



The project aimed for community-based conservation of Red Panda in Manigong through occupancy surveys, threat assessment and stewardship building with local communities for Red Panda.

Final Project Report

Community Based
Conservation of Red Panda in
Different Conservation
Regimes of Arunachal Pradesh,
India

CLP ID: 03501921

Project Period: Nov 2021 – Nov 2022

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Project Partner and Collaborators

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Section 1:

Summary:

The project was carried out in Manigong, Arunachal Pradesh of North-East India. The aim of the project was to include the local communities and their leaders into red panda conservation to encourage community-based conservation at local governance level. Project had three objectives: i) Assess occupancy of red panda in different conservation regimes, ii) Assess threats and anthropogenic pressure on red panda, and iii) Develop awareness and stewardship through governance system for long term conservation of red panda.

Data collection involved: i) random trails sampling on grids using GPS to record presence/absence data and ii) Semi structured questionnaires, which involved hunters, youths, village leaders and women to understand the distribution, threats, and traditional beliefs towards red panda. These efforts provided the key results: 1) Presence of red pandas recorded in 15 grids; 2) major threats to red pandas identified such as Habitat degradation and Hunting; 3) 500+ students, 15 Village leaders, 20 women, ITBP & Indian army officers and 200 villagers made aware of conservation of red panda and impact of education and early-marriage in remote areas. At the end of the project, all 4 Villages of segment III banned hunting and unsustainable timber collection in their forest area.

Introduction:

The state of Arunachal Pradesh in India is home to the largest population of red pandas. However, there is limited knowledge from the eastern part of the state in this regard. Red pandas are considered as indicator species for the Eastern Himalayan range. However, the species lacks information related to status of threats and conservation measures across Arunachal Pradesh.

The project was carried out in Manigong, Shi-Yomi district of Arunachal Pradesh, India. Manigong is inhabited by the Bokar tribe, an excellent hunter tribe that still follows their roots of traditional hunting. Manigong is inhabited by two societies: SAAJI and Hemi-Dunyo. Our study was mostly focused on the SAAJI area as it holds the largest land ownership in Manigong. It is further divided into 4 segments as SAAJI I, SAAJI II, SAAJI III and SAAJI IV. Each segment is a cluster of 3-4 villages and each segment has their own community forest governed by their own segments except SAAJI I and SAAJI II who share the same forest areas and its natural resources for their sustenance. The villages in each segment are:

SAAJI I: Namasiba, Chango and Papikrung I.

SAAJI II: Papikrung II, Soyorgang, Yorkongdom and Tassum.

SAAJI III: Labukar, Lusing, Sukdom and Simugang.

SAAJI IV: Pullom, Sejegong, Kolle and Remang.



This area is biodiversity rich with the presence of species like the endangered red panda, Takin, Red goral, and rare pheasants like Sclater's monal and tragopans, etc. Primary objective of the project was to establish distribution status of red panda and its potential habitat and to understand the various anthropogenic pressures on red pandas in the area. The project also aimed to assess the types of threats towards red pandas in the community forest of Manigong. Additionally, the project focused on fostering stewardship among local communities for the conservation of red pandas.

Multiple stakeholders were involved to ensure the success of conservation efforts at both the local and policy levels. Key partners in this project were community leaders and community members owning and utilizing the community forest of Manigong. Being in a remote place with few income opportunities the community has been dependent on forest for many generations and are able to provide insight towards the change in floral and faunal species of the area. Interviews and multiple meetings were conducted with such members to understand their dependency on the forest and to understand their perception towards the need of a system that provides sustainable use of natural resources.

