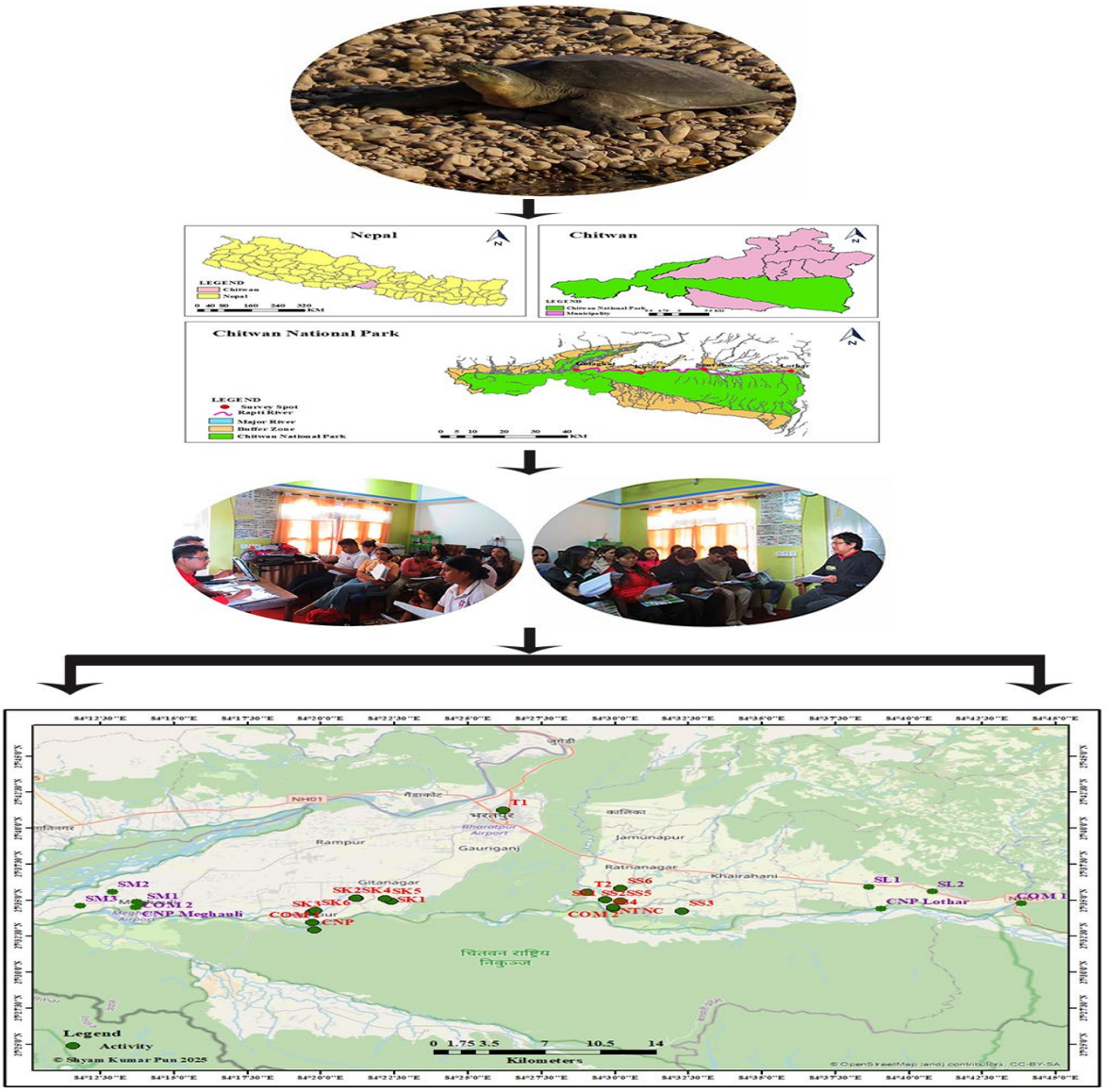
Conservation of Indian Softshell Turtle in Chitwan National Park, Nepal
(Conservation Only)

Detailed Final Report 2025



Submitted by
Shyam Kumar Pun

Project Supporter

www.opcf.org.hk/en/ https://ideawild.org/ https://iucn-tftsg.org/ www.hbcsn.org

Project Information

1. Project title: Conservation of Indian Softshell Turtle in Chitwan National Park, Nepal.
2. Location: Chitwan National Park
3. Turtle Team (n= 40):

SN	Name	Gender Male (M)-Female (F)	Institute	Qualification/Role
	Team Member			
1	Shyam Kumar Pun	M	HBCS	Principal Investigator
2	Kabita Adhikari	F	HBCS	Co- Investigator
3	Kanchan Rana	F	HBCS	Co- Investigator
4	Ritu Acharya	F	HBCS	Co- Investigator
5	Sandesh Niure	M	HBCS	Co- Investigator
	Round 1 & Round 2	**Volunteer**		
6	Prajita Bhusal	F	HBCS	Project Assistant
7	Resa KC	F	HBCS	Project Assistant
8	Smriti Pariyar	F	HBCS	Project Assistant
9	Sarina Aryal	F	SC	B.Sc Forestry 8th Semester
10	Sarmila Rayamajhi	F	SMC	B.Sc Environmental Science 3rd Year
	Round 1	**Volunteer**		
11	Komal Raj Kandel	M	HBCS	Program Officer
12	Muna Gauli	F	BC	B.Sc Environmental Science 3rd Year
13	Prapti Timilsina	F	BC	B.Sc Environmental Science 3rd Year
14	Promisha Gurung	F	SMC	B.Sc Environmental Science 3rd Year
15	Purnima Poudel	F	BC	B.Sc Environmental Science 3rd Year
16	Roshan Thapa	M	SMC	B.Sc Environmental Science 1st Year
17	Sabina Subedi	F	BC	B.Sc Environmental Science 1st Year
18	Sumita Poudel	F	SMC	B.Sc Environmental Science 3rd Year
	Round 2	**Volunteer**		
19	Aastha Giri	F	HBCS	Project Officer
20	Sabita Acharya	F	HBCS	Project Officer
21	Deepa Bhandari	F	HBCS	Research Fellow
22	Pabina Neupane	F	HBCS	Research Fellow
23	Pratikshya Khanal	F	HBCS	Research Fellow
24	Sanjeela Acharya	F	HBCS	Research Fellow
25	Sadikshya Khanal	F	HBCS	Research Fellow
26	Afasana Pandey	F	BMC	B.Sc Botany 4th Year
27	Asha Jhendi	F	SMC	B.Sc Environmental Science 4th Year
28	Dipika Bhusal	F	SMC	B.Sc Environmental Science 2nd Year
29	Hardika Raut	F	SMC	B.Sc Environmental Science 4th Year
30	Indira Neupane	F	SMC	B.Sc Environmental Science 2nd Year
31	Jharana Adhikari	F	BMC	B.Sc Botany 4th Year
32	Laxmi Sharma	F	SMC	B.Sc Environmental Science 4th Year
33	Purnima Dhakal	F	SMC	B.Sc Environmental Science 4th Year
34	Rahul Dangi	M	SC	B.Sc Forestry 8th Semester
35	Rasmita Subedi	F	SMC	B.Sc Environmental Science 4th Year
36	Sonika Gurung	F	SMC	B.Sc Environmental Science 4th Year
37	Surakshya Pokharel	F	SMC	B.Sc Environmental Science 4th Year
38	Susma Gurung	F	SMC	B.Sc Environmental Science 4th Year
39	Susmita Gaire	F	SMC	B.Sc Environmental Science 4th Year
40	Swoyam Poudel	M	SC	B.Sc Forestry 8th Semester

4. Principal Investigator Information:
   Post- Founder and Executive Director
   Organization- Humanitarian and Biodiversity Conservation Society
   Address- G.P. O. Box 30, Bharatpur 10, Chitwan, Nepal
   E-mail- rauyan.pun2@gmail.com / shyam@hbcsn.org
   Website- www.hbcsn.org
   Social- www.researchgate.net/profile/Shyam-Pun / www.youtube.com/user/MrShyam00
5. Project period: July 2024 to June 2025
6. Final Report Submission: June 2025.

Project Publication

Project Video Links (n=6):

i. **Field-Social- Training**
https://www.youtube.com/watch?v=vkuotjUGhwQ&t=6s
https://www.youtube.com/watch?v=z66474lWp58&t=28s

ii. **TAP**
https://www.youtube.com/watch?v=9sHyu1kzbxo
https://www.youtube.com/watch?v=m3Kbe9xHzHM
https://www.youtube.com/watch?v=z_-jRE4ksh4

iii. **Turtle Video**
https://www.youtube.com/watch?v=70Y-TgHAm9Y

Project Article Links (n=6)**:**

i. **Newspaper:**
https://media.chitwanpost.com.np/assets/20241209114904/cpost-12-9-2024.pdf
Printed version: Namaste Bihani
Printed version: Loktantra Sandesh

ii. **Online Portal:**
https://www.chitwanpost.com.np/20241209-12859
https://saurahaonline.com/2024/12/15/253802/
https://www.nepalraftar.com/2024/12/15/240630/

Acknowledgements

We would gratefully thank to Ocean Park Conservation Foundation, Hong Kong (OPCFHK) for financial and Idea Wild spotting scope equipment and IUCN/SSC-TFTSG support to this project.

We are thanking to the Department of Nationals Parks and Wildlife Conservation (DNPWC), Chitwan National Park (CNP) and Social Welfare Council (SWC) for providing permit to this project work.

