

This report will be made public. If it contains confidential or sensitive information, please also provide a revised report for sharing with the public.

Section I. Project Information

Project Title: Community-based conservation in Northeast China Tiger & Leopard National Park

Grantee Organisation: Wildlife Conservation Society (WCS)

Location of project: Northeast China Tiger and Leopard National Park (Figure 1).



Figure 1. Location of 6 villages with community patrol teams (Lihua, Hongqihe, Zhongtumenzi, Lanjia, Hulutougou, and Caomao) supported in NCTLNP in 2024 as part of this project.

<p>Size of project area (if appropriate):</p> <p>About 5,000 km²</p>	<p>No of tigers and / or Amur leopards in project area, giving evidence & source:</p> <p>Hunchun Nature Reserve: 45 Amur tigers and 30 leopards, based on our camera trap analysis of 2023.</p> <p>Dahuanggou: 9 Amur tigers and 4 leopards, based on our camera trap analysis of 2023.</p>
<p>Partners: <i>(Please give details of partners, including communities, academic institutions etc. for this project.)</i></p> <p>The Northeast China Tiger and Leopard National Park (NCTLNP) administration is our primary partner, especially the Hunchun Municipal Forestry Bureau. We've worked with them on a range of conservation efforts since Hunchun Reserve was created in 2002, and they are a trusted partner. For this project, we cooperated with them to carry out community patrol work and community education activities.</p>	
<p>Project Contact Name: <i>(main contact via email)</i></p> <p>Aimin Wang, Scott Waller, Jonathan Slaght</p>	
<p>Email:</p> <p>awang@wcs.org; swaller@wcs.org; jslaght@wcs.org</p>	
<p>Reporting period:</p> <p>March 1, 2024 - January 31, 2025</p>	

Please ensure that your report relates to the objectives and activities detailed in your proposal and logframe. Please include results data in Section II and Section III.

Section II. Project Results

Long Term Impact: *(How has this work contributed to the vision and long term impact that your project aims to achieve?)*

Our overall vision is to safeguard the global population of Amur tigers and leopards and recover viable populations of tigers and leopards in Northeast China. Community involvement is key to realizing that vision, as the acceptance or intolerance of these big cats by local people will determine whether these species recover and persist in Northeast China or are extirpated. Through this grant, we continued our model of community participation in conservation by supporting community patrol teams to carry out patrol and snare removal work, thereby protecting important habitat for tigers, leopards, and their prey in community-managed forests. This approach both reduces the

threats of snares near villages where past research has found them to be most common and also enhances local people's awareness of and support for conservation. In turn, these community rangers are able to lead further education efforts for their communities on the importance recovering and protecting wild populations of Amur tigers and leopards in the same forests where the communities live.

Conservation Outcome: *(What are the actual changes that this project has achieved?)*

Together with our team of collaborators, we continued to support community patrol teams in five local communities within NCTLNP to reduce the threat of snares to Amur tigers and leopards and increase local support for these species' conservation. We also extended the community patrol team model to one additional village: Hongqihe, in the southern part of the park (**Figure 1**). Over the past year, we further strengthened and improved community patrol work, removing 142 snares from the collective forests around the villages. This work helped provide a safer and healthier environment for tigers, leopards, and their prey, as well as for villagers. Through our public education campaigns, community residents acquired greater knowledge about the need to protect wildlife, as well as how to reduce chances of conflict with big cats and other wildlife.

With four years of continued success of our community patrol team program and engagement with our partners, NCTLNP park management, local government, and local communities together have decided to adopt our efforts as a model and implement this program in additional villages within NCTLNP. We are thrilled by this development and will play an advisory role to the national park as they begin to establish additional patrol teams throughout NCTLNP.

Summary of activities and achievements: *(Please provide a narrative summary for use in our communication materials Max 300 words)*

With the support of WildCats, WCS China, in cooperation with the Hunchun Municipal Forestry Bureau (HMFB), continued to support community patrol teams in the village of Lihua in Northeast China Tiger and Leopard National Park (NCTLNP) and extended the program to a new village, Hongqihe. From June to December 2024, the two teams conducted 136 daily patrols, covering 795 km across prime Amur tiger and leopard habitat. During these patrols, community teams removed 59 snares placed by poachers, which remain a key threat to the recovery of tigers, leopards, and their prey. WCS also provided advice to leaders of four other villages to continue community patrol work which was primarily supported by HMFB. From March to September 2024, these four teams conducted 324 daily patrols, covering 1,790 km. A total of 83 large snares were removed from the forest. We also conducted four public education campaigns, engaging ~300 members of local communities on topics such as the importance of coexistence with tigers and leopards and how to reduce and respond to human-tiger conflicts.

To assess our impact, we cooperated with HMFB to conduct two questionnaire surveys of villagers, comparing communities' conservation knowledge, attitude, and practice (KAP) before and after the start of community patrols. We found that all three indices of KAP in Hongqihe increased between March and September. We also compared survey data of Lihua in 2024 and 2023 (the first time the KAP survey was used). We found all scores in 2024 were slightly higher than that in 2023, though the

difference was not significant. We are pleased to report that these patrol teams have proven to be such a success that NCTLNP management has decided to adopt and implement this model in more villages throughout the national park. WCS will continue to play an advisory role to support these communities.