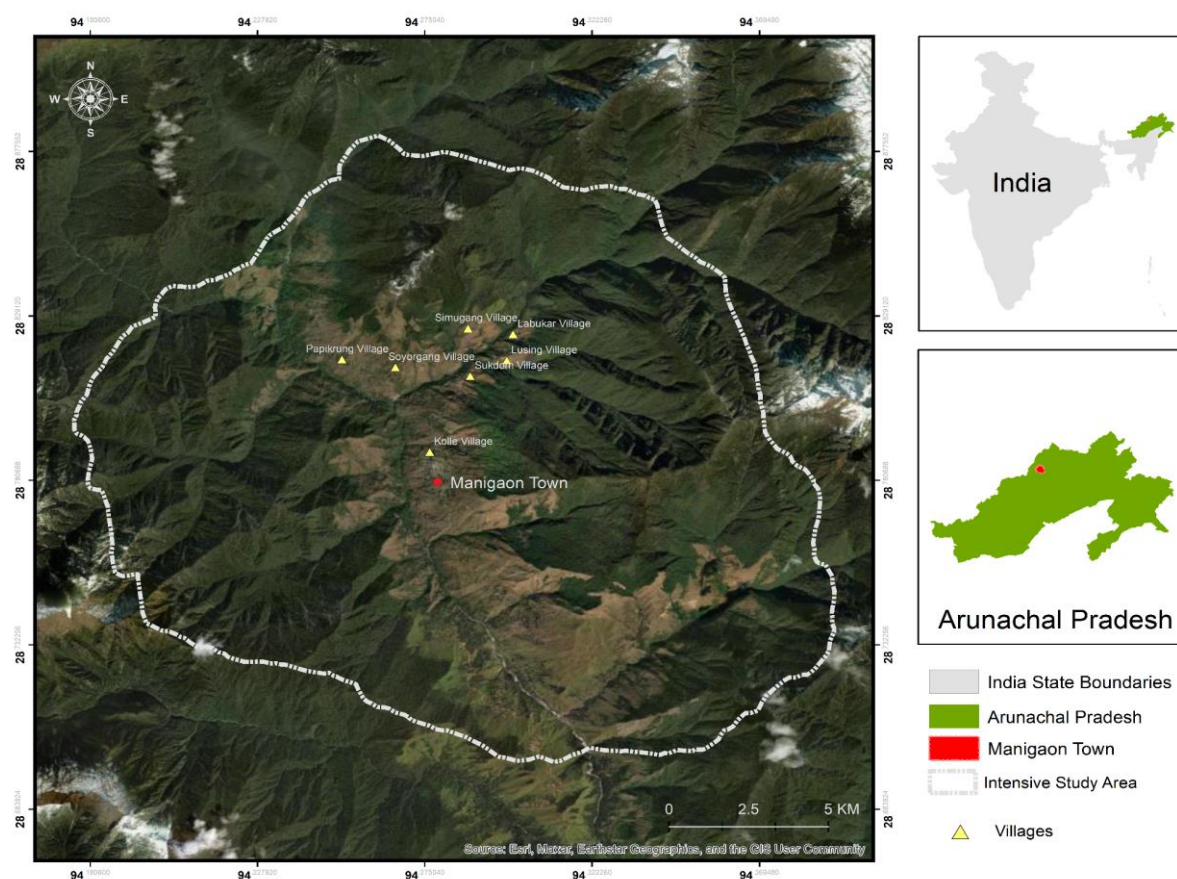


Figure 1: Study Area Map



Project members

1. *Rimung Tasso, 30* - Currently working independently as a Conservation Biologist in the state of Arunachal Pradesh, India. She is M.Sc in wildlife sciences and has worked on conservation of Red panda in western part of Arunachal Pradesh with WWF-India for 3 years. She was the team leader in the project and has been involved in project planning, communication with stakeholders, organizing workshops, leading ecological and questionnaire surveys in the field, data analysis and report writing.
2. *Karnik Priyansh, 28* - Presently working as Manager - Land use and Forestry at VNV Advisory Pvt. Ltd. He is a postgraduate in forest management and has been working in community-based conservation and climate change domain for 4+ years. He has been involved in the project as Project manager and has been performing administrative roles and involved in report development, knowledge material development, questionnaire development and data analysis.
3. *Adyut Anjuman, 27* - Presently working as Consultant with Government of Odisha in the tribal department. He is a postgraduate in forest management and has been working in the development sector for 2+ years. He has been involved in the data analysis, social and communication component of the project.

Section 2:

Aim and Objectives

The project aimed to understand the status of distribution and threats to red panda in Mouling National Park and Manigong community forest and develop stewardship amongst the local communities and their leaders into red panda conservation to encourage community-based conservation at local governance level.

The project focused on three objectives at the proposal stage: i) To assess occupancy of red panda in different conservation regimes in Mouling National park and Manigong (community owned forest) in two districts: Upper Siang and Shi Yomi in Arunachal Pradesh, ii) To assess the threats and anthropogenic pressure on red panda in different conservation regimes, iii) To develop awareness and stewardship through the governance system for the long-term conservation of red panda in Manigong.

Changes: From the two study sites, Mouling National Park was removed from the project because occupancy surveys in two sites of Mouling National Park yielded zero evidence of red panda presence. consultation with the village leaders and hunters of 4 villages around the Mouling National Park confirmed that red panda is not found in this area.



Changes to original project plan

The two-month occupancy survey and discussions around Mouling National Park yielded no data indicating the presence of red pandas in the selected sites. As a result, the Mouling area was excluded from the project, with the focus shifting to the Manigong study area.

Various obstacles were encountered during the survey. Permissions to enter parts of Namasiba forest were denied by the border force, and villagers prohibited surveys in certain areas due to hidden pit traps that posed risks to both animals and humans. Additionally, heavy snow made some grids inaccessible. Despite these limitations, questionnaires proved valuable in understanding the extent of red panda presence in the SAAJI area of Manigong.

In the Manigong region, Namasiba was replaced by five other villages for interview surveys due to a sexual harassment case involving two project team members. The issue was resolved at the local level, with witnesses observing the accused individuals signing an undertaking. The accused parties and representatives of the SAAJI society expressed their apologies, assured our safety in the future, and encouraged us to continue the project until its completion.

Methodology

Objective1: Occupancy survey

To understand the occupancy of red pandas in the SAAJI area of Manigong, 2x2 km grids were laid as per average home range of red pandas over elevation between 2000 to 4000 m above sea level. Random trails were walked in 17 grids from February 2022 to March 2022. The survey effort was conducted for 14 days a month led by two teams in a day, during the period of 6:00 am to 4:00 pm. For the presence of red panda, indirect evidence such as pug marks or scats were recorded and to assess the threats, presence of humans was observed such as human trail, traps, logging signs and cattle grazing in the red panda habitat.



Figure 2: Red panda scat found during occupancy survey.



Objective 2: Threats and anthropogenic pressure



Figure 3: Respondent interview for threat assessment.

10 villages were selected for the questionnaire in SAAJI society based on their proximity to Red Panda habitat: Papikrung II, Soyorgang, Yorkongdom, Labukar, Lusing, Sukdom, Simugang, Remang, Sejegong and Pullom. To understand the perception of threats and their traditional beliefs with red panda, 55 people were interviewed which included hunters, farmers, village leaders, women, and youth. Interviews were carried out by 3 teams from May 2022 to June 2022, twice a day during morning hours

from 6:00 to 10:00 am and evening from 5:00 to 8:00 pm. using an audio recording device and for visuals 2 DSLR cameras were used. Variables relating threats and traditional beliefs were further converted into qualitative data in excel which is analysed to generate types and level of threats on red panda.

Objective 3: Awareness and Stewardship Building

To raise awareness about the status and significance of red panda, 3 segment meetings and 1 all Saaji leaders meeting were conducted in the month of July and August 2022. This meeting was crucial to discuss the project findings, to understand locals' perception on impact of rapid degradation of forest cover due to hunting and unsustainable timber collection. A short documentary [“The Bugun and the Liocichla” developed by Greehub](#), was screened at each meeting.



Figure 4: Awareness and sensitization workshop with school children.



3 Focused group discussions were conducted with the women groups to understand their perception on hunting, changing environment around them and possible alternative livelihood to support their partners to contribute to forest dependency reduction.

A series of workshops based on nature education was conducted in the month of August 2022 at Government Secondary School, Manigong. The workshop manual was inspired from [“Under The Canopy”](#), a nature-education manual specially designed for the tribal children of Northeast India. The workshop had 24 classroom sessions which focused on distribution status and threats to red panda and other high-altitude species, significance of nature and our role in conserving them, it also included screening sessions on short films and 6 outdoor sessions with nature walk and thought-provoking nature related games.

Outputs and Results

Objective 1:

Occupancy survey was conducted in Manigong where red panda evidence was positive in 15 grids of the study area with 1 sighting in Segment III. Based on the survey evidence in Manigong Kernel density estimation (KDE) was done estimate density of red panda in the study area, which shows highest density of red panda in was observed in Segment I and II followed by moderate density in Segment IV and lowest density in Segment III.