We thank to staffs of CNP: Dil Bahadur Purja Pun, Abinash Thapa Magar, Dipendra Koirala, Smriti Lama, Divesh Shrestha, Dal Bahadur Chaudhary, Amrita Pudasaini and Yogesh Dhakal; NTNC: Deepak Srivasta, Suk Bahadur Kumal and Pramananda Gary; MGS: Manish Limbu; BBCFUG: Kumari Loh; Ratnagar ward 10: Chandra Bikram Chaudhary; BCN: Santosh Bajagain and Sudha Shrestha; nature guide Prakash Basnet for help in the project work.

We also highly acknowledge following persons for their support the project:

- Dr. Craig B. Stanford, Professor of Department of Biological Sciences, University of Southern California, Los Angeles, CA, USA.
  Chair of IUCN/SSC Tortoise and Freshwater Turtle specialist group
- Dr. Kalu Ram Rai, Professor of MMC, Bhadrapur, Jhapa, Nepal
- Anil Parsai, Senior Conservation Officer, NTNC, Lalitpur, Nepal

Our sincere apology whose names would not be mentioned here because of short memory or forgot to noted names.

Last but not least, we are thankful to assistants, volunteers, students, local communities, nature guide, Park officials, Buffer Zone communities, boatmen and fishermen who directly or indirectly contributed to success of the project.

Contents

Abbreviations and Acronyms

BBCFUG	Belsahar Buffer Zone Community Forest User Group
BC	Balkumari College
BCN	Bird Conservation Nepal
BMC	Birendra Multiple Campus
BZ	Buffer Zone
CITES	Convention of International Trade in Endangered Species of Wild Flora and Fauna
CNP	Chitwan National Park
DFO	District Forest Office
DNPWC	Department of National Parks and Wildlife Conservation
Fig.	Figure
GPS	Global Positioning System
HBCS	Humanitarian and Biodiversity Conservation Society
IUCN	International Union for Conservation of Nature and Natural Resources
ITP	Indian softshell Turtle Program
IW	Idea Wild
km^2	Square Kilometer
MMC	Mechi Multiple Campus
MoFSC	Ministry of Forest and Environment
MGS	Meghauli Game Scout
n	Number
NPWC	National Park and Wildlife Conservation
NRDB	National Red Data Book
NTNC	National Trust for Nature Conservation
OPCFHK	Ocean Park Conservation Foundation, Hong Kong
SC	Siddhant College
SMC	Saptagandaki Multiple Campus
SSC	Species Survival Commission
SWC	Social Welfare Council
TAP	Turtle Awareness Program
TFTSG	Tortoise and Freshwater Turtle Specialist Group
TU	Tribhuvan University
UNESCO	United Nations Educational Scientific and Cultural Organisation

List of Tables:

List of Figures:

List of Appendices:

Executive Summary

Ten species are reported from Chitwan out of 18 species and among them nine are listed in category of threatened species. All turtles of Nepal are enlisted in either Appendix I or II of CITES. The project is focal Indian softshell turtle (*Nilssoina gangetica*) is listed in Endangered by IUCN Red List and in Appendix I of CITES. In Nepal, it is found in elevation range of <300m, bask extensively on shores and sand bars, live in rivers generally tend to avoid temporary water bodies. The threats to the species like sand mining, exploitation for consumption on both subsistence and commercial level. The project carries out in Rapti River from Lothar to Golaghat of Chitwan National Park and its Buffer Zone. The goals of the project is to get status, distribution, capacity building and aware local for further improvement of the species situation. The project carried out in three phases: field survey, capacity building, and awareness program. In this report, only explore the conservation portion. The total of 22 people (10 students and 12 locals) were participated in the turtle monitoring training by separate group. TAP were organized in 17 schools (2,228 students out of 10,360), 4 communities (88 locals), 4 Institute (89 official) in Saurah, Kasara, Lothar and Meghauli. The project important was disseminated by distribution of print materials (banner, brochures, pictorial guide book, posters and t-shirts), publish in media (social site, newspaper, online portal) and installation of signboard.

1. Introduction

1.1. Background

Turtles exist from more than 220 million years ago making turtles one of the oldest reptile groups (Joyce 2017). Of the 360 known species alive today some are highly endangered (Turtle Taxonomy Working Group 2021). The study of turtles is called cheloniology (Greek) and testudinology (Latin). Turtles are major biodiversity components of the ecosystem, they inhabit, often serving as keystones species from which other animals and plants benefits. Turtles consume of mollusc, worms and insect contributes to the control of these prey species and they play ecological role in environment.

In **Nepal**, A total of 18 species of turtles are reported (Turtle Taxonomy Working Group 2021; Fig. 1-2). Most of the turtles are cited by IUCN red list of threatened species and either in Appendix I and II of CITES; the status of all the Nepalese turtles are protected species by NPWC Act 1973 (Kästle et al. 2013; Appendix 9-11). The status of the species in Nepal is poorly known. Yet, 10 turtles species (*Batagur dhongoka, B.kachuga, Melanochelys tricarinata, M. trijuga indopeninsularis, Pangshura tecta*, *Indotestudo elongata, Nilssonia gangetica, N.hurum, Chitra indica* and *Lissemys punctata andersoni*) are reported in Chitwan and among them nine are listed in category of threatened species and eight are freshwater turtle (Kästle et al. 2013; Fig. 1). The recorded turtle species in Nepal are aquatic or semi-aquatic and terrestrial in habitats. Nine turtle species were recorded during our past turtle project work in Chitwan (Pun et al. 2023).

The project focal species is Indian softshell Turtle (*Nilssonia gangetica,* Fig. 3), it is listed in Endangered by IUCN Red List and in Appendix I of CITES. Maximum carapace length 94 cm long and weigh more than 100 kg; omnivorous subsisting on both aquatic flora and fauna; bask extensively on shores and sand bars, often in groups; rest in shallow water with the snout protruding, live in rivers but generally tend to avoid temporary water bodies (Kästle et al. 2013). In Nepal, the western to eastern region, Terai, it is found in elevation range of <300m (Kästle et al. 2013, NTNC-BCC and CNP 2020, Khadka and Lamichhane 2020, Pun et al. 2023).

Habitat quality and quantity suffer from sand mining (Moll 1997), river pollution (Rashid and Khan 2000) and shells are used for both productions of medicine and souvenirs for tourists (Ernst et al. 1997). The species is often kept in temples and house for religious reason without any suitable condition (Sarkar et al. 2019). Cattle grazing practice is common, which reduces the vegetation cover (Schleich and Kästle 2002); road mortality and trampling by cattle (Sriprateep et al. 2013) and large wild animals e.g. Rhino, Elephant etc. (Basumatary and Sharma 2013) causes turtle mortality. Local people often opportunistically capture turtle while farming or extracting other forest resources. Turtles are kill as pest where accidentally drowning in fishing gear (Whitaker 2009). Their eggs and hatching are prey for monitor, herons and some small mammalian predator (Kanwal and Khan 2018). Fires eliminate vegetation cover, food and cause death of the turtle (Schleich and Kästle 2002) and expose any surviving species (Platt et al. 2001) and juvenile turtle are more susceptible (Hailey 2000). Ensuring the sustainability of turtle conservation is always challenging because turtles are extremely long-lived organisms and owing to a unique suite of life history characteristics, turtle populations are generally slow to recover. Successful outcomes can only be realized after many years of sustained effort. The

project will successful, when local are participating in this program. They are the prominent stakeholders for species conservation; their knowledge and perception make a huge sense.

Fig. 1. Turtle of Nepal.

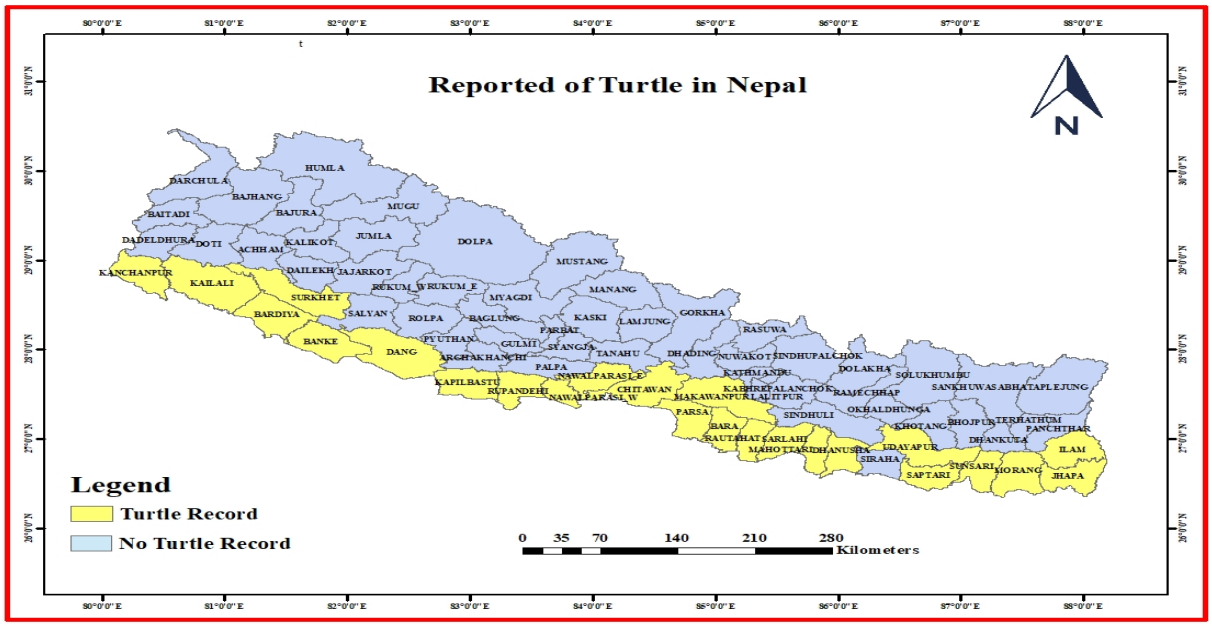


Fig. 2. Turtle Distribution in Nepal.