Details of activities and results: *(Please give detailed narrative of the results of each objective & output. Please include measures for example patrol numbers and distances covered, #people trained or #people attending meetings/workshops or refer to figures in your tables below)*

Objective 1: Promote community participation in wildlife conservation.

Activity 1.1. Identify two communities and establish community patrol teams.

In May 2024, WCS cooperated with HMFb to conduct a community survey of eight candidate villages in Amur tiger and leopard habitat that could successfully support a community patrol team. These villages were initially selected by HMFb based on various factors, including their location within and around NCTLNP and surrounding tiger and leopard habitat, the community profile, population composition, collective forest area size, and their willingness to participate in community patrol teams. Based on their survey results, Hongqihe village in Yangpao Township of Hunchun Administrative Region was selected (**Figure 1**). In addition to this new village, we continued to support the community patrol work in the village of Lihua (**Figure 1**), where we organized a community patrol team that started in 2022.

To identify potential members of the patrol team, the village committee posted an announcement and interested villagers signed up. The village committee conducted a preliminary screening of applicants and provided the list of proposed personnel for the patrol teams to HMFb. On July 17, WCS and the HMFb conducted a skills training and assessment for the potential community rangers (**Figure 2**). The training started indoors and focused on the use of GPS, how to fill in patrol record forms, and how to identify wildlife tracks. After the training, the trainees completed a written test. Outside, the professional rangers of HMFb led the team to conduct GPS field practice training, and at the end, the trainees were scored for GPS operation. After an evaluation, a final team of six people were selected in Hongqihe, including one woman, who is the first female community ranger since the establishment of the community patrol team program in 2021.

After the formation of the patrol teams, WCS distributed uniforms, field supplies, and safety equipment to the community rangers (**Figure 2**). This equipment ensures their safety in the field and helps instill a sense of pride in becoming a community ranger.



Figure 2. WCS and HMFB conducted patrol skill training and distributed uniforms, field supplies and safety equipment to the community rangers in the village of Hongqihe

Activity 1.2. Establish support teams.

After the establishment of the new community patrol team, we also organized a support team consisting of two staff from HMFB, two experienced patrol team members from the village of Lihua, and two new patrol team members of Hongqihe. In the early stages of the project, the support team provided further extensive training for the new community patrol team. During the patrol season, the support team was available to offer guidance via a shared WeChat group. In August and December 2024, the support team also participated in patrol inspections, enabling them to better connect with the new community patrol team.

Activity 1.3. Organize patrol teams to carry out daily patrol work.

In 2024, we continued to work with HMFB to support community teams in Lihua and Hongqihe to carry out daily patrols. We used the SMART patrol system to record and analyse patrol data. We divided the patrol area into a 0.5 X 0.5 km grid that would guide patrol efforts and set the basis for our patrol effort and result analyses. Each community patrol team was tasked with completing eight patrols per month. During the reporting period, patrol work was carried out as planned in each village’s respective jurisdiction.

From June to December 2024, the Lihua and Hongqihe community patrol teams conducted 136 patrols, covering a total of 796 km, averaging 5.9 km per patrol (**Table 1, Figure 3**), and removing a total of 59 snares. 88% of snares found were old (we distinguish between old and new snares based on the marks on the tree – the marks of an old snare in the tree are deep. Old snares are usually older than one year yet remain a threat to wildlife). The snare encounter rate was 7 snares/100 km (**Figure 4**). In Lihua, the snare encounter rate was greater at 18 snares/100 km, similar to the 17 snares/100 km encountered during last year (June – December 2023). Community rangers also recorded many wildlife signs (tracks and scats) and direct sightings (live animals) during their patrols. Among them, roe deer were recorded the most (68), followed by wild boar (27), sika deer (19), black bears (5), badgers (3), Amur tiger (1), and Amur leopard (1) (**Table 2**).

Beyond these two villages, Zhongtumenzi, Lanjia, Hulutougou, and Caomao villages (**Figure 1**) continued to carry out their community patrol work, supported by HMFB. During the reporting period, from March to September 2024, community patrol teams from these four villages conducted 324 patrols, covering 1,790 km and averaging 5.5 km per patrol, and spent 1,101 hours patrolling (**Table 1, Figure 3**). During their patrols, the community teams removed a total of 83 snares from the forest. The snare encounter rate was relatively low at 5 snares/100 km (**Figure 4**), and 98% of snares

were old. We are encouraged by this result: under the influence of the community patrol teams in these four villages, there appears to be almost no poachers setting new snares in their community-managed forests. Community rangers also recorded many wildlife signs and direct sightings during their patrols. Among them, roe deer were recorded the most (212), followed by wild boar (139), sika deer (29), badgers (17), Amur tigers (3), Amur leopards (3) and yellow-throated marten (1) (**Table 2**). We remind WildCats that these same villages had delays in their work in 2023 due to payment challenges within HMFB. Fortunately, these were resolved, HMFB re-signed agreements with the villages, and community patrol work resumed. We share the results of these patrols in 2023 below (“Monitoring and Evaluation”).

Table 1. Summary statistics for each community patrol team.