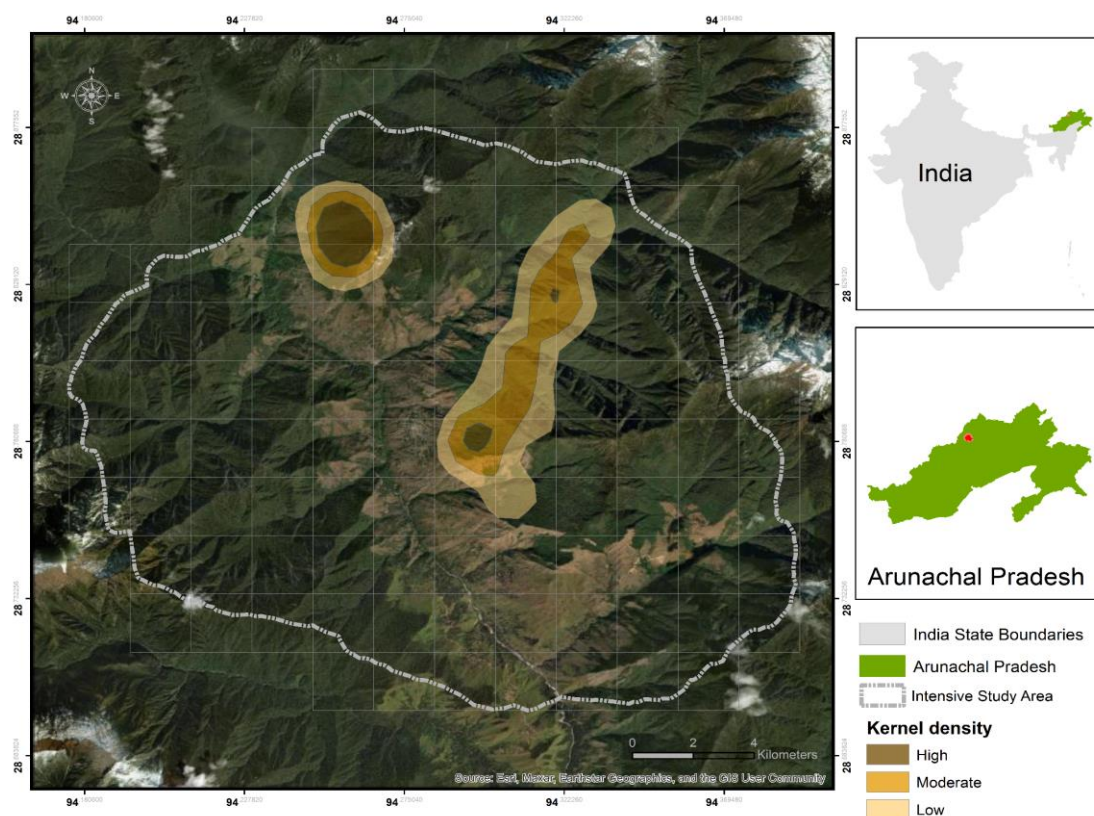


Figure 5: Kernel density estimate of Red panda presence in study area



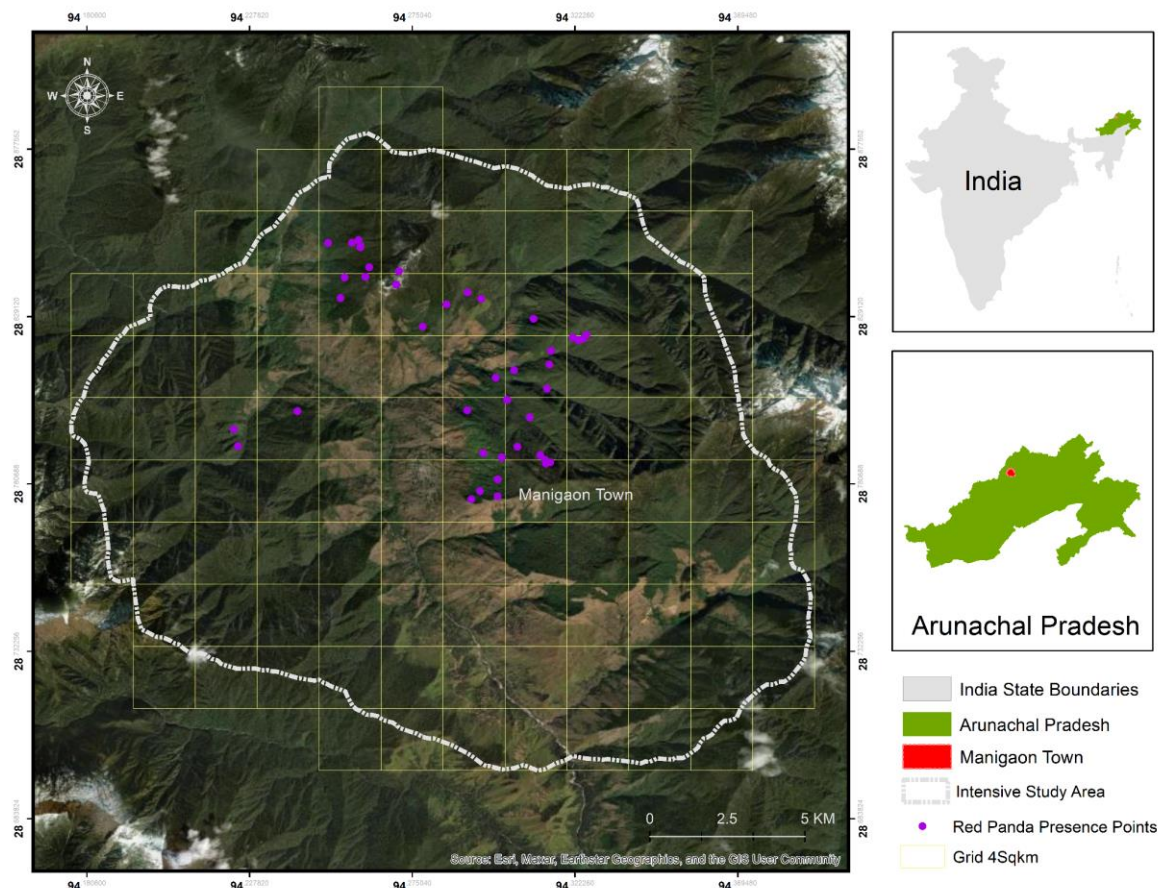


Figure 6: Record of Red panda presence in Study area.

Objective 2.

According to the survey results two major threats for the red pandas identified are Habitat degradation and Hunting. Manigong town is surrounded with mountains that are identified as potential red panda habitat, some of it confirmed in this study.

Habitat Degradation:

- 89% of the people interviewed accepted involvement in timber collection.
- 87% people agreed involvement in medicinal herb collection.
- A 3 sq km area forest cover in Dapang which is popularly known for red panda habitat in Manigong was completely cleared off and continues to clear the surrounding patches of it.



Figure 7: Timber collection from potential Red Panda Habitat.

- Camping in the forest for medicinal herbs or hunting also affects the habitat of red panda in terms of fuelwood for the camps.