Fig. 3. Indian Softshell Turtle in CNP: A- Juvenile, B. Adult.

1.2 Objectives

i. Capacity building through training to students and local
ii. Raise awareness and educational of turtle conservation program to improve the social acceptance of the species.

2. Methodology

2.1 Study Area

Nepal (Fig.4) is one of the richest countries in terms of biodiversity, due to its unique geographical position and latitudinal variation geographically; it is 80º 4" to 88º 12" East longitude and 26º 22" to 30º 27" North latitude. It is an independent, sovereign and land locked country bordered by China to the North and India to the East-South and West. It is approximately 885 km in length and its mean width is 193 km width a total area of 1, 47, 181 km^2. **Chitwan** (Fig. 5) is located in Bagmati Province with an area of 2,238.39 km^2 (27°35'N 84°35'E). It covers 2,238.39 km^2(864.25 sq mi), and in 2011 had a population of 579,984 (279,087 male and 300,897 female) people, consisting of different ethnic groups like Brahmin, Chepang, Darai, Gurung, Magars, Tamang, Tharu etc (National Population and Housing Census 2011). The Chiwan consist of 7 administrative regions (Bharatpur Metropolitan City, Kalika Municipality, Khairahani Municipality, Madi Municipality, Ratnanagar municipality, Rapti Municipality and Ichchhakamana Rural Municipality). The **Chitwan National Park** (CNP area 952.63 km^2, Fig. 5) at 27°34 to 27°68'N and 83°87' to 84°74'E is the first National Park of Nepal (1973) and UNESCO designated CNP as a World Heritage Site in 1984 under the World Heritage Convention recognizing its unique biological resources (UNESCO/IUCN-2003) while the Buffer Zone (BZ area 729.37 km^2, Fig. 5) at 27°28' to 27°70'N and 83°83' to 84°77'E, BZ concept in Nepal was developed to demonstrate on how community can function as partners in self-reliant, socio- economic development to support conservation and sustainable use of biodiversity in protected areas (MFSC, 2002). The park management and BZ are divided into four administrative sectors: Eastern (Sauraha), Northern (Kasara), Southern (Madi), and Western (Amaltari). CNP lies in the southern part of the mid-central administrative development region of the country and spans across portion of four districts with cover park area such as Chitwan (74.04%), Parsa (15.45%), Makwanpur (6.97%) and Nawalparasi (3.54%).

The park is bordered by the Narayani River in the west, the **Rapti River** in the north, and the Reu River and the international border with India in the south. On the other side of these rivers there are highly populated human settlements and agricultural areas. A corridor forest, Barandabhar, connects the park with the northern hill forest. The Rapti River flows westward, along the northern border of CNP, and confluences with the Narayani River near the northwestern corner of the park. It is a perennial river, originates in Mahabharat range, and flows for about 120 km before reaching Narayani River. The Narayani River is one of the major river systems in Nepal. It forms the north-western boundary of Chitwan National Park. After entering into Chitwan valley from Devghat, it flows southwest for 30 km before conjoining with Rapti. It then flows for about 20 km toward the west and 10 km south, reaching Tribeni and in due course joins the Ganga River in India. The park preserves fragile Churiya hill in the south and lowland

inner Terai valley ecosystems, elevation range 100m to 815m asl; temperature 8°C to 37°C. The climax vegetation of the Inner Terai is Sal (*Shorea robusta*) forest, which covers some 70% of the CNP. According to Thapa (2011), the park included forest (80%), grassland (12%), exposed surface (5%) and water bodies (3%). More than 55% of BZ is useful for wildlife habitats including forests, grasslands, shrub land, river and water bodies, the rest agricultural land and human settlements (Karki et al. 2015). The work will be divided into three sections of Golaghat (Narayani- Rapti confluence) to Lothar (approx. 68 km).

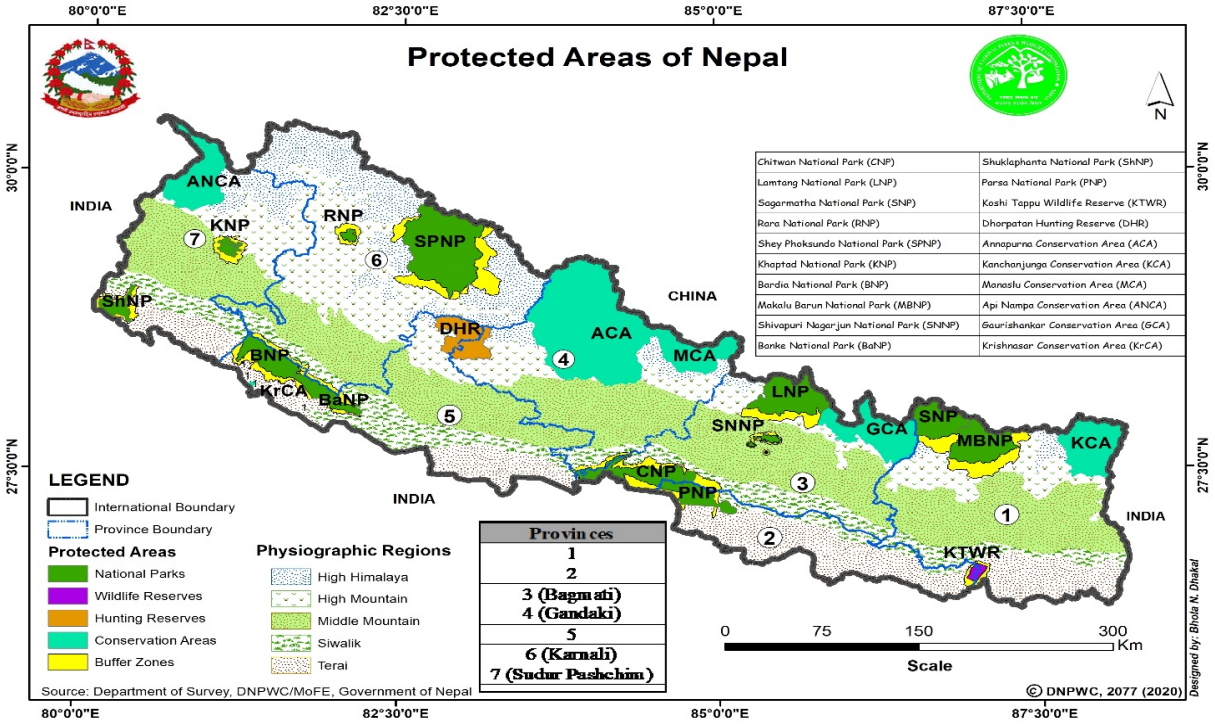


Fig. 4. Map of Protected Areas of Nepal.

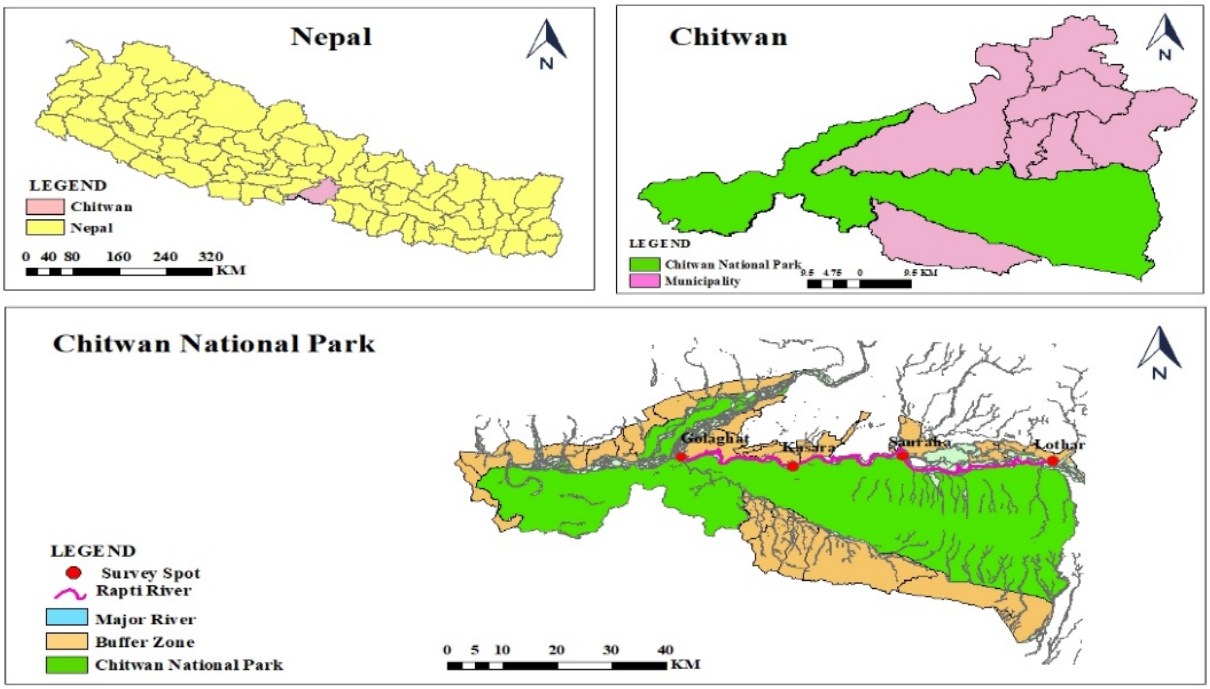


Fig. 5. Map of Study Areas.

