

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: Supporting the recovery of Amur leopards and tigers through community-based conservation in Northeast China	
Grantee Organisation: Wildlife Conservation Society	
Location of project: Hunchun coordinates: 42°51'47"N, 130°21'58"E	
Size of project area (if appropriate): About 5,000 square kilometres.	No of tigers and / or Amur leopards in project area, giving evidence & source: A 2018 publication authored by Chinese, Russian, and American specialists estimated a global population of Amur leopards at 84 adults and subadults in 2014-2015. These counts suggested there were approximately 11 leopards primarily residing in Northeast China with about the same number using both Russian and Chinese lands. Since then, surveys on both sides of the border indicate that numbers continue to climb. The most recent report from Northeast China Tiger and Leopard National Park (NCTLNP) claimed that there were 80 Amur leopards in the national park. Although their method is unknown and the reliability cannot be fully guaranteed, it still suggests a long-term increase in Amur leopard numbers. The latest robust estimate was 26 tigers in Northeast China in 2018 (Qi <i>et al.</i>, 2021), while NCTLNP reported a tiger population size of 70 within the park this year, presumably including some tigers with territories that overlap Russian lands. Beyond these reports, WCS has documented an increase in tiger population density from 0.25 individuals / 100 km² [95% CI: 0.14-0.40] in 2013 to 0.74 individuals / 100 km² [95% CI: 0.44-1.23] in 2023, based on 11 years of camera trapping within Hunchun Nature Reserve. Monitoring data show that in the past five years, one to two Amur tiger cubs were born every year in this study area. Half of these cubs were continuously photographed on our camera traps, and some of them grew to successfully produce their own cubs. New adult individuals that immigrated into the study area were detected every year as well. For leopards, unlike tigers, most of the increase in numbers is presumed to come from migrating individuals, since fewer females with cubs were photographed.

Partners: *(Please give details of partners, including communities, academic institutions etc. for this project.*

Northeast China Tiger and Leopard National Park, the Hunchun Municipal Forestry Bureau, and village committees are our primary partners.

As a conservation management organization, NCTLNP gives us policy support. The Hunchun Municipal Forestry Bureau is the executive agency for the activities in this grant. We have worked with them on a range of conservation efforts in the past. In this project, we work together with their staff to carry out community patrol work. The village committees are our key partners since local people play central roles in most project activities.

Project Contact Name: *(main contact via email):* Mr. Wang Aimin

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Actual start date of project: *(if different from 1st February 2025)*

Reporting period: February 1, 2025 - June 30, 2025

Section II. Project Progress

Summary of progress for the first 6 months: *(please provide a summary for use in our communication materials)*

With the support of the WildCats Conservation Alliance, WCS China, in cooperation with the Hunchun Municipal Forestry Bureau, continued to support community patrol teams in the village of Hongqihe in Northeast China Tiger and Leopard National Park (NCTLNP) and extended the program to two new townships, Machuanzi and Jingxin, outside NCTLNP. During the reporting period, we conducted training for rangers of two new patrol teams on how to patrol for illegal activity and snares. From April to June 2025, the three teams conducted 40 daylong patrols, covering 240 km on foot and removing 10 snares placed by poachers. Beyond these patrols, WCS and the Hunchun Municipal Forestry Bureau jointly carried out a publicity and education activity in May for 60 staff of a mining company that operates near the border of the park. Finally, we conducted a preliminary survey on conservation knowledge, attitude, and practice for villagers in these two new communities. The results of the survey show that there was not much difference between Machuanzi and Jingxin, the villages outside of the park, but they were both well below Hongqihe, which is inside the national park. This could be explained by the reduced resources dedicated to conservation outside of the national park. This survey will be repeated in December 2025 to assess the short-term impact of the community patrol team program in these three communities.

Details of activities and results to date: *(Please give details of progress made towards the objectives & outputs of your Logframe, and activities included in your Workplan. Please add any relevant charts, maps and images.*

Objective 1: Remove snares in community forest

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

This year, we have taken a new approach to identifying communities suitable for patrol teams. The two new communities this year were selected at the higher administrative level of township, allowing us to not only include more young people, but also to patrol a larger number of community-managed forest areas scattered throughout the township. This avoids the situation where some villages struggle to carry out patrols due to too few community rangers, or patrol only a very small community forest area.

From May to June 2025, WCS and the Hunchun Municipal Forestry Bureau conducted preliminary investigations and discussions with the township government before finally selecting Machuanzi and Jingxin townships, located to the south of the main area of the national park (**Figure 1**). These two townships are areas where human-tiger conflicts have occurred frequently in recent years, so are a priority for our patrol team program. In addition to these new townships, we continued to support the community patrol work in the village of Hongqihe (**Figure 1**) where – thanks to the investment of WCCA – we organized a community patrol team starting last year (2024).