Lihua and Hongqihe, June to December 2024.					
Patrol team	Number of Patrols	Distance (km)	Hours	Animal obs.	Snares removed
Lihua	68	381	209	64	45
Hongqihe	68	414	247	60	14
Total	136	795	456	124	59
Zhongtumenzi, Lanjia, Hulutougou and Caomao, March to September 2024.					
Patrol team	Number of Patrols	Distance (km)	Hours	Animal obs.	Snares removed
Zhongtumenzi	79	428	255	52	48
Lanjia	88	501	344	17	6
Hulutougou	85	511	284	143	4
Caomao	72	350	219	192	25
Total	324	1790	1102	404	83

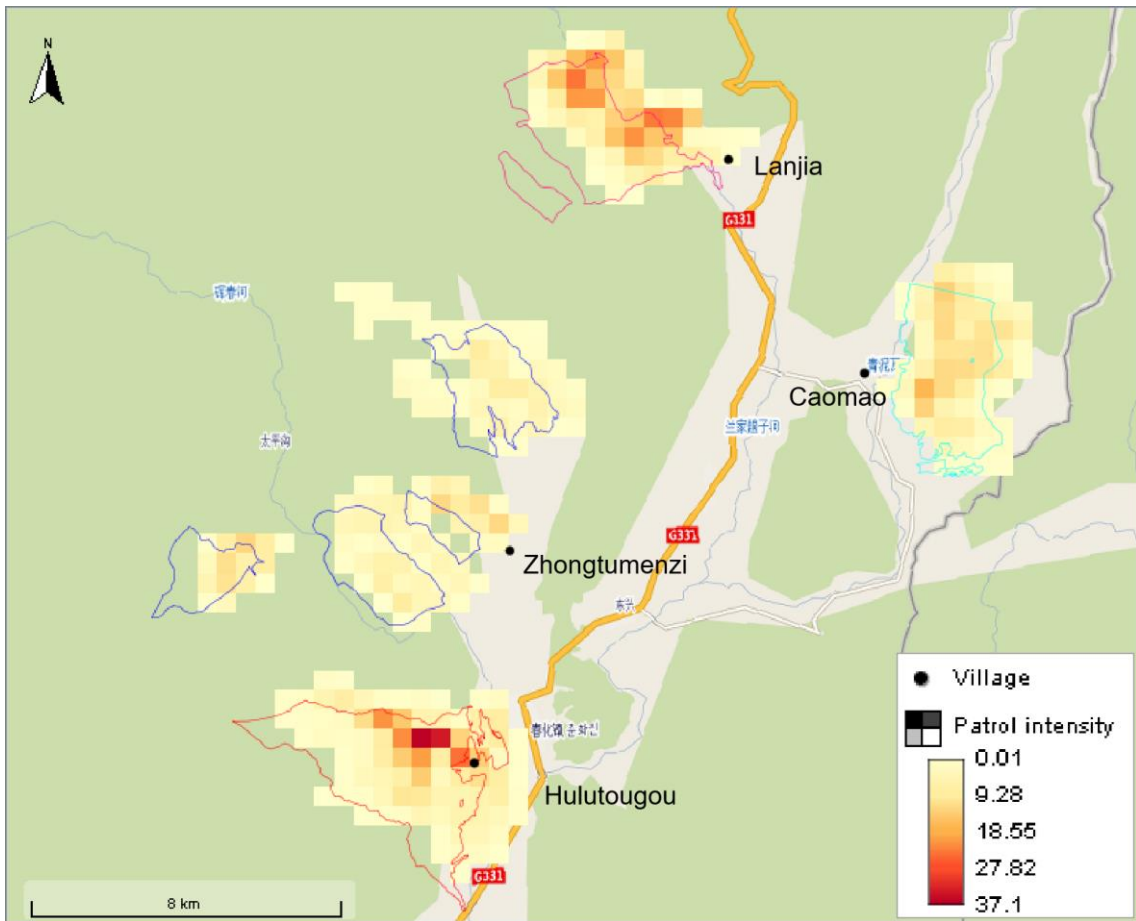
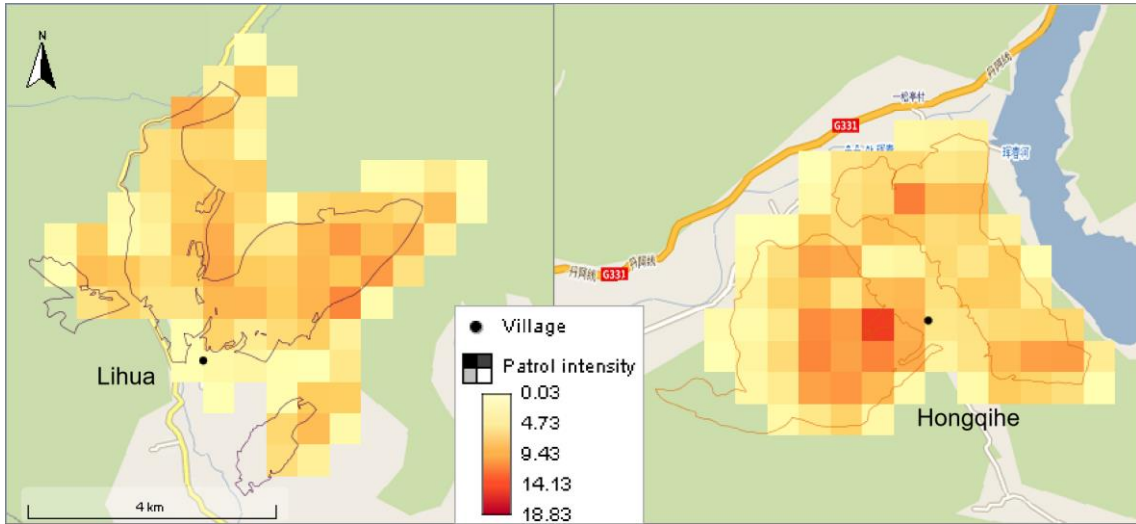


Figure 3. Patrol intensity (patrol distance) in six communities. Grid size: 500m.