2.2 Materials

Field Equipments (n=12)		**Awareness Materials** (n=9)	
i	Camera	i	Banner
ii	GPS device	ii	Brochure
iii	Binocular	iii	Flex
iv	Measuring tape	iv	Poster
v	Topographic Map	v	Pictorial guide book
vi	Survey Sheets	vi	T-shirts
vii	Field Guide Books	vii	Signboard
viii	Field Notebook	viii	Turtle items (teddy, statue etc.)
ix	Turtle Cards	ix	Stationary (colour, sheet etc.)
x	Laptop		
xi	Projector		
xii	External Hardrive		

2.3 Documentation work and Reconnaissance survey: preliminary visit carried out to interactions with local, officials and potential sector for the project.

2.4 Project Design: based on information obtained from the preliminary visit. The project creates monitoring protocols and data recording sheets as well as printing of awareness material (Fig. 6).

2.5 Methods: project period from July 2024 to June 2025 (12 months). The project carried out in three phases: field survey, capacity building and awareness program. The GPS also noted and create map.

A. Phase I: Field Survey

i. Social-Survey: (Pun et al. 2023): base on the consultation with village authority so as to enhance community involvement in the evaluation. It is designed such a way that local knowledge and attitudes pertaining to species past history, present status and future conservation objectives would be reflected. The simple Random Sampling Technique followed to select the individuals for the interview and questionnaire with number of people. The main objective of the questionnaire survey is to identify the threats to species and its habitat in the respective river systems. Therefore, the target respondents were primarily local ethnic group who compete with species to earn their living through fishery. This section involve key informant person such as staffs of Village leaders, Park officials, Buffer Zone community members and Gharial Conservation Breeding Center.

ii. Turtle Monitoring Survey (TMS, Pun et al. 2023**):** The survey were conducted in Rapti River of Park. The work divided into three sections of Golaghat to Lothar (approx. 68 km): First section- Golaghat to Kasara (19.68 km), Second section- Kasara to Sauraha (19.91km) and Third section- Saurah to Lothar (28.41 km). The geographic location of site are Golaghat

(27°33'47.58N 84°09'35.95E), Kasara (27°33'02.12N 84°19'32.60E), Saurah (27°34'25.58N 84°29'36.51E) and Lothar (27°35'08.02N 84°43'56.12E). The survey conducted at morning and day through fishing boat with the team consisting of five observers and two boatmen or/and a guide who belonged to the local ethnic group. The use of point count sighting of 20 minutes in each spot within the three sections along the paths or rivers with line transect. Binoculars, Camera and GPS were used to count, capture photographs and locate the turtle. Also, the record potential threats to turtle by direct observation.

iii. Turtle Nesting Survey (TNS): Field surveys of freshwater turtle nesting are crucial for understanding the reproductive ecology and population dynamics of the species. During the nesting season, researchers carefully select study areas known for their freshwater turtle populations; Armed with GPS devices for precise nest location marking, data sheets for systematic record-keeping, measuring tools, and digital cameras for documentation; Behavioral observations from a safe distance provide further insights into the nesting process (Campbell et al. 2013).

B. Phase II: Capacity Building

Monitoring training were conducted about 5 days. The training includes theory and field, which involve 10 turtle enthusiasts in each group of students, and local; learn about the ecology of Nepal's turtles, map reading and GPS, practical survey and conservation skills and identify species. An unofficial turtle conservation network form through program.

C. Phase III: Turtle Awareness Program (TAP, Appendix 1-4**)**:

i. Students Program: induction about turtles, their ecology, threats to turtle, importance of turtles conservation and student role in turtle conservation; organized different activities like drawing, essay and semi-structure questions to know the perception of student knowledge and attitude towards turtle. Target to involve more than 2000 students.

ii. Community Program: The programs teach and aware the community of the ecological importance of turtles living near to their surrounding and explicit the information regarding the rules and regulations related to protection of turtles. It covered at least one community in each site.

iii. Institutional Program: conduct in park offices and interested parties, where possible 10-15 people participate in each program.

iv. Awareness through Media:

a. 5 minute video publishes on a social media platform.
b. 1 page long article in the regional newspaper in Nepali/ English.
c. Extensive article about the project on an online news portal in Nepali/ English.

2.6 Data Analysis and Report Writing (Appendix 5-6)**:** All qualitative and quantitative data were analyzed Ms-Excel and other analytical tool. The map of study area and distribution map for the species recorded were produced using Arc GIS and Google Earth. A total of 2 reports are submitted within 1 year period in form of progress and final report.

2. Outcomes and Results

The project consists of four objectives such as status, distribution, nesting identify, capacity building and awareness program. The achieve these objectives, the project were carried field survey (social survey, monitoring survey, nesting survey), capacity building (students, local) and awareness program (school, community, institute) in near to the Rapti River habitat of Indian softshell turtle in CNP (both round). Furthermore, disseminate the project work through online and printed medium such as social site, newspaper, online portal and distribution of conservation materials. The project developed good linkage with local living to the turtle habitat. They are regularly inform us, if they get any incident or found species. The outcomes and results of the conservation work only in given below:

Fig. 6 (A-D). Project Design Round and 1 & 2.

3.1 Capacity building through training to students and local. (Fig. 7-8 and Table 1)

A total of 22 people (10 students and 12 local) were participated in the Turtle monitoring training. Both were trained separate group. The students were included with different subject and level from Campus and Colleges, the training was carried in 5 days (Fig. 7). The locals were included with different age, sex and professional people, carried in 1 day (Fig. 8). From this program, created unofficial turtle network, where they are regularly inform about the turtle incident, if they get any news or counter species from their surrounding. This activity was **fully achieved**.

Table 1. Training List of students and local

SN	Name	Institute/Other
	Student	
1	Muna Gauli	Balkumari College
2	Prajita Bhusal	Balkumari College
3	Prapti Timilsina	Balkumari College
4	Promisha Gurung	Saptagandaki Multiple Campus
5	Purnima Poudel	Balkumari College
6	Resa KC	Balkumari College
7	Roshan Thapa	Saptagandaki Multiple Campus
8	Sabina Subedi	Balkumari College
9	Sarmila Rayamajhi	Saptagandaki Multiple Campus
10	Sumita Poudel	Saptagandaki Multiple Campus
	Local	
1	Anita Bote	Local
2	Bishnu Mushar	Nature Guide
3	Laxmi Bote	Local
4	Pukar Basnet	Local
5	Resham Raj Rijal	Local
6	Sabina Lama	Local
7	Shiva Kumar Chaudhary	Nature Guide
8	Sunita Pariyar	Local
9	Samar Bahadur Kumal	Nature Guide
10	Umesha Dahal	Nature Guide
11	Parsu Ram Bote	Nature Guide
12	Pradip Bote	Nature Guide

Fig. 7 (A-C). Monitoring Training for Student.

Fig. 8 (A-C). Monitoring Training for Local.

3.2 Raise awareness and educational of turtle conservation program to improve the social acceptance of the species.

This portion covered 17 school, 4 community and 4 institute in Saurah, Kasara, Lothar and Meghauli (Fig. 42).

3.2.1 Students Program (Fig. 9-32 and Table 2-4)

Seventeen schools were selected from four sites in Saurah (6 schools, Fig. 9), Kasara (6 schools, Fig. 10), Lothar (2 schools, Fig. 11) and Meghauli (3 schools, Fig. 12). A total of 2,228 (22%) were attended the program out of 10,360 and conducted presentation, drawing, essay and questionnaire and provided prize to the winners of these activities (Table 2A-2C). The knowledge helps children to identify the causes of these problems and their possible solutions, all of this through reflection and a critical and autonomous way of thinking. We could recognize by looking at their drawing and essay that the turtle were not present, even though most of the kids live near or next to this place where the turtle lives. The view of the school program in Saurah (Fig. 14-19), Kasara (Fig. 20-25), Lothar (Fig. 26-27) and Meghauli (Fig. 28-30). Both round (128 winners) - Drawing (n=83, Fig. 31), Essay (n=33, Fig. 32A-B) and Questionnaire (n=12, Fig. 32C), where students male (n=56) and female (n=72) (Table 2A-2C).The students were also rated the program, where the result found that 94.8% said Good (Table 3, Fig. 13). The activities were **fully achieved**.

Fig. 9. School of TAP in Saurah- A. Bachchauli, B. Green, C. Jhuwani, D. Madhyamik, E. Malpur, F. Chitrasen.

Fig. 10. School of TAP in Kasara- A. Amar, B. Bal, C. Blue, D. Bright, E. Ganganagar, F. Laxmi.

A

B

Fig. 11. School of TAP in Lothar- A. Bhandara, B. Buddha.

A

B

C

Fig. 12. School of TAP in Meghauli- A. Janaki, B. Sajha, C. Saraswati.

Table 2A. Round 1-ITP in School.