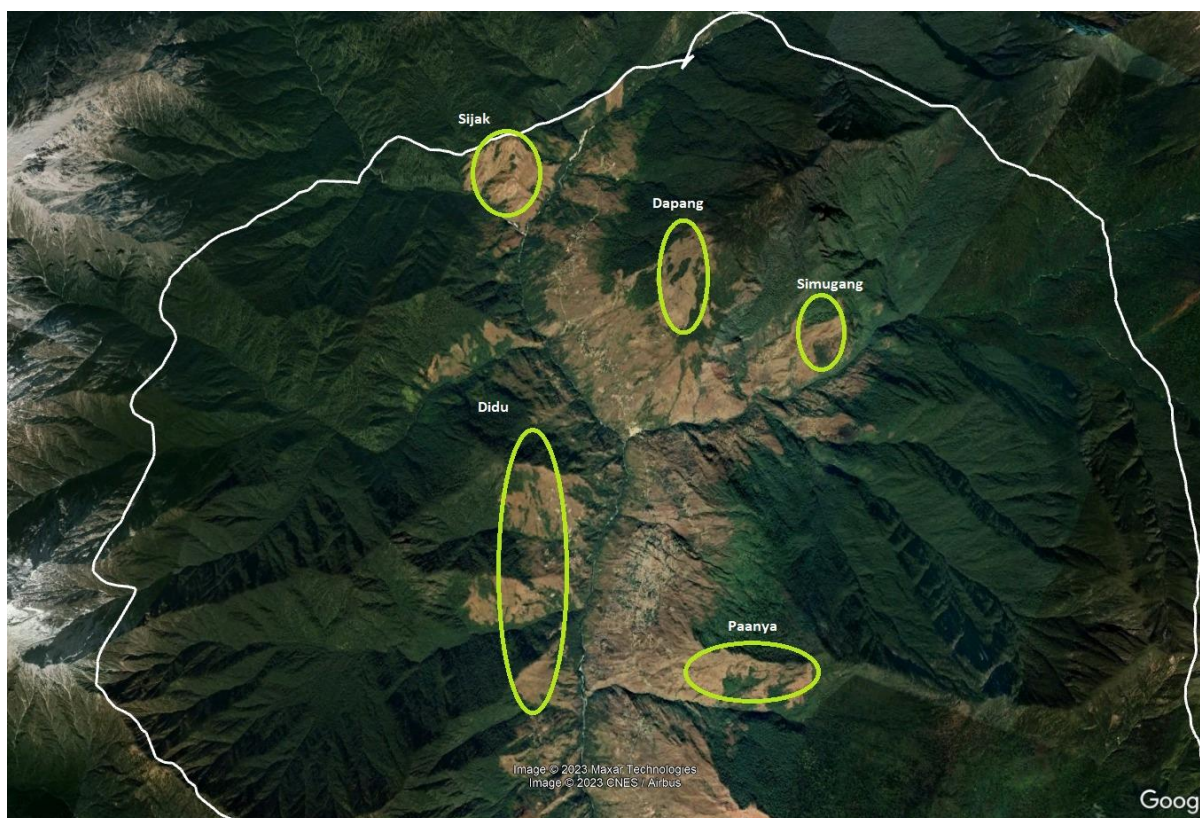


Figure 8: Cleared Forest patches (potential red panda habitat) due to timber collection, forest fire and road construction.

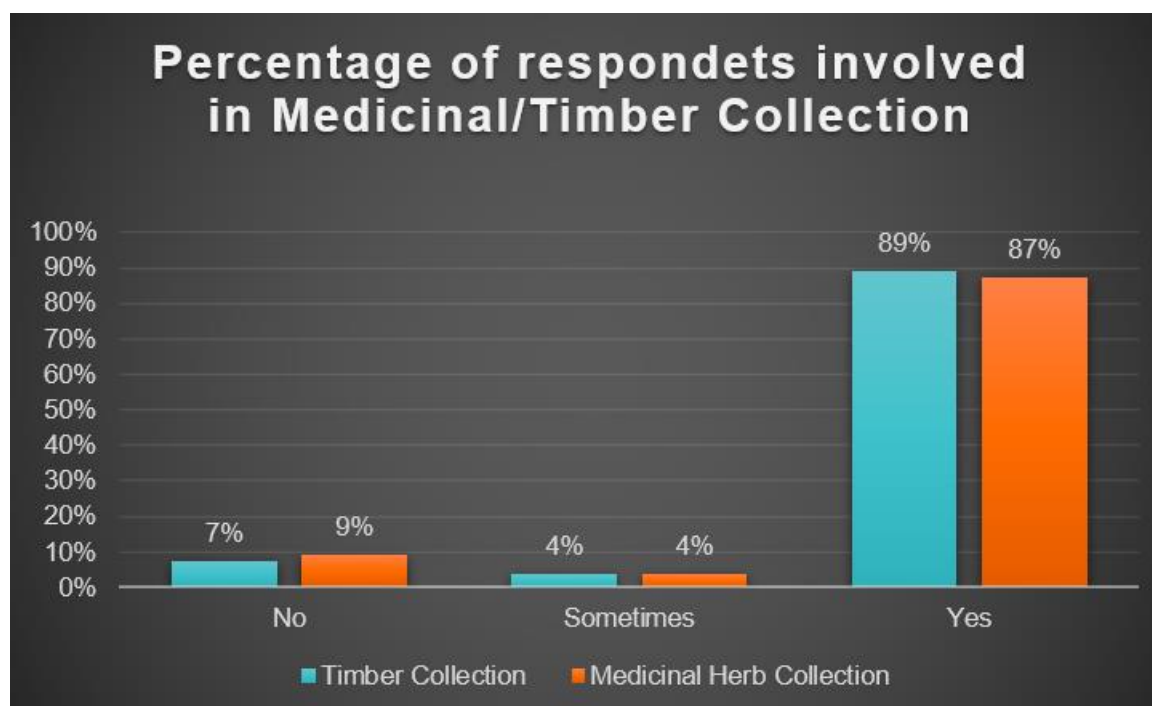


Figure 9: Percentage of respondents involved in timber and medicinal herb collection.



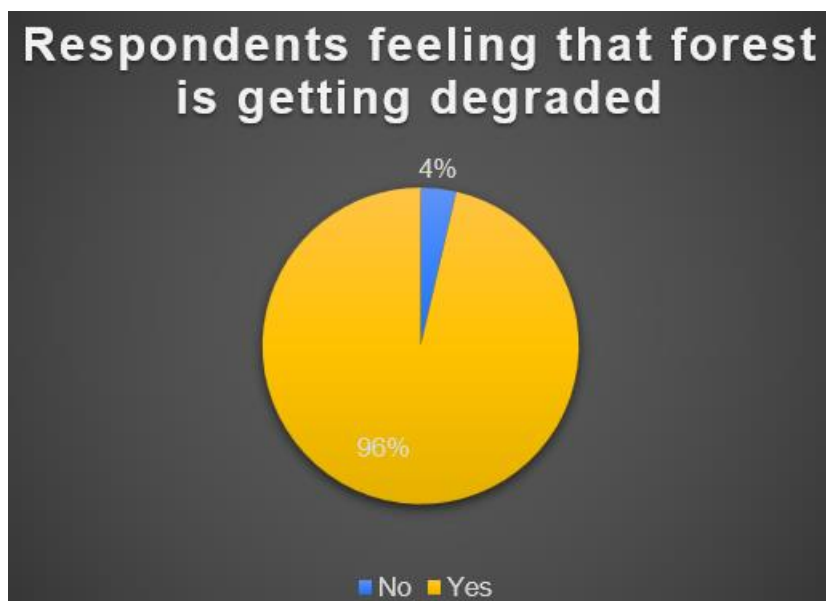


Figure 10: Percentage of respondents feeling forest degradation.