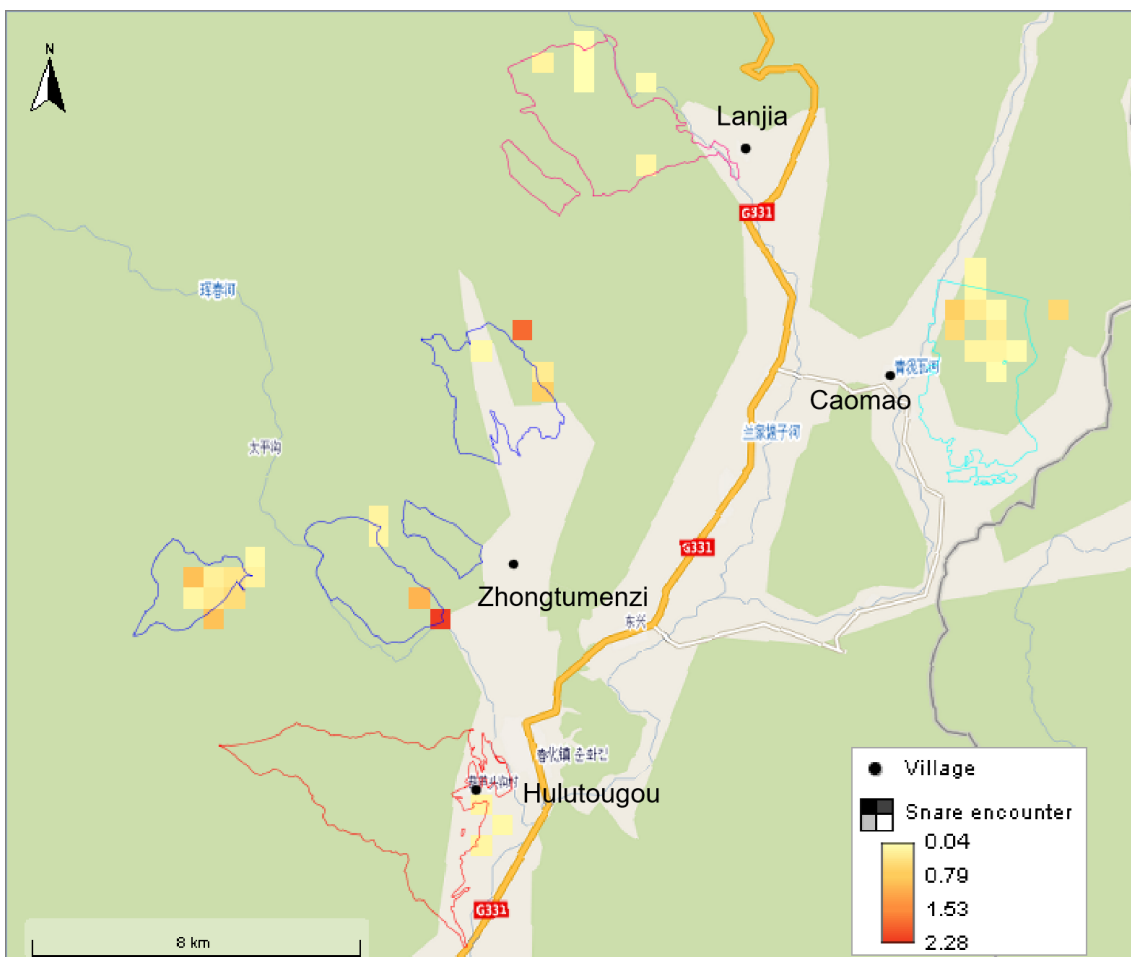
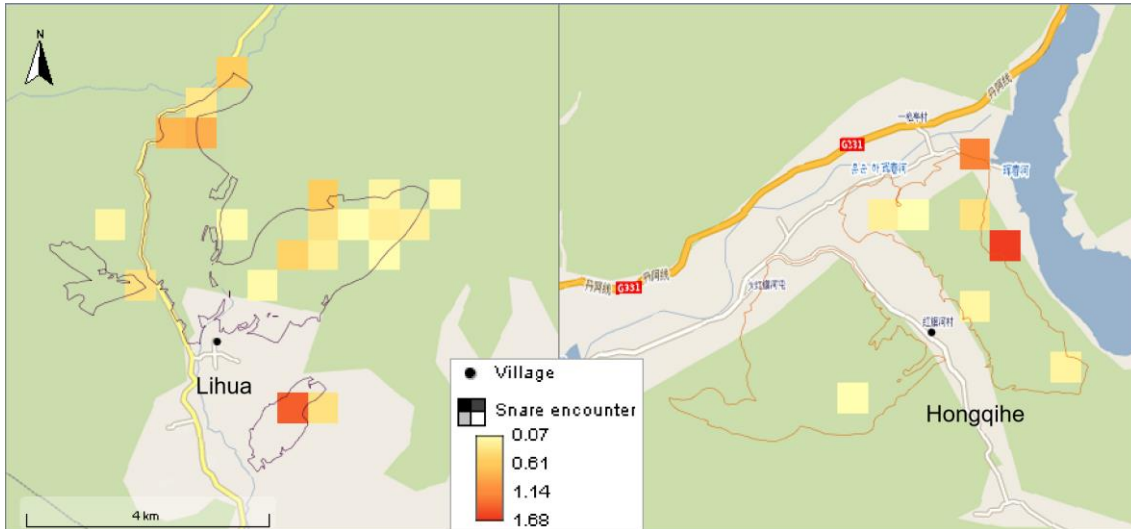