SN	Name, Contact, Address, Website	Total Number		Coordinate		Range (m)	Class - Students	Activity			Time
		Staffs	Students	Latitude (N)	Longitude (E)			Question	Drawing	Essay	
	Saurah										
1	Shree Bachchauli Secondary School,Ratnanagar 6, Chitwan +977-56- 580005, 9849359296	22	315	27°58.394	84°49.457	200	6:31, 7:28 9:37 (**96**)	-	6-7	9	11:30AM
2	Green Society Public School, Ratnanagar 7, Saurah, Chitwan +977-56- 580206, 9855014219	30	493	27°58.202	84°49.460	170	6:25, 7:25 8:24, 9:27 (**101**)	-	6-7	8-9	2:00PM
3	Shree Madhyamik School, Ratnanagar, Chitwan 9855018488	24	550	27°57.7065	84°53.834	169	6:35 7:35 (**70**)	-	6-7	-	11:00AM
4	Shree Malpur Secondary School, Ratnanagar 7, Chitwan +977-56- 580173/ 9862546246	20	370	27°58.395	84°49.460	198	6:44, 7:35 8:30 (**109**)	-	6-8	-	2:00PM
5	Shree Jhuwani Secondary School, Ratnanagar 5, Jhuwani, Chitwan +977-56- 580151/9855027677	48	460	27°58.202	84°50.305	170	8-12: 120 6-9: 76 (**196**)	8-12	6	8	1:00PM
6	Shree Secondary School, Chitrasen, Ratnanagar 8, Chitwan +977-56-562816/985573141	23	375	27°59.669	84°50.0346	180	6-9 (**120**)	9-10	6-7	8	10:00AM
	Total	**167**	**2563**				**692** (30%)				
	Kasara										
1	Ganganagar Secondary School, Bharatpur 13, Chitwan +977-56-401133 ganganagarschool.edu.np/	27	435	27°34.914	84°22.387	173	6:30 7:30 8:34 (**94**)	-	6-7	8	12:00PM
2	Amar Secondary School, Bharatpur 22, Chitwan 9855011501	35	524	27°35.132	84°21.226	173	6-9: **120**	-	6-7	8-9	3:00PM
3	Blue Bird English Boarding School, Bharatpur 23, Chitwan, 9849638965	30	550	27°34.169	84°19.716	215	6:46, 7:35 9:34 (**115**)	-	6-7	8-9	10:00AM
4	Bright Star Secondary English Boarding School, Bharatpur 22, Chitwan, +977-56-401006	39	780	27°35.134	84°21.223	180	7A-B:57 8A-B:55 (**112**)	8	7	8	2:00PM
5	Bal Vidyashram English Boarding School, Bharatpur 22, Chitwan +977-56-401001	20	405	27°35.081	84°22.184	159	4-8: **137**	-	8	-	12-1PM
6	Laxmi Secondary School, Jagatpur, Bharatpur 23, Chitwan www.laxmimabijagatpur.edu.np	40	820	27°34.270	84°19.800	155	6-7: **130**	-	6-7	-	2:20-3:10PM
	Total	**191**	**3514**				**708** (20%)				
	All Total	**358**	**6077**				**1400**(23%)				

Table 2B. Round 2-ITP in School.

SN	Name, Contact, Address, Website	Total Number		Coordinate		Range (m)	Class - Students	Activity			Time
		Staffs	Students	Latitude (N)	Longitude (E)			Question	Drawing	Essay	
	Lothar										
1	Bhandara Secondary School, Rapti Chitwan +977-56-550011, 9845049980 https://shreebhandara.edu.np/	60	1467	27°35.9137	084°38.6602	198	6:52 7:58 (**110**)	-	6	7	11:00PM
2	Buddha Shanti Secondary School, Piple, Chitwan, +977-56-550476	45	900	27°35.5948	084°40.8217	216	6:100+, 7:70 (**170**)	**7**	6		01:00PM
	Total	**101**	**1916**				**558** (29%)				
	Meghauli										
1	Janaki Secondary School, Meghauli, Chitwan +977-56- 620328, 9845046544 http://www.janaki.edu.np/	42	850	27°34.7615'	084°13.8845'	134	6:60 7:60 8:100 (**220**)	-	6-8	-	12:00PM
2	Sajha Secondary School, Meghauli, Chitwan +977-9855014219	28	530	27°35.5856	E084°12.8905	133	6:35, 7:35 9:60 (**130**)	9	6	7	3:00PM
3	Saraswati Secondary School, Meghauli, Chitwan +977-056-694888, 9845085128	31	536	27°34.6063'	084°11.7791	134	5:21 6:28 7:69 9:90 (**208**)	-	5-8	9	10:00AM
	Total	**105**	**2367**				**280** (12%)				
	All Total	**206**	**4283**				**828**(19%)				

Table 3. TAP Rating by Students.

SN	School Name	Program Rating (%)		
		Good	Bad	None
		%	%	%
	Saurah			
1	Shree Bachchauli Secondary School	92	5	3
2	Green Society Public School	81	1	18
3	Shree Madhyamik School	100	-	-
4	Shree Malpur Secondary School	100	-	-
5	Shree Jhuwani Secondary School	100	-	-
6	Shree Secondary School, Chitrasen	100	-	-
	Kasara			
1	Ganganagar Secondary School	100	-	-
2	Amar Secondary School	100	-	-
3	Blue Bird English Boarding School	100	-	-
4	Bright Star Secondary English Boarding School	100	-	-
5	Bal Vidyashram English Boarding School	100	-	-
6	Laxmi Secondary School	100	-	-
Total (%)		**97.3**	**0.6**	**2.1**
	Lothar			
1	Bhandara Secondary School	84	-	16
2	Buddha Shanti Secondary School	94	2	4
	Meghauli			
1	Janaki Secondary School	74	26	-
2	Sajha Secondary School	92	5	3
3	Saraswati Secondary School	94	1	5
	Total (%)	**87.6**	**6.4**	**5.6**
17	**All (%)**	**94.8**	**2.4**	**2.8**

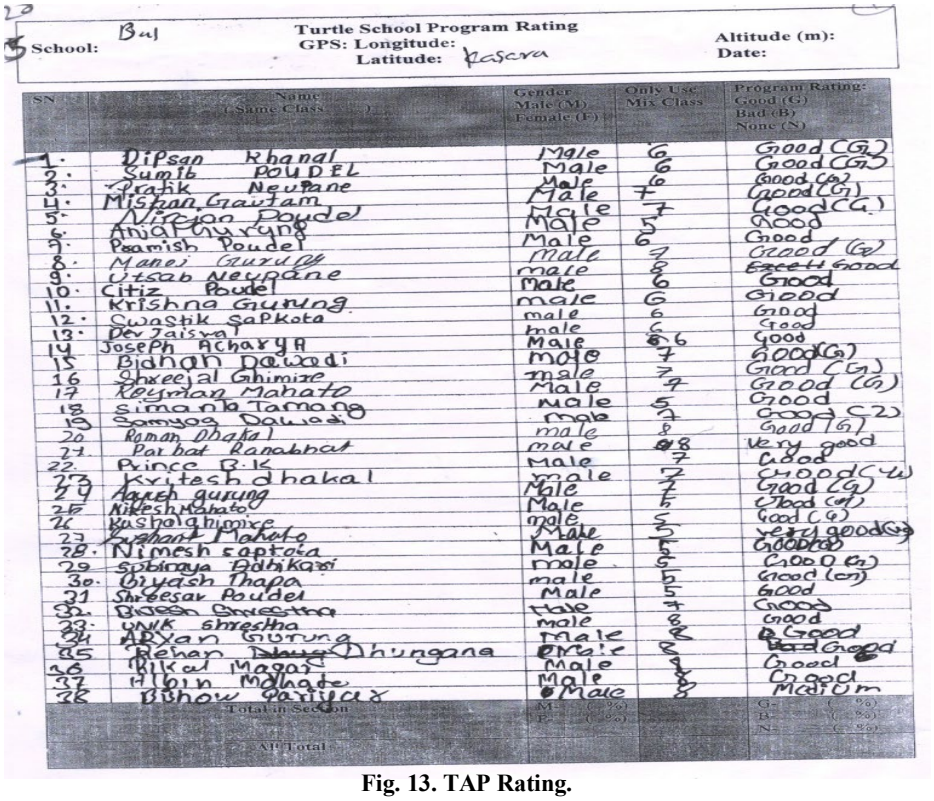


Fig. 13. TAP Rating.

Fig. 14 (A-C). Saurah TAP in Bachchhauli.

Fig. 15 (A-C). Saurah TAP in Green.

Fig. 16 (A-C). Saurah TAP in Jhuwani.

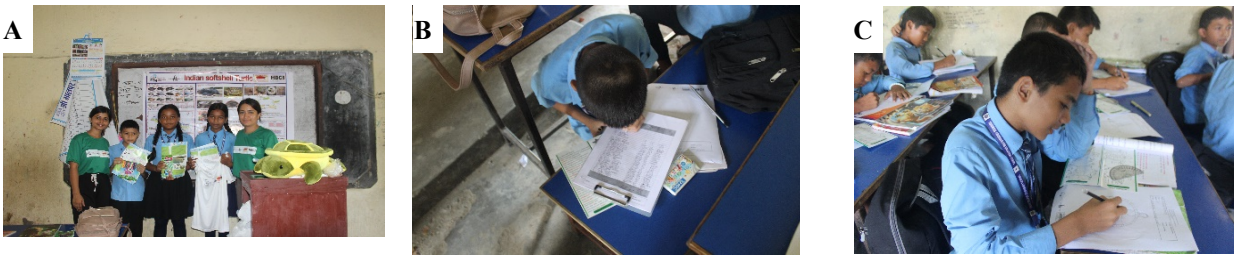


Fig. 17 (A-C). Saurah TAP in Madhyamik.

