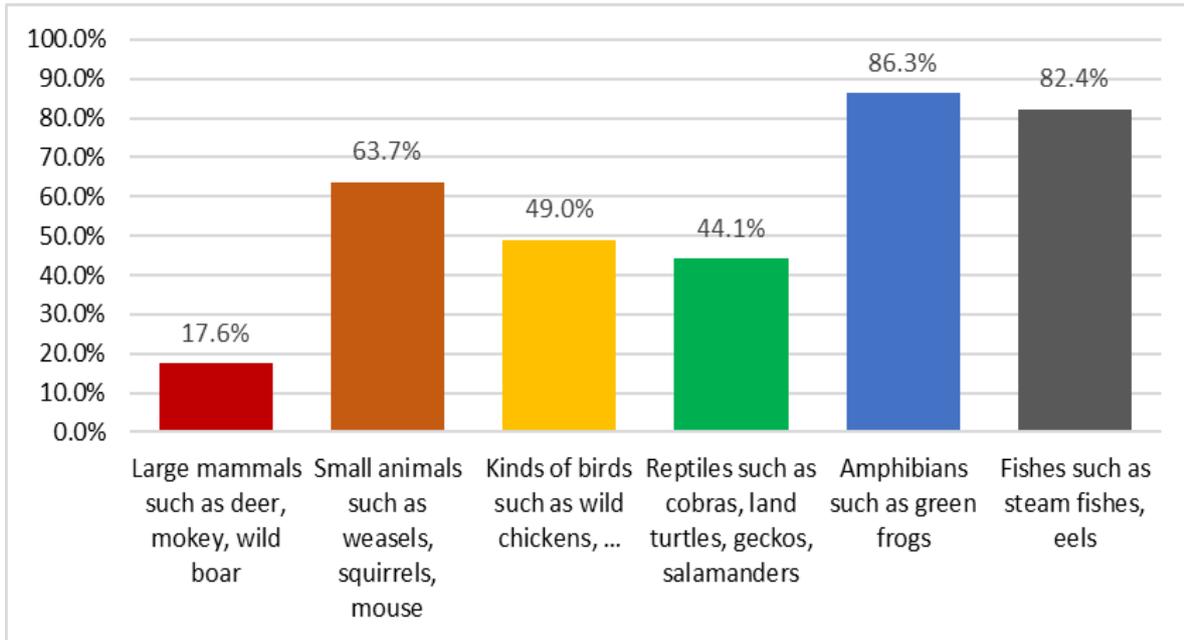


Fig. 3. Wild animals are frequently the target of hunting (N=239)