Hunting:

Five reasons for hunting red pandas were identified during the survey: Accidental killing, As pet, easier to hunt, out of frustration and demand for taxidermy. However, there's a traditional belief attached with red pandas as their sighting or call is considered bad omen for hunters, that they are going to come back empty handed. In such cases, often they would kill the red panda instead and return home. In a few cases locals have tried to keep them as

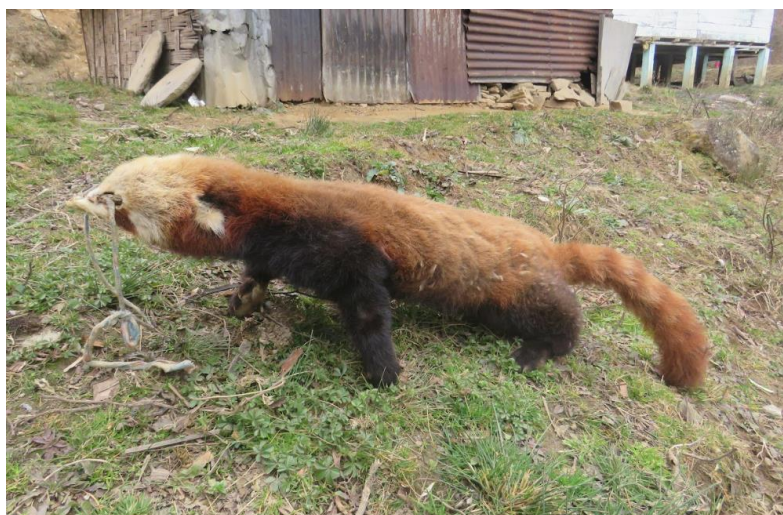


Figure 11: Taxidermy of Red Panda.

pets because of its charismatic look and some people kill them because red pandas are easier to catch, and some people have killed them on demand for taxidermy.

Out of these most of the individuals denied hunting of red panda but heard of hunting or selling them to people in town, 25% respondents confirmed red panda caught in traps laid for other animals and 20% respondents accepted hunting of red panda for meat or sold as taxidermy at Rs 150-500 INR.



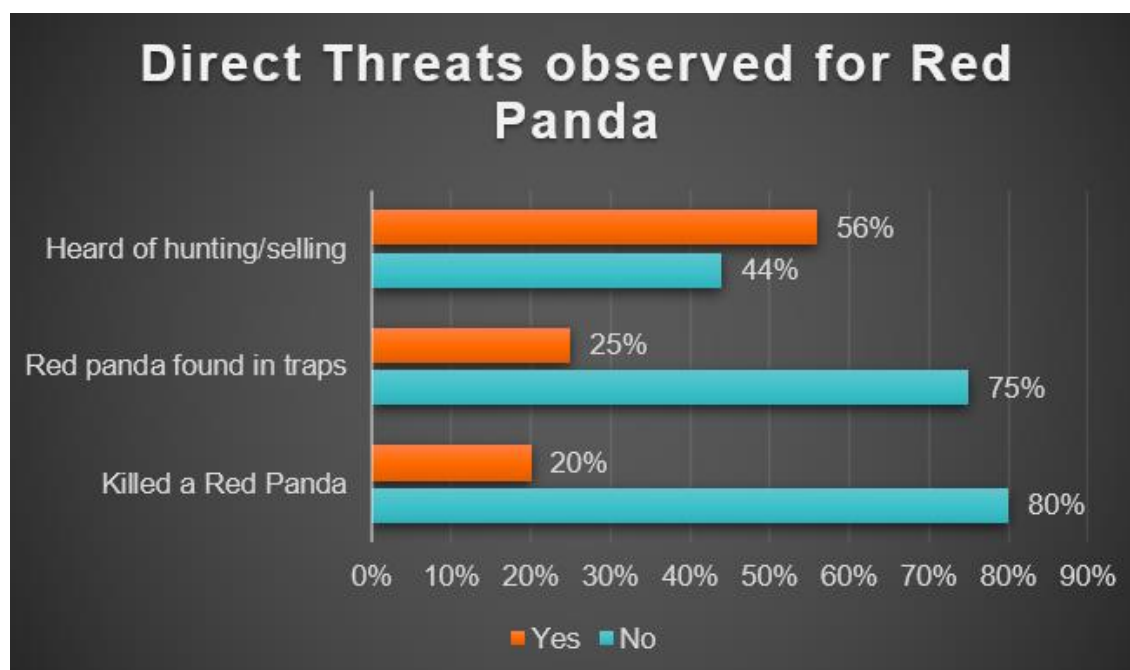


Figure 12: Direct Threats observed for Red Panda

Objective 3

A total of 3 segment meetings with overall attendance of 43 people and 1 all Saaji leaders meeting were conducted where 48 people attended to discuss the findings of the project and their opinion on current issues such as unsustainable timber collection, hunting of red panda and future scope of community-based conservation of red panda in Manigong.



Figure 13: Awareness and outreach program on International Red Panda day.

Outreach and awareness programs were organized for school students of class VI to VIII at Government Secondary School of Manigong. A total of 25 students completed the workshop with a pledge and certificate of completion. Students of primary classes were provided with a daylong session on nature conservation where 60 students attended the session. Mass awareness was conducted on conservation of red panda and to preserve their natural resources in 2 major events; Independence Day 15th August and International Red Panda Day on 19th September where 300 and more people including villagers, officers and students attended. On 12th August a drawing competition on "Conservation of red panda and Degradation of forest" was held at Manigong Secondary School where 40 students participated. 18 students performed a drama based on the impact of hunting on Teacher's



Day, where 15 teachers and 265 students were sensitized that animals can also feel the pain of lost home and life.

Communication and Application of Results

Project results have been disseminated with the village leaders and community members through the local field assistants and translators who have been a crucial part of the project. Based on results and post project discussion with the SAAJ society, the society has circulated a regulation on the prohibition of hunting and killing at Saji III area, violation of which will attract a fine of Rs 25000.