Fig. 18 (A-C). Saurah TAP in Malpur.

Fig. 19 (A-C). Saurah TAP in Chitrasen.

Fig. 20 (A-C). Kasara TAP in Amar.

Fig. 21 (A-C). Kasara TAP in Bal.

Fig. 22 (A-C). Kasara TAP in Blue.

Fig. 23 (A-C). Kasara TAP in Bright.

Fig. 24 (A-C). Kasara TAP in Ganganagar.

Fig. 25 (A-C). Kasara TAP in Laxmi.

Fig. 26 (A-C). Lothar TAP in Bhandara.

Fig. 27 (A-C). Lothar TAP in Bhuddha.

Fig. 28 (A-C). Meghauli TAP in Janaki.

Fig. 29 (A-C). Meghauli TAP in Sajha.

Fig. 30 (A-C). Meghauli TAP in Saraswati.

Table 4A. Winner students in TAP 2024 (Saurah).

SN	School Name Drawing 24, Essay 12, Ques 3 = 39	Winner Name with Activity (M-Male 14, F-Female 25)
1	Shree Bachchauli Secondary School	**Drawing** (Class: 6) 1.Kishan Chaudhary (M) 2. Namrata Chaudhary (F) 3. Sarika Chaudhary (F) **Drawing** (Class: 7) 1.Anjali Tamang (F) 2. Dipshika Bote (F) 3. Santosh Pariyar (M) **Essay** (Class: 9) 1.Anuska Subedi (F) 2. Anmesh Mahato (M) 3. Risha Chaudhary (F)
2	Green Society Public School	**Drawing** (Class: 6-7) 1. Suprem Thapa Magar (M) 2. Priskila Chaudhary (F) 3. Sital Mahato (F) **Essay** (Class: 8-9) 1. Prasamsha Pandey (F) 2. Aarushi Mahato (F) 3. Siddhika Giri (F)
3	Shree Madhyamik School	**Drawing** (Class: 6-7) 1. Aarav Dhakal (M) 2. Sulochana Bhandari (F) 3. Sangam Ale Magar (M)
4	Shree Malpur Secondary School	**Drawing** (Class: 6) 1. Nisha Kumari Shah (F) 2. Jenin Darai (F) 3. Abhiman Mahato (M) **Drawing** (Class: 7-8) 1. Bishwas Darai (M) 2. Suhana Tamang (F) 3. Suboth Mahato (M)
5	Shree Jhuwani Secondary School	**Drawing** (Class: 6) 1. Sony Mahato (F) 2. Aayush Praja (M) 3. Siman Mahato (M) **Essay** (Class: 8) 1. Arbina Mahato (F) 2. Anjal Shrestha (F) 3. Smarika Khanal (F)
6	Shree Secondary School, Chitrasen	**Drawing** (Class: 6-7) 1. Aryan Chaudhary (M) 2. Alex Mahato (M) 3. Aman Tamang (M) **Essay** (Class: 8) 1. Binu Kumal (F) 2. Ritika Mahato (F) 3. Rashib Thapa (M) **Questionnaire** (Class: 9) 1. Sakina Chaudhary (F) 2. Krihti Mahato (F) 3. Ristika Mahato (F)

Table 4B. Winner students in TAP 2024 (Kasara).

SN	School Name Drawing 34, Essay 12, Ques 3= 49	Winner Name with Activity (M-Male 23, F-Female 26)
1	Ganganagar Secondary School	**Drawing** (Class: 6-7) 1.Anup Tamang (M) 2. Ishak BK (M) 3. Sapana BK (F) 3. Sandhya Chhetri (F) **Essay** (Class: 8) 1.Isha BK (F) 2. Nirjala Thapa Magar (F) 3. Ujwal Dawadi (M)
2	Amar Secondary School	**Drawing** (Class: 6-7) 1. Sujita Ghale (F) 2. Anjal Thapa (M) 3. Kishan Bhandari (M) **Essay** (Class: 8-9) 1. Sujsriya KC (F) 2. Jenisha Gurung (F) 3. Sinal Chaudhary (F)
3	Blue Bird English Boarding School	**Drawing** (Class: 6-7) 1. Dibas Dhakal (M) 1. Tripti Sunar (F) 2. Kiran Pariyar (M) 2. Manisha Basnet (M) 3. Khushi Ramdam (F) 3. Dipren Lamichhane (M) **Essay** (Class: 8-9) 1. Nana Giri (F) 1. Shouna Giri (F) 2. Apson Giri (M) 2. Diya Basnet (F) 3. Ashbin Bhandari (M) 3. Susan Ramdam (M)
4	Bright Star Secondary English Boarding School	**Drawing** (Class: 7) 1. Binita Pandey (F) 1. Anil Kumar Shrestha (M) 2. Rajan Thapa (M) 2. Puspa Ghale (F) 3. Aaryan Mahato (M) 3. Prasiddhi Rana Magar (F) **Questionnaire** (Class: 8) 1. Anuska Basnet (F) 2. Mima Pandey (F) 3. Aayusha Gurung (F)
5	Bal Vidyashram English Boarding School	**Drawing** (Class: 4-8) 1. Sulakshana Pandit (F) 1. Swechchna Dhungana (F) 1. Shreeya Poudel (F) 2. Biyash Thapa (M) 2. Hemanta Tamang (M) 2. Dipsan Gautam (M) 3. Sujika Dahal (F) 3. Susana Tamang (F) 3. Siya Tamang (F)
6	Laxmi Secondary School	**Drawing** (Class: 6-7) 1. Anurag Chalise (M) 1. Basanta BK (M) 2. Sushil Sunar (M) 2. Prashant Sharma (M) 3. Samir Pariyar (M) 3. Binita Giri (F)

Table 4C. Winner students in TAP 2025 (Lothar & Meghauli).

SN	School Name- Lothar Drawing 7, Essay 3, Ques 3 = 13	Winner Name with Activity (M-Male 5, F-Female 8)
1	Bhandara Secondary School	**Drawing** (Class: 6) 4. Bijesh Bhujel (M) 5. Ishan Mahato (M) 6. Yogita Chaudhary (F) 3. Salija Bal (F) **Essay** (Class: 7) 1. Saru Rai (F) 2. Alisha Pariyar (F) 3. Pritam Darai (M)
2	Buddha Shanti Secondary School	**Drawing** (Class: 6) 1. Sumita Maya Muktan (F) 2. Gaurab Chepang (M) 3. Prince Tamang (M) **Questionnaire** (Class: 7) 1. Salina Rana Magar (F) 2. Sadikshya Pariyar (F) 3. Sanju Maya Chepang (F)
SN	**School Name- Meghauli** Drawing 18, Essay 6, Ques 3 = 13	**Winner Name with Activity** **(M-Male 14, F-Female 13)**
1	Janaki Secondary School	**Drawing** (Class: 6-8) 1. Aaditya Gautam (M) 1. Sugam Khatri (M) 1. Chandani Tamang (F) 2. Roshani Sunar (F) 2. Anuragee Bohara (F) 2. Sadikshya BK (F) 3. Srijan Bhattarai (M) 3. Sulab Bhattarai (M) 3. Ritika BK (F)
2	Sajha Secondary School	**Drawing** (Class: 6) 1. Dilisha Rana Magar (F) 2. Mamata Kumal (F) 3. Bibek GC (M) **Essay** (Class: 7) 1. Raisa Bhusal (F) 2. Angel Kumal (F) 3. Soloman Mahato (M) **Questionnaire** (Class: 9) 1. Riya Sapkota (F) 2. Samir Mahato (M) 3. Sagar Mahato (M)
3	Saraswati Secondary School	**Drawing** (Class: 6-7) 1. Prajun Gadal (M) 1. Devit Kumal (M) 2. Saurab Kumal (M) 2. Anuja Darai (F) 3. Subash Kandel (M) 3. Sakin Mahato (M) **Essay** (Class: 9) 1. Barsha Kumal (F) 2. Pratik Adhikari Chhetri (M) 3. Sumina Kumal (F)