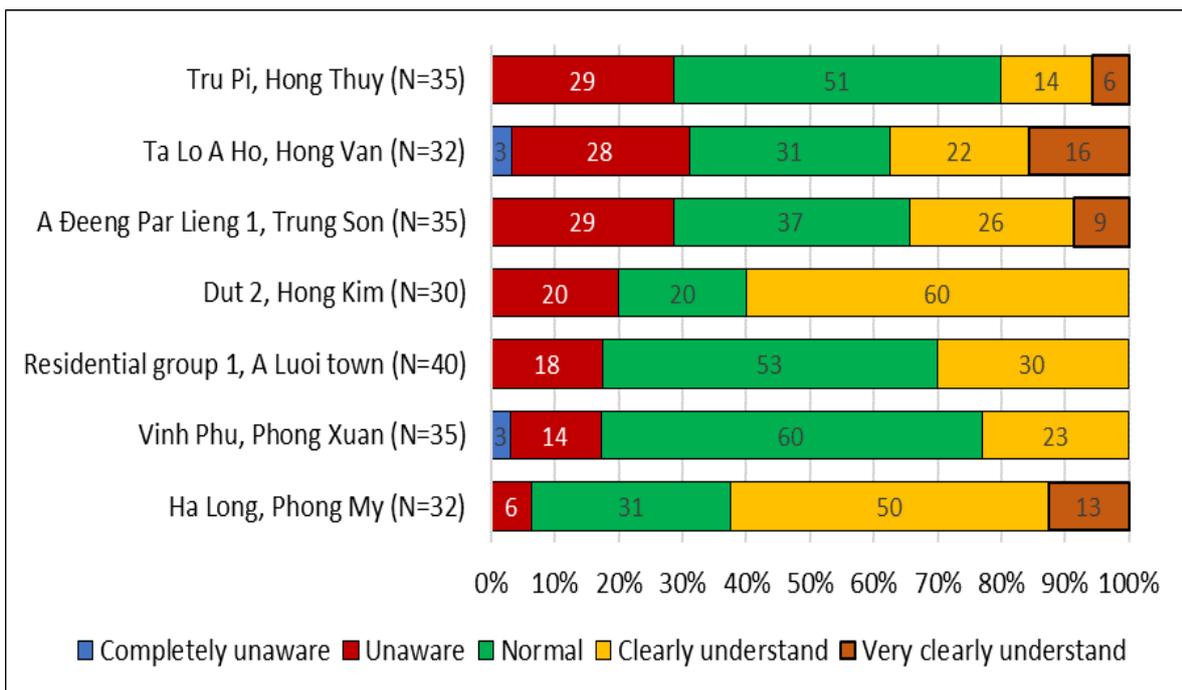


Fig. 4. Local people's understanding and knowledge of wildlife conservation

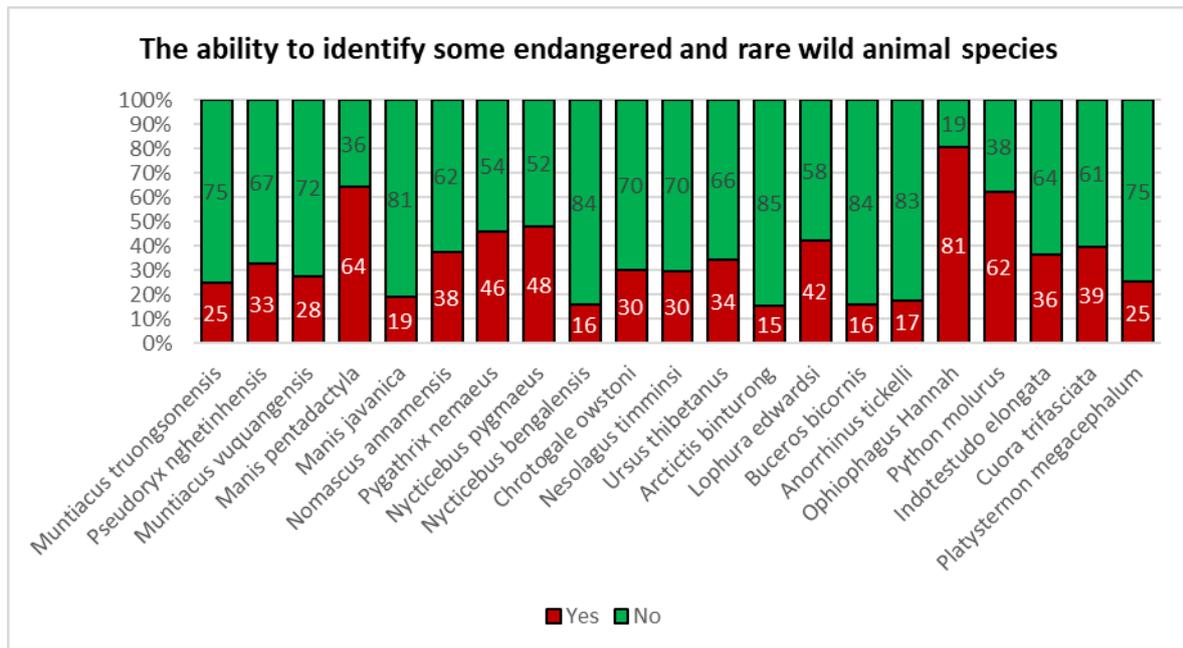


Fig. 5. The ability to identify some endangered and rare wild animal species.

c). Carrying out awareness-raising activities and educational programs on conservation for local communities.

We have partnered with the Phong Dien Nature Reserve to conduct awareness-raising activities among communities in the buffer zone. We identified issues and gaps in people's understanding of the importance of wildlife conservation after analysing the results from the household survey. As a result, we prepared appropriate content to carry out community awareness-raising activities in seven villages of seven communes in the buffer zone, which were chosen similarly to household interviews.