Furthermore, a final copy of the report will also be shared with the forest department and other local institutions working in the area. A copy of the report will also be shared with the Saaaji society.

Monitoring and Evaluation

A daily activity chart and rooster used to be prepared a day before to share fair responsibility among the group. To assess effectiveness of field work and team growth, weekly team discussions used to be conducted. Survey efforts were evaluated by assessing completed grids and number of households interviewed in comparison to desired targets set in the proposal. Periodic consultations with stakeholders (Village leaders, Project advisor and forest department) helped us see and resolve challenges at ground level as well as personal level. Effectiveness of awareness programs were assessed by pre and post concept mapping during the Nature-education workshop. This method helped us understand the change and growth of ideas and new words and concepts learnt in the later period.



Achievements and Impacts

The project will be able to contribute first ever documentation of the status of red pandas from the Manigong area. where the species are recorded in 15 sites. 10 Villages of Manigong are now aware of the significance of red pandas and legal offences against hunting or trade of the schedule I species. All 3 field assistants from Manigong who used to be hunters before joining the CLP project, got selected for the responsible tourism fellowship supported by GreenHub and Royal Enfield. All three felt that the CLP project was a life changing opportunity



Figure 14: Drama performed by the students on Teachers day on impact of hunting.

which opened new doors to their life. Currently, all three of them are working on a project to generate alternate livelihood using responsible tourism as a model to reduce forest dependency of their community. Inspired by them 2 more youths went to join the GreenHub fellowship to learn filming and documentation.

Sensitization of red panda conservation was carried out to reach a larger population: More than 400 students and Teachers, youths and leaders of the Saaji society of Manigong. Women groups shared their interest to come together and establish SHGs to support conservation and reduce dependency on forest that can stop the men from hunting or engage in other illegal non-timber forest products collection which sometimes causes fatal accidents. Discussion upon the observation of the project, the leaders and youth shared their concern and the need to develop a strong system to control unsustainable timber collection and hunting. By the end of the project, 4 villages of segment III decided to ban hunting and illegal timber collection in their area to protect their natural resources for the next generation.





Figure 15: Outreach campaign on conservation of Red panda and its habitat on Independence Day.

Based on real life issues, sensitization on impact of underage marriage and lack of education in remote and poor society was organized in two schools as well as women groups and leaders of SAAJI society. This was outside project objectives but very well received by the elders and youth because majority of youths in Manigong are school dropouts due to poor education system and then soon engage in early marriage. Panchayat leaders and young girls spoke about their support to take a stand against early marriages in Manigong. Panchayat leaders agreed that they need to strengthen their system to spread awareness and take strong actions against early marriage. Students between the age group of 11 to 17 years went through a series of environment conservation workshops and at the end 25 students took pledge to protect their environment through small steps like speaking up with elders, hunters, leaders to stop hunting and to plant more trees.

Capacity Development and Leadership capabilities

Initially, the team of CLP red panda project were a pack of introverts who shared difficulty in speaking up in public spots. 3 field assistants who were primary and secondary school dropouts and 2 interns just passed out of MSc lacked confidence in public speaking or taking charge of activities. During the project we were able to recognise each other's skills and be kind to each other's weaknesses, learn new skills to data collection, communication and influence people for behaviour change. Weekly group discussions helped us open up and see each other's weaknesses and inspired us to learn from each other. Consecutive group meetings with leaders and other groups have made each of us more confident and to speak



with more passion. Right after the project, both the interns were hired in a leading organization and institution in India. The three field assistants have become the voice of Manigong, who are leading their community and decision makers to conserve natural resources of Manigong. And most importantly, together as a team to realise that “Conservation is not possible without community and Community won't exist without conservation”.

Section 3:

Conclusion

The survey conducted on red pandas was limited to a specific area, emphasizing the need for a broader survey to understand the distribution model of red panda at the landscape level. This expanded survey would provide more accurate data and insights for conservation planning and management. The local community has become aware of the rapid deforestation and agrees that a strong system should be developed to address this issue effectively, indicating an increasing awareness of forest conservation. Women's groups have shown willingness to establish income-generating activities to discourage hunting and reduce forest dependency, contributing to long-term sustainability. Information on red panda trade has emerged, but further research is required to assess its scale and impact. Involving the forest department is seen as crucial for reducing hunting and illegal trade, highlighting the role of government agencies in enforcing regulations. Breaking the cycle of poverty, lack of education, and early marriage is essential for sustainable development. Efforts should focus on improving education access and creating economic opportunities to reduce dependence on harmful practices like hunting. The local population generally supports red panda conservation but requires additional support, resources, and education to actively participate in conservation efforts. Providing ongoing support can foster a stronger sense of ownership and commitment to protect the red panda and its habitat.

Problems encountered and lessons learnt

1. Planning:

- It's often difficult to do recce before the project due to financial or geographical constraints but it is a very essential part to do a ground truthing before selecting study sites. In our case, Mouling National Park was supposed to be a comparative study site against Manigong but unfortunately there was no red panda population which led us to remove the site from the project.
- Right team formation is the key to effective progress of the project. Prolonged unavailability of team members in the field affected the project badly which led to unwanted incidents followed by delay in activities. This issue was resolved with change in team members.

2. Survey Efforts:



- Most of the grids laid for occupancy survey were not accessible in the SAAJI area due to i) heavy snow for which the team were not equipped, had to withdraw from halfway and return to base camp, ii) Villagers prevented us from entering some grids as they still had pit traps laid in those areas for large mammals. These traps are fatal for humans that's why it is banned in India but in remote areas they still practice these traps and inform the entire village if an area has one such live trap set and iii) some grids closer to border areas were prevented by the Indo-Tibetan Border force for security purpose. However, through questionnaires the location of red panda evidence or sightings by the locals were recorded from some of these areas.
- Discussions and preparation for the occupancy survey and interviews went smoothly in the community forest areas, and had the advantage of being a local from the same state. However, the forest department staff of Mouling NP did not involve much except the Division Forest Officer who helped us .
- Training programs with the FD department was difficult as they were least interested due to various reasons such as lack of manpower, unavailability of forest range officers (FRO) and transfer of the DFO to different regions which weakened our hold with the forest staff around Mouling. It also led to prohibition in post project training. Further discussions with FROs of Aalo range led to the conclusion of working closely with the youths of Manigong to fill the gaps where forest staff cannot be reached immediately.
- Number of households were less than expected in the villages (as assumed during the development of the project), which reduced the number of surveys to be done from 200 to 100.