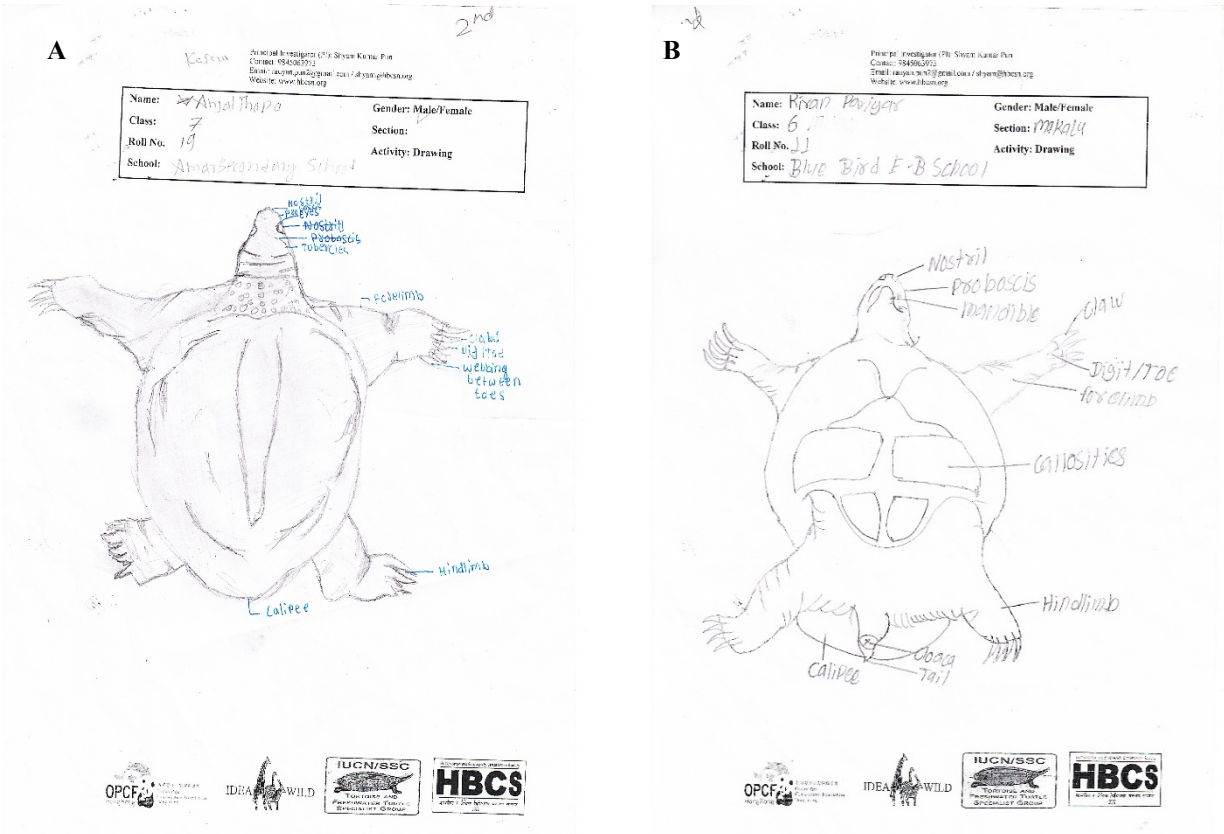


Fig. 31 (A-B). Winner Drawing.

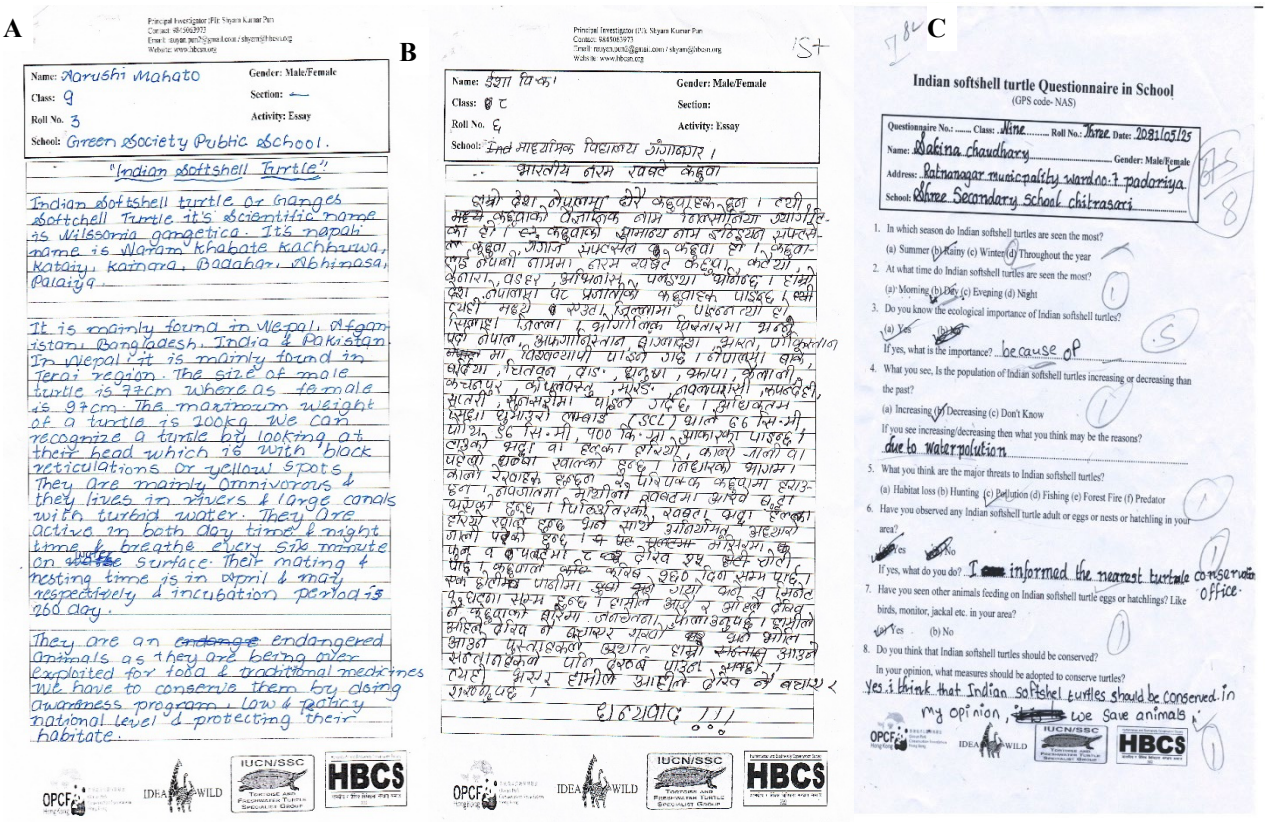


Fig. 32. A-B. Winner Essay, C. Questionnaire

Turtle Questionnaire: (Fig. 32 C)

The total of 2,228 students from 17 schools were participate in this activity and also awarded the winner student who did well in questionnaire (Table 2A- 2C). The questionnaire confirmed that turtle occur in this area. Based on questionnaire, we found that children's conservation awareness was rather poor. Most of the respondents could not distinguish different turtle species found in Nepal but few were known about the turtle play important role in ecosystem. Students were eager to learn more about the importance of turtle in the surrounding and more TAP could enhance the student involvement in conservation of turtle. This section was fully achieved. The below showed the result of that surveyed.

 # <u>Questionnaire School Report</u>

1. **In which season do Indian softshell turtles are seen the most?**
   (a) Summer (b) Rainy (c) Winter (d) Throughout the year

Ans 1. Summary and Rainy season are the most seen turtle (Table 5).

Table 5. Turtle seen Season in both round.

Round 1	Round 2
a. 57%	a. 32%
b. 37%	b. 25%
c. 6%	c. 21%
d. 0%	d. 22%

2. **At what time do Indian softshell turtles are seen the most?**
   (a) Morning (b) Day (c) Evening (d) Night

Ans 2. Day time is the most seen turtle (Table 6).

Table 6. Turtle seen Time in both round.

Round 1	Round 2
a. 15%	a. 16%
b. 42%	b. 57%
c. 23%	c. 23%
d. 20%	d. 4%

3. **Do you know the ecological importance of Indian softshell turtles?**
   (a) Yes (b) No
   If yes, what is the importance? .....

Ans 3. Yes- 69%, No- 31%. The most of the children thought that turtles are ecological importance. There are reasons to be given by children for Yes:

i. Clean and protect environment, ii. Balance food chain in environment.

4. **What you see, Is the population of Indian softshell turtles increasing or decreasing than the past?**
   (a) Increasing (b) Decreasing (c) Don't Know
   If you see increasing/decreasing then what you think may be the reasons?
   .....

Ans 4. There is 59% of the children seen that the population of turtles decreasing than the past. The reason of the turtle population decreasing:

i. Food
ii. Deforestation
iii. Hunting
iv. Global warming
v. Pet
vi. Pollution
vii. Traditional medicine

5. **What you think are the major threats to Indian softshell turtles?**
   (a) Habitat loss (b) Hunting (c) Pollution (d) Fishing (e) Forest Fire (f) Predator
   Ans 5. The most of children assume that the major threats to turtles are hunting, habitat loss and pollution loss (Fig. 33).

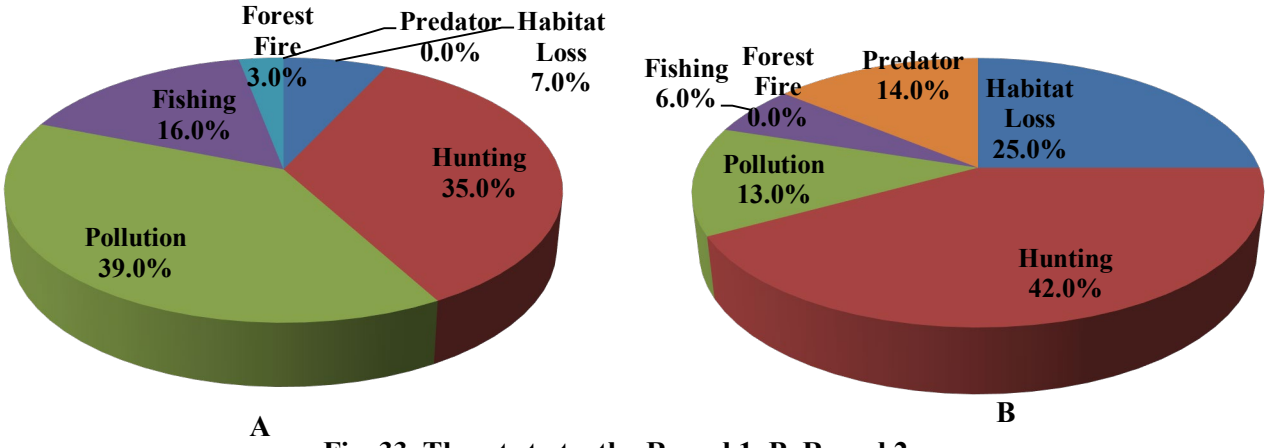


Fig. 33. Threats to turtle: Round 1, B. Round 2.