In addition, we coordinated with forest rangers of the NR to integrate and propagate the contents of the state's laws on banning the illegal hunting of wild animals. Our awareness-raising activities included reintroducing the nature reserve's boundaries and reason for establishment, discussing the need to protect wildlife, identifying endangered species according to the IUCN Red List, and highlighting the key factors affecting wildlife conservation. We also integrated to introduce the current state laws on illegal wildlife hunting for locals. We organised a quiz game to test people's ability to identify endangered and rare wildlife species in the reserve. The participants were thrilled to take part in this mini game. We distributed hats and shirts with the Rufford Foundation logo and the slogan "Together to protect wildlife in Phong Dien Nature Reserve" to 100 participants and officials involved in our awareness-raising activities. We also provided the communities with documents and posters depicting rare and endangered species in the nature reserve, along with information on state laws that prohibit hunting and associated penalties. Participants appreciated the visual aids and found them helpful in retaining information for future reference.

Besides raising awareness programs for local communities, we organised a drawing contest with the theme "Together to protect wildlife" and incorporated a quiz game

about the wild animals in the Phong Dien Nature Reserve during the event to educate and foster a love of wildlife among the students. The programme was held at four schools, namely Phong Xuan primary school, Hoa My primary school, Trung Son primary school, and Hong Van primary school. A total of 48 students from different primary schools participated in the drawing contest, and more than 50 students joined the mini game while the judges were scoring the competition pictures.



Left: Raising-awareness activities in Vinh Phu village, Phong Xuan commune. Right: Drawing contest in Hoa My primary school.

d). Proposing appropriate recommendations for building community-based conservation for Phong Dien NR

Our recommendation for building community-based conservation for Phong Dien NR is based on actual survey results from household surveys and discussions with Phong Dien NR staff. Over 84% of respondents identified awareness-raising as a necessary solution. Continuous education programmes can help local communities understand the importance of conservation and their role in protecting natural resources. Improving local livelihoods through eco-tourism and sustainable NTFP exploitation was also seen as beneficial by 43% of respondents. Additionally, more than 40% of respondents suggested strengthening law enforcement to prevent illegal hunting and trading. There are a lot of further alternatives as well, such as getting people to stop eating bushmeat and consider how their descendants will no longer be able to witness wild animals in the wild.

Establishing trust and solid relationships with regional communities is crucial for the development of community-based conservation efforts. This can be done by including people in the decision-making process, honouring their cultural practices and traditional knowledge, especially those of ethnic minorities, and acknowledging their rights to natural resources. It is necessary to help communities identify new alternatives for livelihood development, such as ecotourism development potential and sustainable exploitation of NTFPs, to motivate people to join in conservation initiatives.