Important lessons learnt are: –

1. Communication should never stop between the stakeholders. Communication gap leads to loss of interest of locals in the interventions.
3. Weekly group discussion among the team is very healthy as it keeps bringing new insights to current situations and also helps monitor team and individual growth..
4. Journaling and account keeping is a must thing in the process of a project, it helps and saves a ton at the end.



In the future

- Manigong needs more ecological surveys to generate landscape level plan, such as distribution model or habitat suitability model which is very crucial to develop species conservation plan.
- As the communities have been majorly dependent on the forest due to less job opportunities, the team is working towards developing sustainable models having income generation activities, which will act as incentive to give up hunting and to lesser the utilization of nearby natural resources.

Financial Report

Itemized expenses	Total CLP requested	Total CLP used (USD)	% Difference	Explanation & Proposed Spending**
PHASE I - PROJECT PREPARATION				
Field guide books, maps, journal articles and other printed materials	100.00	98.65	-1%	Not able to spend because of remote location and no network for course access. This will be used now for courses on data analysis.
Insurance	0.00	0.00	#DIV/0!	
Visas and permits	8.00	6.65		
Team training (Please detail:)	80.00	0.00	-100%	
Medical supplies/First Aid	0.00		#DIV/0!	
Communication (telephone/internet/postage)	50.00	49.26	-1%	
EQUIPMENT				
Scientific/field equipment and supplies (Please detail:)	789.00	745.32	-5.54%	There was no forest guest houses during work in manigong and only few resort or homestay, which increased the cost
Photographic equipment (Please detail:)	164.00	0.00	-100.00%	
Camping equipment (Please detail main items:)	243.00	259.35	6.73%	
Vehicle Hire (E.g. Boat/Truck/Engine)	0.00		#DIV/0!	
Other (Please detail:)				
PHASE II - IMPLEMENTATION				
Accommodation for team members and local guides (Please detail:)	1,350.00	1,627.03	20.52%	There was no forest guest houses during work in manigong and only few resort or homestay, which increased the cost
Food for team members and local guides (Please detail:)	1,800.00	1,965.46	9.19%	
Travel (Including fuel costs) (Please detail:)	2,120.00	2,080.41	-1.87%	
Outreach/education activities and materials (brochures, posters, video, t-shirts, Workshops)	920.00	882.91	-4.03%	
Reconnaissance	1,415.00	1114.86	-21.21%	
	3,658.00	3,616.22	-1.14%	
PHASE III - POST-PROJECT EXPENSES				
Report production and results dissemination	50.00		-100.00%	This will be for final report printing and dissemination to stakeholders
Contingency	638.00	594.76	-6.78%	
Total	13,385.00	13,040.88	-2.57%	

Figure 16: Snapshot of Financial Report.

Section 4:

Appendices

Appendix 4.1: CLP M&E measures table.

Output	Number	Additional Information
Number of CLP Partner Staff involved in mentoring the Project	0	NA
Number of species assessments contributed to (E.g. IUCN assessments)	0	NA



Number of site assessments contributed to (E.g. IBA assessments)	2	IBA and ...
Number of NGOs established	0	We are planning to establish an NGO this year.
Amount of extra funding leveraged (\$)	0	
Number of species discovered/rediscovered	0	
Number of sites designated as important for biodiversity (e.g. IBA/Ramsar designation)	0	
Number of species/sites legally protected for biodiversity	1	Red Panda (Community based protection in Saaji 3 area)
Number of stakeholders actively engaged in species/site conservation management	45	Women SHG groups, Local youth, Leaders, Students
Number of species/site management plans/strategies developed	2	Saaji 3 implemented ban on hunting. Action plan developed for responsible tourism with local youths.
Number of stakeholders reached	350+	Including SAAJI members, leaders, students, hunters, SHG women members etc.
Examples of stakeholder behaviour change brought about by the project.	4	Notice of ban on hunting, 3 local youth hunters converted into conservationist
Examples of policy change brought about by the project	1	Segment III banning hunting and Illegal timber collection
Number of jobs created	6	Temporary jobs till the project were active; Porters, translators, field assistants
Number of academic papers published	0	In preparation stage



Number of conferences where project results have been presented	1	Project findings shared at the RGU
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Appendix 4.1 CLP M&E measures

Appendix 4.2: Species List and Ecological Inventories

S.No.	Common Name	Scientific Name	IUCN Status
BIRDS			
1	Blood Pheasant	<i>Ithaginis Cruentus</i>	Least Concern
2	Satyr Tragopan	<i>Tragopan satyra</i>	Near threatened
3	Temmincks Tragopan	<i>Tragopan temminckii</i>	Least Concern
4	Sclater Monal	<i>Lophophorus sclateri</i>	Vulnerable
5	Khalij Pheasant	<i>Lophura leucomelanos</i>	Least Concern
6	Hill Partridge	<i>Arborophyla torqueola</i>	Least Concern
7	Rufous Throated Partridge	<i>Arborophyla rufogularis</i>	Least Concern
8	Scarlet Minivet	<i>Pericrocotus flammeus</i>	Least Concern
9	Blue Whistling Thrush	<i>Myophonus caeruleus</i>	Least Concern
10	Sultan Tit	<i>Melanochlora sultanea</i>	Least Concern
11	Hoary Throated Barwing	<i>Sibia nepalensis</i>	Least Concern
12	Verditer fly catcher	<i>Eumyias thalassinus</i>	Least Concern
13	Common Bull Finch	<i>Pyrrhula Pyrrhula</i>	Least Concern
14	Small Niltava	<i>Niltava macgrigoriae</i>	Least Concern
15	Blue Fronted Redstart	<i>Phoenicurus frontalis</i>	Least Concern
16	Green Backed Tit	<i>Parus monticolus</i>	Least Concern
17	Plumbeous Redstart	<i>Phoenicurus fuliginosus</i>	Least Concern
18	Himalayan Bluetail	<i>Tarsiger rufilatus</i>	Least Concern
19	Rufous Breasted Accentor	<i>Prunella strophiota</i>	Least Concern
20	Chestnut Crowned Laughingthrush	<i>Trochaloxyeron erythrocephalum</i>	Least Concern
21	Beautiful Sibia	<i>Heterophasia pulchella</i>	Least Concern
22	Yellow Billed Cough	<i>Pyrrhocorax graculus</i>	Least Concern
23	Black Bulbul	<i>Hypsipetes leucocephalus</i>	Least Concern
MAMMALS			
1	Red panda	<i>Ailurus fulgens</i>	Endangered
2	Takin	<i>Budorcas taxicolor</i>	Vulnerable
3	Red goral	<i>Naemorhedus baileyi</i>	Vulnerable
4	Red giant flying squirrel	<i>Petaurista petaurista</i>	Least Concern
5	Marble cat	<i>Pardofelis marmorata</i>	Near threatened
6	Common Leopard	<i>Panthera pardus</i>	Critically Endangered
7	Leopard cat	<i>Prionailurus bengalensis</i>	Least Concern
8	Barking Deer	<i>Cervus muntjak</i>	Least Concern
9	Bamboo rat	<i>Rhizomys sp.</i>	-
10	Himalayan serow	<i>Capricornis sp.</i>	Vulnerable