Figure 4. Frequency of snare removed (snare numbers) in six communities. Grid size: 500m.

Table 2. Summary statistics for animal observations of Lihua (Lh), Hongqihe (Hqh), Zhongtumenzi (Ztmz), Lanjia (Lj), Hulutougou (Hltg), and Caomao (Cm).

	Lh & Hqh, June to December 2024			Ztmz, Lj, Hltg & Cm, March to September 2024			
	Live	Sign	Total	Live	Sign	Carcass	Total
Tiger	0	1	1	0	3	0	3
Leopard	0	1	1	0	3	0	3
Wild boar	2	25	27	12	127	0	139
Sika deer	7	12	19	5	23	1	29
Roe deer	23	45	68	85	114	13	212
Black bear	1	4	5	0	0	0	0
Badger	1	2	3	2	14	1	17
yellow-throated marten	0	0	0	0	0	1	1
Total	34	90	124	104	284	16	404

In August and December 2024, WCS and HMFBS conducted inspections of patrol teams for each community patrol area, assessing the quality of work and helping improve the skills of community rangers (**Figure 5**). Since the team at Hongqihe village was new, the support team was divided into two groups, patrolling together with community rangers to check their GPS use and data collection, as well as their skills in finding and removing snares.



Figure 5. WCS and HMFBS carried out patrol work inspection in Hongqihe and Lihua Village.

Since 2021, WCS has cooperated with HMFBS to organize ten community patrol teams in NCTLNP. To commemorate the success of the patrol team program, on December 6, 2024, WCS worked with the Hunchun government and Hunchun Sub-Bureau of NCTLNP to hold the “2024 Joint Habitat Protection Special Action and the First Ranger Competition”. A total of 40 rangers from 10 community patrol teams participated in the competition to showcase their skills and abilities to safeguard Amur tiger and leopard habitat. Participants passed both a written test and a field

competition to demonstrate their skills. The leaders and managers from the NCTLNP Administration Bureau and its branches watched and learned, then praised the value of such a program.



Figure 6. 2024 Joint Habitat Protection Special Action and the First Ranger Competition.

Activity 1.4. Conduct public education campaigns.

In order to improve awareness of the importance of protecting wild Amur tigers and leopards, on July 28, NCTLNP and the Hunchun Administrative Region People's Government jointly held a series of publicity activities for Global Tiger Day. This activity was held in Xitumenzi village in the heart of the national park. More than 4,000 people from the Hunchun forestry department, forest public inspection law department, a local insurance company, wildlife protection organizations, villagers from various towns, students, and others participated in the day's activities. As one of the supporting organizations, WCS distributed leaflets, souvenirs, and books at the event about the importance of tiger and leopard conservation.

In December 2024, WCS and HMFB jointly carried out four additional community publicity and education activities in Hadamen and Jingxin Townships. These communities were recommended by HMFB because of reports of an increasing number of human-wildlife conflicts and a lack of conservation work there, leading to a more urgent need to engage the communities. The main messages of these campaigns include conservation knowledge, human-wildlife conflict prevention, and conservation efforts related to the park. This information was shared through speaking events, video presentations, and educational brochures (**Figure 7**).

To evaluate the impact of this educational effort, we surveyed villagers before and after the activities of the day. The contents of the questionnaire were the same, including questions leading to a final rank between 1 and 10 as an index of knowledge of the importance of tiger and leopard conservation. A total of 180 valid questionnaires were collected from the four villages. We used the Mann-Whitney test to determine the difference in the index before and after our education efforts, and the Kruskal–Wallis test for groups with more than two levels. We considered 0.05 as the significance threshold. The combined survey results showed that the scores after publicity (7.58 ± 1.58) were significantly higher ($p < 0.01$) than those before publicity (5.33 ± 1.84). When analyzed individually, the score of each village was higher after publicity as well (**Figure 8**). These results indicate that our education efforts have improved the public's awareness of wildlife conservation, at least in the short term. Interestingly, we found that scores significantly decreased with the increase of age ($p < 0.01$) and significantly increased with the increase in the person's level of education ($p < 0.01$). There was no significant difference in scores by gender ($p = 0.67$).