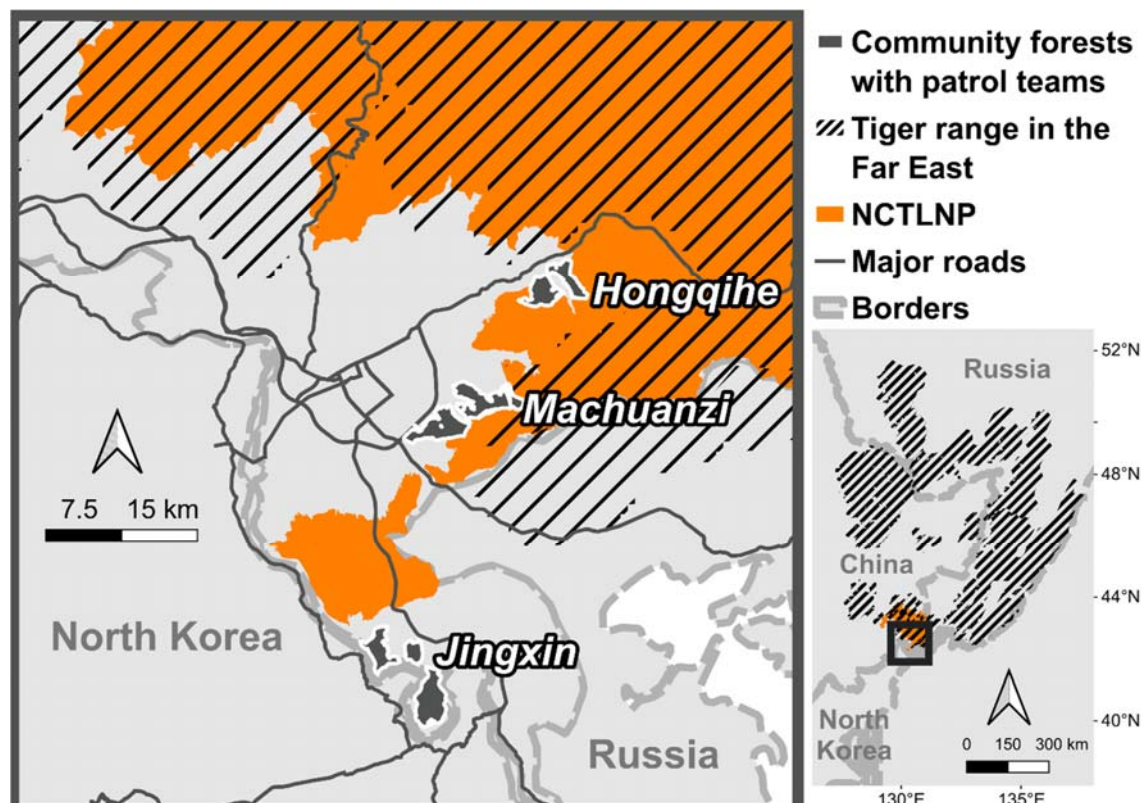


Figure 1. Map of the three community forests where we have established patrol teams in this project. NCTLNP: the Northeast China Tiger and Leopard National Park. Tiger range refers to the “species conservation landscapes” of Sanderson et al. (2023): <https://doi.org/10.3389/fcosc.2023.1191280>

To identify potential members of the patrol teams, the township governments posted announcements and interested villagers signed up. The township government then conducted

a preliminary screening of applicants and provided the list of proposed personnel for the patrol teams to the forestry bureau. On June 13 and 24, WCS and the forestry bureau 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 to assess their learning. Outside, the professional rangers of the forestry bureau led the team to conduct GPS field practice training, and at the end, the trainees were scored individually for their GPS operation. After a final evaluation, a total of 12 people were selected from two communities, six people (divided into two patrol groups) in each community.



Figure 2. WCS and the Hunchun Municipal Forestry Bureau conduct a community ranger training and assessment in the townships of Machuanzi and Jingxin. Photo ©WCS

Activity 1.2. Establish support teams.

After the establishment of the new community patrol teams, we also organized two support teams consisting of two staff from the Hunchun Municipal Forestry Bureau, two experienced patrol team members from the village of Hongqihe, and two new patrol team members of Machuanzi and Jingxin. In the early stages of the project, the support team provided further extensive training for the new community patrol team (**Figure 3**). During the training, the experienced rangers passed on their patrol experience to the new members and shared the sense of achievement from contributing to wildlife conservation. Later this year, the support team will also participate in patrol quality inspections in the middle and end of this project as well as public education efforts and technical support.