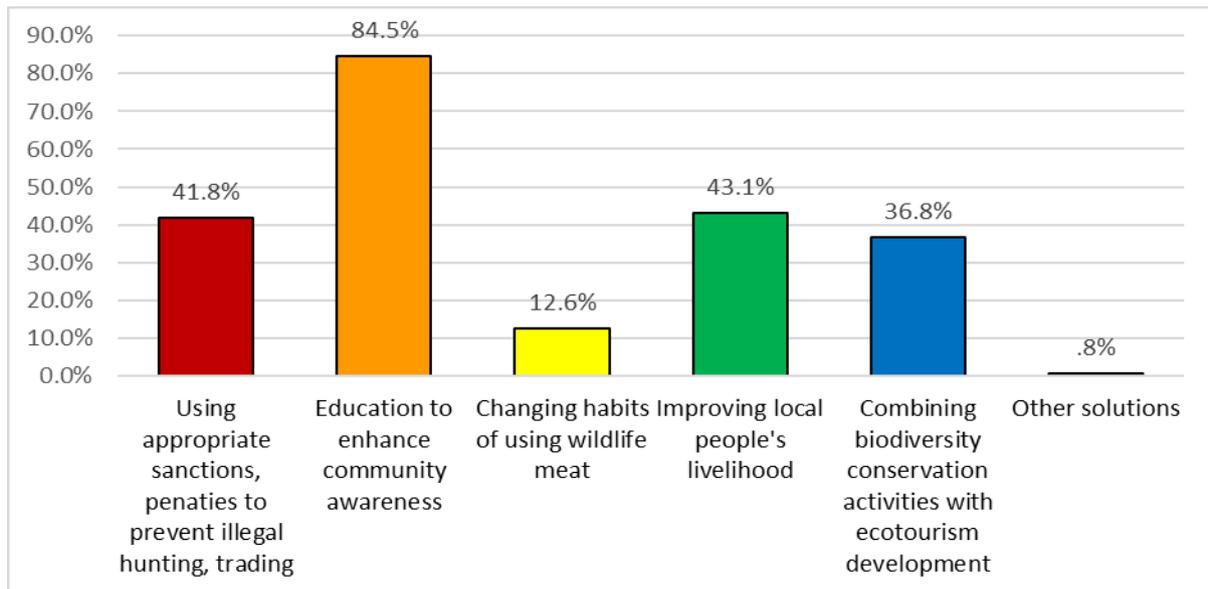


Fig. 6. Prioritized solutions for conserving endangered and rare wildlife.

The two most significant accomplishments of the project, according to a re-evaluation of its activities, were the organisation of community education programmes in seven villages inside seven buffer zone communes and the primary school drawing contest. Because it has had a positive impact in encouraging both adults and children to participate in wildlife conservation activities, particularly those adults from poor ethnic minorities with limited education. Their views toward wildlife may be improved, and they are more likely to take part in conservation initiatives and report illegal activity to the managers of the nature reserve. A solid relationship between the project team, the nature reserve employees, and the local community was also formed through the programme, which will make it easier to organise future conservation initiatives.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

The Covid-19 pandemic has presented some anticipated challenges that could impede the achievement of the project goals in conducting household interviews, organising awareness campaigns, and arranging drawing contests in primary schools. In fact, the research team has faced some obstacles, such as the reluctance of some households to participate in the project activities and local people being hesitant to gather in large numbers due to health concerns. These factors have impacted the number of interviews conducted, affecting the sample size. To mitigate these challenges, the research team has taken precautions to ensure the safety of the participants by arranging socially distanced meetings, providing masks and hand sanitisers, and seeking the assistance of the village chief and local forest rangers to encourage participation from the community. Additionally, we conducted public awareness activities and hoped for high participation. To that end, we asked help from the village chief to call for everyone to assemble at their community house, but in some villages, such as A Luoi Town, the attendance was not as anticipated. It could be because the activity was held during the day when people were occupied with work. Organising activities at night

in mountainous communes is challenging for the project team, but we will consider this for future events to encourage more citizen participation.

Initially, the project was planned to be implemented in 10 communes adjacent to Phong Dien Nature Reserve, but after working closely with the staff of the nature reserve, it was discovered that two communes had merged and the remaining communes had boundaries within the nature reserve, including Phong Son, Hong Ha, and Binh Dien, but were not recognised as buffer zone communes because no nearby communities were living there. Consequently, the project was executed in seven buffer zone communes, which were contiguous to Phong Dien Nature Reserve.

However, most of the households interviewed were ethnic minorities who spoke a different language than Vietnamese, leading to communication difficulties during the interview process. As a result, local interpreters were enlisted to assist with communication, making the interview process longer. Furthermore, since the interviewees were frequently working far from their homes, it was challenging to find respondents who met the sampling criteria.

4. Describe the involvement of local communities and how they have benefitted from the project.

The participation of local residents plays a crucial role in the success of this project. The buffer zone villages selected for the study are predominantly inhabited by impoverished ethnic minorities with low levels of education. Raising their awareness of wildlife conservation is a significant challenge because their livelihoods are closely tied to the natural forest, and wild animals are an important source of their daily income and food. To improve the awareness of the community in the buffer zone, it is essential to change the mindset of their leaders first. With the assistance of local forest rangers, we worked with village chiefs to understand the historical and cultural issues of the area and the current situation of hunting and trapping of wild animals, from which we explained and conveyed to them the relevant knowledge of wildlife conservation. With the support and assistance of the village chiefs, the project has been relatively successful in encouraging the participation of a large number of people in the buffer zone villages. The village chiefs will also help the research team to continue to disseminate and raise awareness of the conservation of endangered species for their communities in the future joint meetings, even after the project has ended.