Figure 7. WCS and HMFB conducted community publicity and education activities and villagers filled in questionnaires of promotional content.

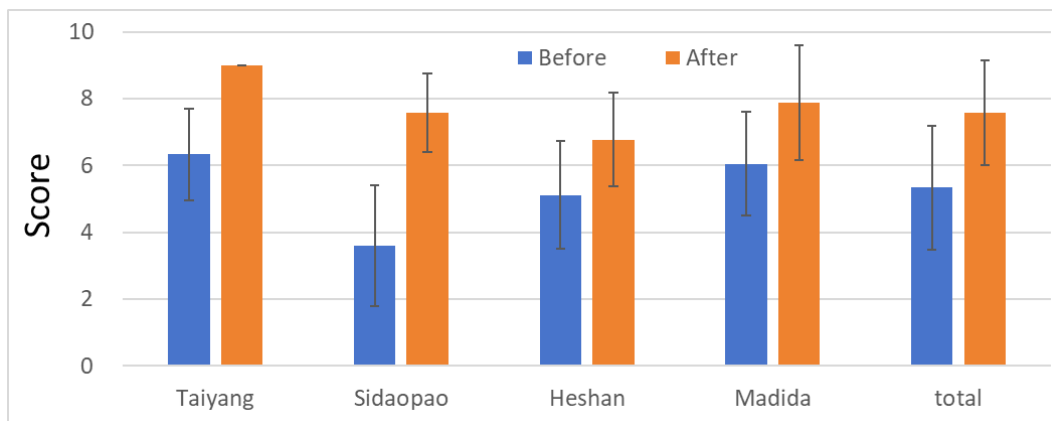


Figure 8. The scores before and after public education. Error bars represent mean \pm SD.

Activity 1.5. Assessment of the impact of the project.

To assess the impact of the community patrol teams on the knowledge, attitude, and practice (KAP) of local villagers in Hongqihe, we cooperated with HMFB to conduct two questionnaire surveys at the beginning in June and the end in December 2024. In Lihua, since we conducted an initial KAP survey in 2023, we therefore compared survey results from December 2024 with those from the year before as a better assessment of the long-term impact of the community patrol team there. We sampled 5% of the population and collected a total of 55 questionnaires. The questionnaires were designed to assess villagers according to an index of their knowledge, attitude, and practice of conservation. The higher the score, the more knowledge the villager has about the importance of conservation, the more positive their attitude towards conservation work, and the higher their participation in local conservation initiatives. We used the t-test and the Mann-Whitney test to determine the difference between groups. We considered 0.05 as the significance threshold.

Data analysis showed that all scores at the end project in Hongqihe were slightly higher than those in the beginning, though this difference was not significant ($P_k=0.17$, $P_a=0.49$, $P_p=0.82$, $P_t=0.33$) (**Figure 9**). In Lihua, all scores in 2024 were slightly higher than those in 2023, though the uncertainty in scores from 2023 led to the difference being insignificant ($P_k=0.97$, $P_a=0.59$, $P_p=0.33$, $P_t=0.25$) (**Figure 10**). In addition, we found the knowledge, attitude, practice, and total scores of Hongqihe were higher than Lihua, and there were significant differences between all categories ($p_k < 0.001$; $p_a <$

0.001; $p_p < 0.001$; $p_t < 0.001$), possibly because Hongqihe is in the core area of tiger and leopard distribution and there have been greater efforts in recent years by others to educate the public on the importance of conservation.

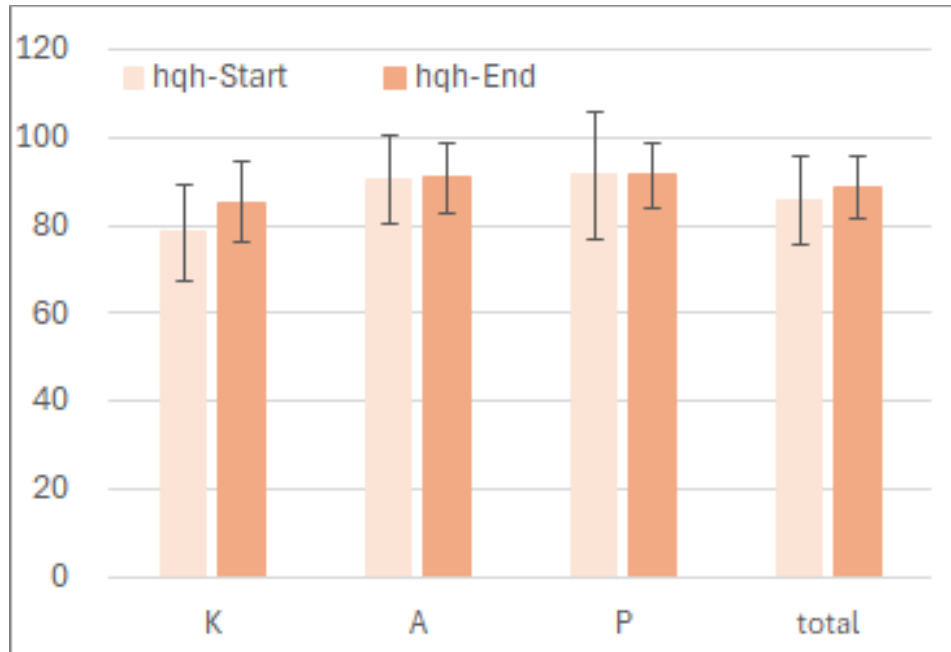


Figure 9. Comparison of the KAP (knowledge, attitude, practice) metrics between the beginning in June and the end in December 2024 of the community patrol project in Hongqihe village. Error bars represent mean \pm SD.