11	Himalayan striped squirrel	<i>Tamiops mccllellandii</i>	Least concern
12	Orange bellied Himalayan squirrel	<i>Dremomys lokriah</i>	Least concern
13	Yellow throated marten	<i>Martes flavigula</i>	Least concern
14	Alpine musk deer	<i>Moschus chrysogaster</i>	Endangered
15	Dhole	<i>Cuon alpinus</i>	Endangered
16	Otter sp.	<i>unidentified</i>	-
17	Capped langur	<i>Trachypithecus pileatus</i>	Vulnerable
18	Asiatic golden cat	<i>Catopuma temminckii</i>	Near Threatened
19	Himalayan Palm civet	<i>Paguma larvata</i>	Least concern
20	Himalayan Black bear	<i>Ursus thibetanus</i>	Vulnerable

Appendix 4.3: Field Photographs



Figure 17: Data collection during occupancy survey.



Figure 18: Blyth's Tragopan during occupancy at Mouling.



Figure 19: Interview session with Toto of Labukare Village.





Figure 20: Landscape view of Simugong village.

R FOR RED PANDA!

Scientific Name - *Ailurus fulgens*

Kungpunglung he topyong chupnam he. Holoka Kungpunglung he Giant panda gibo imong nago. Holoka Kungpunglung hem nying-chiango hol topyong pe.

Ngulu nyemey yuku!

Hija ge ongne 18 years la nguluk kabang ga 50% go nyenyok nyeku.

10,000 hem sin ngulu deku na nyeyo nyeyo deku. Hab igey ngulu achirunbo henluk da

Kungpunglung He gu uha?

Kungpunglung he 90% hang agney la dach.

Kungpunglung he dinong hem 13 hours go dawa tangue makur da.

Kungpunglung he hangyong bo akare yakar da. Holoka aaga honye bo yem kungpung da.

Kungpunglung donam he...

95% go kungpunglung donam he yale. yanag heyu ke.

Haba ha duryene 95% go kungpunglung, fagum yakar hem dide na.

Fun facts

Kungpunglung gaga kugan kokne sin dasta hening fang singne agney la gonghanga. Holoka hemonghe.

Kungpunglung he hangyong boade yale line hem dasta. Haba ja sinan dawa koro bo kungpungling gatao he nying hem sin dasta. Haba ge lo kuen sin sin done go huade nasyu ke.

Kungpunglung he pasoo diya ke.

Adi he pomong bo kungpung.

So roneam, kien, aen, jenging Pukuan

hiny yale. kutang putang, sifum sone hem haga jia bo hant.

Si mung si agu hapa gaku long hokoka ni geting ge. Pukuan hem ranga shi, kungpunglung he sin agney bo chingching chingching dasta ke.

Figure 21: Knowledge material on Red panda in Bokar language.

R FOR RED PANDA!

Scientific Name - *Ailurus fulgens*

Red Pandas are the first pandas and they are not related to the Giant Pandas. They were discovered 50 years earlier.

ENDANGERED!

POPULATION DELINED BY 50% OVER THE SPAN OF 18 YEARS

LESS THAN 5000 LEFT IN THE WILD

Red Pandas do....

Red Pandas spend 90% of their time in trees.

In Winters, they spend 13 hours a day looking for food and eating it.

Red pandas wrap their tails around themselves to keep warm in their chilly habitat.

Red Pandas eat ...

95% of the diet is Bamboo

The Other 5% includes lichens, wild eggs, insects, and grubs

Fun facts.

They have a false thumb (an extended wrist bone) which has developed over time to help them climb trees and eat bamboo

They're vegetarian carnivores. Well? Well? Yep, its true. That is because the word 'carnivore' doesn't necessarily imply a meat-eater but Red pandas rarely eat anything more than bamboo and a few insects

Red Pandas is scared of....

Habitat loss and fragmentation

Poaching and illegal trade

Exploitation of Natural Resources

Climate Change and Rapid increase of Human Population in some mountainous have been pushing the Red Pandas to the upper Himalayan regions.

Figure 22: Knowledge material on Red panda in English.



PLEDGE CARD

Name Rajin Dupin

PROMISE TO HELP CONSERVE MY FORESTS AND WILD ANIMALS BY TAKING THE FOLLOWING ACTIONS

A) I will try to save animals and other things like forest and I will take action on it and try to make a group and have animals

B) I will not let all animal finish and tree all cut and try to separate this message and let what will we lost

I WILL FINISH THESE TASKS BY THE 23 DAY OF THE MONTH OF May IN THE YEAR 2024

TODAY'S DATE IS: 02/09/2022

MY SIGNATURE - Rajin Dupin

WITNESSED BY - Tadung Dupin

Figure 23: Pledge card signed by students after the workshop.

PLEDGE CARD

Name Yajun Pailom

PROMISE TO HELP CONSERVE MY FORESTS AND WILD ANIMALS BY TAKING THE FOLLOWING ACTIONS

A) इस अपना जंगल को बर्बाद न होने दिया जाएगी और नही काटेगा और नही मारने करेगा और अपना दौसात की भी काँनैगा की जंगल को मत काते क्योंकि जंगल काते से ही हम से जानका

B) राम request करेगा अपना बाका की जंगल नही जाने के लिए सुझावे बादा वृद्धों को और जानवर को न मारने को बोलगा

I WILL FINISH THESE TASKS BY THE Monday DAY OF THE MONTH OF June IN THE YEAR 2025

TODAY'S DATE IS: 02/09/2022

MY SIGNATURE - Yajun

WITNESSED BY - Tadung Dupin

Figure 24: Pledge card signed by students after the workshop.



Figure 25: Meeting with Women SHG group.





Figure 26: Potential Red Panda Habitat in Saaji 3 segment.



Figure 27: Namasiba village in month of February.





Figure 28: Learning traditional agricultural practices of Bokar community.



Figure 29: Project planning and discussion during field work.





Figure 30: Taxidermy of Red Panda.



Figure 31: School children awareness workshops.





Figure 32: Group of student creating their food chain model during workshop.

Appendix 4.3: Distribution list

Final report will be distributed to following:

1. Conservation Leadership Programme
2. SAAJI Society
3. DFO Office Aalo (Forest Department)
4. PCCF Office, Itanagar
5. Lohit Library, Tezu, Arunachal Pradesh
6. GreenHub, Tezpur, Arunachal Pradesh