5. Are there any plans to continue this work?

The results of the project showed that the staff of the nature reserve, especially those who work directly with local people in the buffer zone, have not been trained much in the skills related to wild animal conservation activities (such as wildlife rescue skills, identification skills of some rare and endemic species, biodiversity monitoring and investigation skills, etc.). Therefore, in the next stage, we plan to implement a capacity-building programme for the staff in the nature reserve, along with continuing to collaborate with the Phong Dien Nature Reserve to organise more meaningful activities related to wildlife conservation to encourage the participation

of the local community. Maintaining the regularity of these activities is very important in evaluating the effectiveness of community awareness-raising activities in the future.

6. How do you plan to share the results of your work with others?

Le Thi Thu Ha, the principal investigator, presented the project results at Phong Dien Nature Reserve, with the participation of the reserve's management board director and staff. The aim was to identify the strengths and challenges of wildlife conservation efforts in the reserve and its buffer zone communities. Based on this, appropriate conservation strategies and plans for the future were proposed.

Additionally, the results of this research will serve as practical study materials for students of Faculty of Forestry, Hue University of Agriculture and Forestry on the issue of wildlife conservation at locally.

The household survey findings will be analysed and used to prepare a manuscript to be submitted to a scientific journal on the topic of local awareness of wildlife conservation.

7. Looking ahead, what do you feel are the important next steps?

As a result of limited financial resources, our project has only been able to target a select few buffer zone communities located close to the Phong Dien Nature Reserve. If possible, it would be advisable to continue raising awareness among the other villages in the buffer zone, encompassing both the local population and school children. It is important to recognize that building a strong sense of wildlife conservation within the community is a long-term endeavour that necessitates consistent and ongoing efforts to alter behaviours and attitudes. Therefore, it is vital to conduct community awareness programmes consistently and frequently.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, we used the logo of the Rufford Foundation throughout the project, including in all project activities. Before collaborating with the Phong Dien Nature Reserve Management Board, we shared information about the project's objectives and utilised the Rufford logo. Our project materials, such as posters, uniforms, and local awareness training content related to wildlife conservation, also prominently featured the Rufford logo. Additionally, we plan to acknowledge The Rufford Foundation in our forthcoming scientific article.

9. Provide a full list of all the members of your team and their role in the project.

Mrs. Le Thi Thu Ha (Principal investigator): Ms. Ha was actively involved in all aspects of the project, including planning, liaising with local authorities, conducting interviews and field surveys, providing awareness training for local residents, organizing drawing contests for primary school children, analysing data, and preparing reports, and doing presentations.

Mr. Ho Dang Nguyen (team member): Mr. Nguyen supported Mrs. Ha in preparing the content of raising local awareness and household interviews and conducting household surveys.

Mr. Le Thai Hung (team member): Mr. Hung played a supportive role in the project by assisting the team in contacting the Phong Dien Nature Reserve staff and conducting both staff and household interviews.

Mrs. Vu Thi Thuy Trang (team member): Mrs. Trang provided valuable support to Mrs. Ha in various project activities, including planning, conducting interviews, raising awareness among local communities, and organizing drawing contests.

Mr. Duong Dinh Sang (additional member): Mr. Sang assisted the team in obtaining permission from local authorities and village leaders for the project's implementation. He also provided support during local awareness-raising activities.

Mr. Tran Hong Thang (additional member): Mr. Thang assisted the team during local awareness-raising activities and drawing contest competition for children.

10. Any other comments?

We would like to express our gratitude to the Rufford Foundation for providing the funding that enabled this initiative. Below are some additional project images that we would like to share.



Left: Poster for awareness-raising activities at communes in the buffer zone. Right top: Background for a primary school drawing contest. Right bottom: Certificate of drawing contest for primary school student.



Contents of awareness-raising activities for locals.



Meeting with staff of Phong Dien Nature Reserve.



Interview with the staff of Phong Dien Nature.



Interview with local people in the buffer zone communes.





Raising-awareness activities in buffer zone.



Drawing contest at primary school.



Phong Dien Nature Reserve.