Figure 3. An experienced community ranger instructs a new ranger on how to operate his GPS. Photo ©Hunchun Municipal Forestry Bureau

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

During the reporting period, we worked with the Hunchun Municipal Forestry Bureau to support the three community teams to carry out daily patrols. We use the SMART patrol system to record and analyse patrol data. We divided each patrol area into a 0.5 X 0.5 km grid that guides patrol efforts and sets the basis for our patrol effort and results analyses. The three communities conducted a total of 40 daylong patrols, covering a total of 240 km, with an average of 5.97 km per patrol (**Figure 4**). During their patrols, the community teams removed a total of 10 old snares from the forest (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). The snare encounter rate was 2.7 snares/100 km in Hongqihe village, which was lower than the 3.4 snares/100km in last year (July-December 2024). We attribute this to the improvement in patrol efficiency, with almost no poachers who set new snares. Community rangers also recorded many wildlife signs (tracks and scat) and direct sightings during their patrols (**Figure 5**). Wild boar were recorded the most (58 times), followed by sika deer (44), roe deer (26), badgers (4), and raccoon dogs (2). No signs of tigers or leopards were recorded.

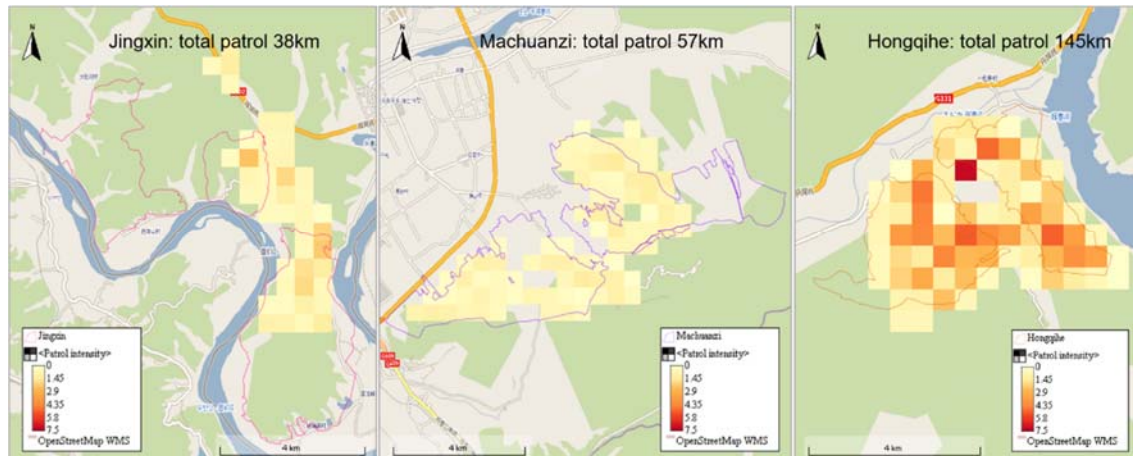


Figure 4. Patrol intensity (patrol distance) in three communities. Grid size: 500m₂

Objective 2: Mitigate human-tiger conflict in local communities

Activity 2.1. Patrol teams mitigate human-tiger conflict.

This year, we are expanding the responsibilities of community rangers to include human-tiger conflict mitigation. In June 2025, we provided safety training on human-tiger conflict prevention for community rangers, explaining the types of conflicts, best practices in conflict prevention, response methods for human-tiger conflicts, as well as the Emergency Plan for Wildlife-Human Conflict Incidents in Hunchun for such incidents. We also established a clear communication system between the community rangers, township governments, and Hunchun Municipal Forestry Bureau: when community rangers detect signs of tigers or leopards during their patrols, they report the location immediately to the forestry bureau. The bureau then contacts the township government, which notifies the head of each village to take preventive measures. These include warning villagers through the village's public address system and village's group WeChat. Community rangers also notify any villagers they encounter of the presence of tigers nearby.

At the beginning of the project, in order to assess the villagers' perception of the risk of human-wildlife conflict, a questionnaire survey was conducted across the three villages. A total of 67 valid questionnaires were collected, and the results were as follows: 1) Perceived safety: 56% of the villagers believe that there are potential safety hazards in their living area, mainly due to possible tiger activities around the community. 2) Behavioural perception: 68% of the villagers knew the correct strategy of “not turning and running away immediately when encountering a tiger”, while only 19% still held the misconception of “running away immediately”. 3) Demand for protection: the vast majority of villagers (85%) support the distribution of flares and other protective tools, believing that this will significantly improve the sense of security. 4) Evaluation of Early Warning Mechanism: 94% of villagers were satisfied with the role of the new communication system to inform villagers of nearby tiger activity (described above). 5) Recognition of patrol responsibility: 90% of villagers believe that Community Patrol Teams will play an important role in identifying wildlife signs and providing quick warnings through the village committee.

Activity 2.2. Conduct public education campaigns on human-tiger conflict.