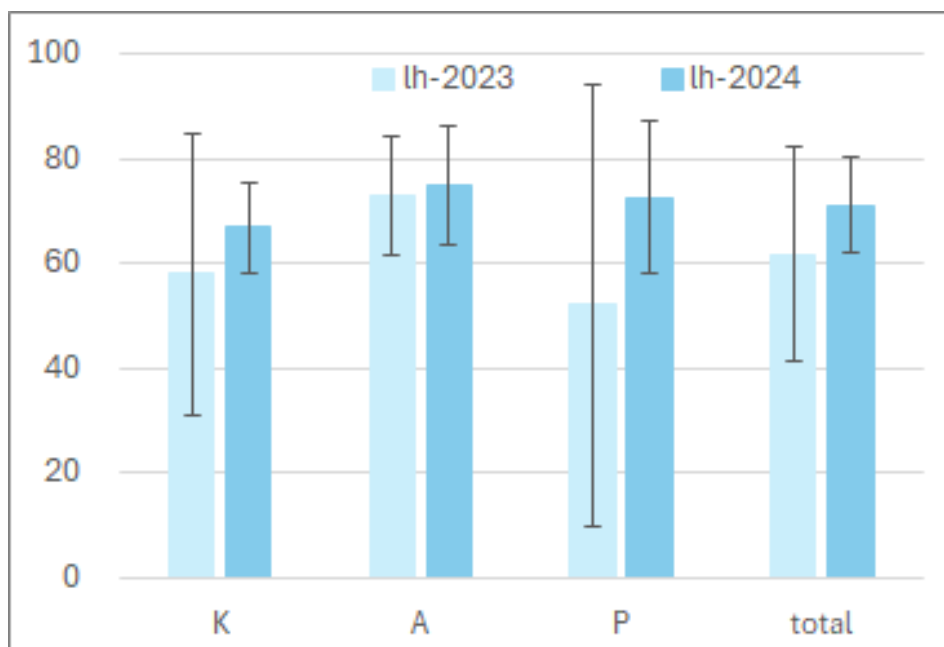


Figure 10. Comparison of the KAP (knowledge, attitude, practice) metrics between 2023 and 2024 of community patrol project in Lihua village. Error bars represent mean \pm SD.

Key achievements of this project: (Please give a bullet point list of key measurable outputs- for example xxx of staff trained in SMART monitoring techniques, xxx camera traps covering xxx km²)

- 6 Community patrol teams supported in prime Amur tiger and leopard habitat across Northeast China Tiger and Leopard National Park;
- 6 new community rangers from Honqihe trained in patrol skills;
- 460 daily patrols covering 2,585 km led by community patrol teams;
- 142 large snares removed from community-managed forests patrolled by these teams;
- 4 community education campaigns conducted throughout the park, reaching 300 people.
- Increased knowledge, attitude, and practice towards conservation in both villages supported by this award.

Obstacles to success: Give details of any obstacles/challenges to success that the project has encountered. *(Any changes to the project that have affected the budget and timetable of project activities should have been discussed prior to the end of the project)*

We did not encounter obstacles or challenges to the success of this project.

Monitoring and Evaluation: *(Describe the methods used to monitor and evaluate the progress of the project)*

Objective	Indicator	Monitoring Method	Completion Status	Output of delayed work in 2023
Objective 1: Promote community participation in wildlife conservation	1) 640 km patrols, and snare encounter rate is no higher than 60 snares/100km. 2) 2 patrol inspections 3) 2 public education campaigns and 2 questionnaires for education reaching at least 120 people. 4) Improvement in attitude and behaviour scores from 2 questionnaires for project assessment	Conduct community patrol activities and publicity education; Community work inspection and acceptance.	1) 795 km patrols, and snare encounter rate was 7 snares/100km. 2) 2 patrol inspections completed. 3) 4 public education campaigns reaching 150 people. 4) Data analysis showed that all KAP scores in the end project in Hongqihe were slightly higher than those in the beginning; the results show that all scores in 2024	1) 1,790 km patrols, and snare encounter rate is 5 snares/100km. 2) 2 patrol inspections completed.

			were slightly higher than that in 2023 in Lihua.	
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Shared learning: *(How will you share the outputs and learning from your project, in what format and with whom?)*

We share the outputs with HMFB, village committees, and community rangers in the form of written reports. We also discuss any problems with the program with HMFB to help summarize our experience and apply these lessons to future community projects. We will also share the outputs with the NCTLNP administration and continue to promote the community patrol team model to other communities around NCTLNP.

Media: *(Please provide a list of publications and media both local and national which mentions the work funded by this project and/or mentions WildCats Conservation Alliance)*

These articles from December 2024 highlight the success of the community patrol teams and details the ranger competition WCS helped organize. The articles were published on the Hunchun Media Center website and WCS WeChat Official Account. Links to the articles are below:

https://mp.weixin.qq.com/s?_biz=MzU2MjQyNDZNg==&mid=2247575817&idx=4&sn=6d072f3bd8346746e287915baf269163&chksm=fd331dd6dc2491db9057603e9cdd649ba015742fbb957869418877e20a11236b95d4257114a9&scene=27

<https://mp.weixin.qq.com/s/ToMpzPKcxI9ZrygxLJuDzg>

Budget Narrative:

Spending for this project was mostly in line with our proposed budget. Minor adjustments were made due to the fluctuating cost of some items and field conditions. No major revisions to our proposed budget were made during the project.

Have you provided at least 2 blogs? Y/N?

Yes, please see the attachments.

Have you provided at least 15 high quality images with details of the relevant credit? Y/N?

Yes, please see the attachments.

Section III. Appendix (Please populate this section with details from section II)	
Did you carry out camera trapping as part of this project? Y/N	
N	
If yes:	
Total camera trap nights/days:	Total area surveyed:
Numbers of tiger/leopard/prey recorded	Please include data on other species recorded
Are numbers of tigers/leopards/prey increasing or decreasing in your project area? Please show trends	
Did you carry out other surveys? Y/N	
N	
If yes:	
Please give details	
Did you carry out patrolling as part of this project? Y/N	
Y	

<p>If yes:</p> <p>Total distance patrolled: foot; 2,585 km</p> <p>(please give figures for different methods, vehicle/foot/boat etc)</p>	<p>Total area patrolled:</p> <p>About 77 km²</p>
<p>Do you use Patrol Monitoring software such as SMART? Y/N</p> <p>Y</p>	
<p>If yes:</p> <p>Total distance patrolled using patrol monitoring software?</p> <p>2,585 km</p>	<p>How do you collect data? Handheld devices/paper/other? Please give details?</p> <p>We patrol with GPS and fill out the patrol record form(paper) to record the observation information.</p>
<p>Please provide comparison data on from your patrolling over time</p> <p>2021, 1 village, 170 patrols with total distance of 882km.</p> <p>2022, 5 villages, 615 patrols with total distance of 3,321km.</p> <p>2023, 6 villages, 255 patrols with total distance of 1,373km.</p> <p>2024, 6 villages, 460 patrols with total distance of 2,585km.</p>	
<p>Please provide data on violations recorded/arrests/successful prosecutions</p> <p>Removed 142 snares placed by poachers.</p>	

<p>Does your project work with local communities? Y/N</p> <p>Y</p>		
<p>If yes: (please be as specific as possible and include gender split)</p> <p>Who?</p> <p>community rangers (male and female)</p> <p>community villagers</p>	<p>What did you do? Was it successful?</p> <p>We worked with HMFB to coordinate community patrol teams to carry out patrol work and conduct public education campaigns. In addition, we co-organized the first Ranger Competition with NCTLNP and HMFB. It was successful.</p>	<p>How many people did you reach?</p> <p>About 300 people</p>
<p>How do you measure the success of this activity?</p> <p>The number of patrols, the total distance of patrols, the number of cleaning snares, the number of education campaigns, the number of people receiving education, and questionnaire survey on the effects of our promotional content before and after the activities.</p>		
<p>Did you carry out educational activities with adults or children? Y/N</p> <p>Y</p>		
<p>If yes: (please be as specific as possible and include gender and numbers)</p> <p>Who?</p>	<p>What did you do?</p>	<p>How many people reached?</p> <p>About 150 people</p>

The community villagers (male and female)	We worked with HMFB to conduct public education campaigns, including speaking events, video presentations, and handing out brochures.	
<p>Have you seen behaviour change from these activities? (Please give details of your results and of how this is measured)</p> <p>We conducted a questionnaire survey on the effects of our promotional content before and after the activities of the day. The contents of the questionnaire were the same and the full score for each questionnaire is 10 points. A total of 180 valid questionnaires were collected from the four villages. The results clearly show that villagers had a better understanding of and support for conservation after our efforts.</p>		
<p>Did you carry out training activities for any staff/community member on the project? Y/N</p> <p>Y</p>		
<p>If yes: (please be as specific as possible and include gender split)</p> <p>Who?</p> <p>community rangers (male and female)</p>	<p>What did you do? Was it effective?</p> <p>We worked with HMFB to conduct skills training and assessment for the potential community rangers. It was effective.</p>	<p>How many staff trained? How many others trained?</p> <p>6 community rangers were trained, including 1 woman</p>
<p>How do you measure the effectiveness of this training?</p> <p>The training was divided into indoor training and outdoor training. The indoor training content mainly included the use of GPS, filling out patrol record forms, and identifying wildlife footprints. After the training, the trainees completed a written test. Outside, the professional rangers of the Hunchun Municipal</p>		

Forestry Bureau led the team to conduct GPS field practice training, and at the end, the trainees were scored for GPS operation. After an evaluation, a final team of six people were selected in Hongqihe, including one woman.

Did you carry out conflict mitigation activities with community members?

N

If yes:

Who?

What?

How main people did this include?

Have you seen behaviour change from these activities? (Please give details of your results and how this is measured)

Were any scientific papers/articles published because of your project? Y/N

N

If so, please give details or provide copies.