In May 2025, together with the Hunchun Municipal Forestry Bureau, we carried out a publicity and educational event for 60 staff of the Zijin mining company. Tigers and leopards have been appearing near places where the company works in recent years, and many employees have witnessed tigers and leopards on the roadside while driving. The main messages of these campaigns included conservation knowledge and measures to prevent human-tiger conflict. This information was shared through speaking events, video presentations, and educational brochures (**Figure 6**).



Figure 6. WCS and partners conducted publicity and education activities for a local mining company. Staff filled in questionnaires about promotional content. Photo ©WCS

To evaluate how well participants absorbed the information, we surveyed participants 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 54 valid questionnaires were collected. 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 a p value of 0.05 as the statistical significance threshold. The survey results (mean $\pm$ SD) showed that the scores after our efforts (8.15 ± 0.82) were significantly higher ($p < 0.05$) than those before (7.59 ± 1.08). We found no significant difference by gender ($p = 0.54$), but barely statistically insignificant differences by education level ($p = 0.06$). Younger respondents tended to have greater improvements in score ($p = 0.04$), which also indicates that young people are more likely to understand and accept conservation knowledge.

Objective 3: Raise conservation awareness among local communities.

Activity 3.1. Assess project impact in raising conservation awareness.

In June 2025, we cooperated with the Hunchun Municipal Forestry Bureau to conduct an early questionnaire survey on conservation knowledge, attitude, and practice (KAP) for villagers in Machuanzi and Jingxin townships (**Figure 7**). We sampled 5% of the population and collected a total of 57 questionnaires. The content of the questionnaire included three categories: knowledge, attitude, and practice. The higher the score, the more the knowledge about the importance of conservation, the better the attitude towards conservation work, and the higher the participation in local conservation initiatives. The results of the scores show

that there was not much of a difference between Machuanzi and Jingxin (with both having the highest attitude scores, followed by knowledge scores, and lower behavioral scores, Table 1), but they were both well below Hongqihe, which is located in the park ($Mean_k=85.25$, $Mean_a=90.86$, $Mean_p=91.60$, $Mean_t=88.80$; data from the end of 2024). This indicates that there is a lot of room to improve the understanding and involvement in conservation of villagers outside of NCTLNP. However, we are cautious to extrapolate this difference to all villages inside of NCTLNP: based on our surveys of other villages throughout the park, conservation awareness varies substantially, with half of the villages scoring below 65 points (KAP total scores, initial results from the 2023 KAP survey). Differences are more likely due to the specific backgrounds and livelihoods of villagers in each village.



Figure 7. WCS cooperated with Hunchun Municipal Forestry Bureau to carry out the early questionnaire survey on conservation knowledge, attitude, and practice. Photo ©WCS

Table 1. Status of KAP Scores in Machunzi and Jingxin Township.

	K	A	P	T
Machuanzi	73.78±17.42	76.89±14.30	55.33±26.86	68.67±17.41
Jingxin	71.18±15.44	78.46±15.01	53.95±23.56	67.86±16.40

To better understand the relationships between knowledge, attitude, and practice, we used a Spearman's correlation analysis. We found a significant positive correlation between

knowledge, attitude, and practice. Linear regression analysis revealed that the direct effect of attitude on practice was significant and stronger after controlling for other variables, while the direct effect of knowledge was only marginally significant. Mediation analysis – a statistical method used to explore how the relationship between two variables is influenced (or “mediated”) by a third variable – further revealed that the effect of knowledge on practice strongly depended on attitude. This result suggests that increasing knowledge alone cannot directly encourage people to participate in protection efforts. Attitude is the key to protection. Therefore, changing people’s attitudes while building on their knowledge is the best way to enhance their awareness of protection.

In addition, Parametric and non-parametric tests were employed to analyze KAP differences across age groups, genders, and education levels. The results showed that there were significant differences among different ages, with lower scores as age increased; there were significant differences between genders, with males having higher scores than females; and there were no significant differences in education levels.

Give details of any obstacles to success that the project has encountered over the last 6 months.

(Please provide detailed examples, explain what impact these will have on the project results and the changes to the budget and timetable of project activities)

No obstacles to success were encountered during the reporting period.

Budget: Is the spending on target? If not, please give details and provide an updated budget sheet.

As is typical with our community patrol program, spending has been low at the beginning of the project. From February to June 2025, our work mainly focused on the selection of pilot communities, communication and coordination with partners, community ranger training, and early questionnaire surveys – activities that are all relatively inexpensive. We are on schedule to spend out this award as planned, as much of the costs go towards the actual work of the community patrol teams which has only just begun.

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

None in this first reporting period.

WildCats Conservation Alliance asks for at least 5 relevant high-resolution jpeg files of images of the project activities during this time period.

Please see the five images attached with this report. All individuals in the photographs have given their consent for having their picture taken and shared.