6. **Have you observed any Indian softshell turtle adult or eggs or nests or hatchling in your area?**
   (a) Yes (b) No
   If yes, what do you do? .....

Ans 6. Children have not observed any turtle adult or eggs or nests or hatchling in their area is 82% and 18% of children observed turtle and they did as

i. Keep them to safe place.
ii. Observe turtle's behaviour.
iii. Capture picture for identification.

7. **Have you seen other animals feeding on Indian softshell turtle eggs or hatchlings? Like birds, monitor, jackal etc. in your area?**
   (a) Yes (b) No

Ans 8. Children have not seen other animals feeding on turtle eggs or hatchings 81%, seen 19%.

8. **Do you think that Indian softshell turtles should be conserved?**
   In your opinion, what measures should be adopted to conserve turtles?

....

Ans 8. According to children, some measures should be adopted to conserve turtle:

i. Stop hunting
ii. Habitat protection
iii. Education and awareness program
iv. Strict rules and regulation
v. Control pollution

3.2.2 Community Program (Table 7-8 and Fig. 34-37)

A total of 88 local with different field and ethnic group were attended in the program from Saurah (n=24), Kasara (n=22), Lothar (n=21) and Meghauli (n=21). The activity was **fully achieved**.

Table 7. ITP in Communities and Offices.

SN	Name, Contact, Address, Phone, Email, Website.	Total Number		Coordinate		Range (m)	Time
		Staffs/ People	Present	Latitude (N)	Longitude (E)		
1	Saurah- NTC		18	27°34.4071	084°29.9425	187	01:00PM-2:30PM
2	Kasara- CNP		33	27°32.9203	084°19.7589	169	01:00PM-2:30PM
3	Kasara- Community		22	27°33.5246	084°20.0067	161	01:00PM-2:30PM
4	Saurah- Community		24	27°34.4071	084°29.9425	187	01:00PM-2:30PM
Total			**97**				
1	Lothar-Khagendramalli CNP		23	27°34.4115	084°39.0557	204	11:00PM-12:30PM
2	Meghauli- CNP		15	27°34.5157	084°13.6925	135	11:00PM-12:30PM
3	Lothar- Community		21	27°34.9025	084°13.7332	246	01:00PM-2:30PM
4	Meghauli- Community		21	27°34.9025	084°13.7332	131	12:00PM-1:30PM
Total			**80**				

Table 8A. Community Program Record- Saurah and Kasara.

SN	Name	Address	SN	Name	Address
	Saurah			**Kasara**	
1	Basant Mahato	Ratna nagar 6	1	Bir Bahadur Bogati	Bharatpur 23
2	Tula Ram Chuv	Ratna nagar 8	2	Yabita Gurung	Bharatpur 23
3	Narayan Rijal	Ratna nagar 6	3	Ritu Bote	Bharatpur 23
4	Dilip Subedi	Ratna nagar 6	4	Sasmita Harijan	Bharatpur 23
5	Ramesh Mahato	Ratna nagar 6	5	Sujata Mahato	Bharatpur 23
6	Sankar Mahato	Ratna nagar 6	6	Shanti Pariyar	Bharatpur 23
7	Sukmit Chaudhary	Ratna nagar 6	7	Safal Pariyar	Bharatpur 23
8	Beeru Chaudhary	Ratna nagar 6	8	Sisir Nepali	Bharatpur 23
9	Bish haru Nepali	Ratna nagar 6	9	Dipa Mahato	Bharatpur 23
10	Ram Ratna Mahato	Ratna nagar 6	10	Aarmaya Gurung	Bharatpur 23
11	Madhari Mahato	Ratna nagar 6	11	Sunita Bote	Bharatpur 23
12	Rita Chaudhary	Ratna nagar 6	12	Kaya Magar	Bharatpur 23
13	Geeta Mahato	Ratna nagar 6	13	Pabitra Sunar	Bharatpur 23
14	Jayaramiya Mahato	Ratna nagar 6	14	Nishan Chaudhary	Bharatpur 23
15	Sudar Mahato	Ratna nagar 6	15	Bame Bote	Bharatpur 23
16	Sudip Malla	Ratna nagar 6	16	Tilak Pariyar	Bharatpur 23
17	Sanjok Kumal	Ratna nagar 7	17	Sani Pariyar	Bharatpur 23
18	Nabin Bhatta	Ratna nagar 7	18	Rike Nepali	Bharatpur 23
19	Pakuli Mahatto	Ratna nagar 6	19	Bir Bahadur Bogate	Bharatpur 23
20	Bhajani Chaudhary	Ratna nagar 6	20	Sher Bahadur Chhetri	Bharatpur 23
21	Lalita Chaudhary	Ratna nagar 6	21	Saranwar Shrestha	Bharatpur 23
22	Ram Krishna Mahato	Ratna nagar 5	22	Bubidhmaya Pariyar	Bharatpur 23
23	Anil Kumar Gurung	Ratna nagar 7			
24	Om Prakash Thapa	Ratnanagar 6			

Table 8B. Community Program Record- Lothar and Meghauli.

SN	Name	Address	SN	Name	Address
	Lothar			Meghauli	
1	Laxmi Thapa	Lothar 6	1	Man Kumari Mahato	Meghauli 27
2	Nisha Soti Magar	Lothar 6	2	Shanta Kumari Mahato	Meghauli 27
3	Iman Singh	Lothar 6	3	Dil Maya Mahato	Meghauli 27
4	Aasha Shrestha	Lothar 6	4	Bal Kumari Mahato	Meghauli 27
5	Shraswoti Upreti	Lothar 6	5	Shobha Mahato	Meghauli 27
6	Kabita Thapa Magar	Lothar 6	6	Buddha Mahato	Meghauli 27
7	Umraoti Kumari	Lothar 6	7	Pangi Kumari Mahato	Meghauli 27
8	Leela Rai	Lothar 6	8	Asha Mahato	Meghauli 27
9	Padma Chaudari	Lothar 6	9	Suku Maya Mahato	Meghauli 27
10	Krishna Maya Waiba Tamang	Lothar 6	10	Sarita Mahato	Meghauli 27
11	Krishna Bhatta	Lothar 6	11	Biswa Mahato	Meghauli 27
12	Nishan Magar	Lothar 6	12	Jamuna Mahato	Meghauli 27
13	Samar Thapa	Lothar 6	13	Babita Mahato	Meghauli 27
14	Rubina Rai	Lothar 6	14	Sita Mahato	Meghauli 27
15	Suman Chaudari	Lothar 6	15	Anjali Mahato	Meghauli 27
16	Puspa Gole Bamjan	Lothar 6	16	Sudip Mahato	Meghauli 27
17	Sabita Bamjan	Lothar 6	17	Shant Kumari Mahato	Meghauli 27
18	Alisha Bhatta	Lothar 6	18	Rampatiya Mahato	Meghauli 27
19	Lalita Magar	Lothar 6	19	Dipti Mahato	Meghauli 27
20	Keshav Chaudari	Lothar 6	20	Sunita Mahato	Meghauli 27
21	Uma BK	Lothar 6	21	Sakamtiya Mahato	Meghauli 27

Fig. 34 (A-C). TAP Community- Saurah.

Fig. 35 (A-C). TAP Community- Kasara.

Fig. 36 (A-C). TAP Community- Lothar.

Fig. 37 (A-C). TAP Community- Meghauli.

3.2.3 Institutional Program (Fig. 38-41 and Table 9)

A total of 89 official staffs from four different institute were selected as NTNC, Saurah (n=18), CNP Headquater, Kasara (n=33), CNP Khagendramalli, Lothar (n=23) and CNP Meghauli (n=15). This program help to show the situation of the turtle in their areas to main stakeholder for long term conservation action. This activity was **fully achieved**.

Fig. 38 (A-C). TAP Institute- NTNC.

Fig. 39 (A-C). TAP Institute- CNP, Kasara.

Fig. 40 (A-C). TAP Institute- CNP, Lothar.

Fig. 41 (A-C). TAP Institute- CNP, Meghauli.

Table 9A. Institute Program Record- Saurah and Kasara.

SN	Name	Institute	Post	SN	Name	Institute	Post
	NTNC Saurah				CNP Kasara		
1	Ramesh Darai	NTNC- BCC	Wildlife Technician	1	Bhesh Bahadur Pandey	Shree Naya Gorakh BN	Army- Captain
2	Tirtha Lama	NTNC- BCC	Wildlife Technician	2	Ram Babu Pandey	Shree Naya Gorakh BN	Army- Jamdar
3	Dr. Amir Sadaula	NTNC- BCC	Veterinary Officer	3	Lal Bahadur Khatri	Shree Nature Conservation School	Army- W02
4	Ramsharan Bhatta	NTNC- BCC	Museum Assistant	4	Prabhakar Khadka	Shree Nature Conservation School	Army- SST
5	Phiru Lal Thapa	NTNC- BCC	Wildlife Technician	5	Hari Bahadur Sapkota	Shree Nature Conservation School	Army- SST
6	Binod Darai	NTNC- BCC	Wildlife Technician	6	Kham Bahadur Bharti	Shree Nature Conservation School	Army- Laptain
7	Prabhu Kachhadira	NTNC- BCC	Phanit	7	Lalmani Ghimire	Shree Nature Conservation School	Private
8	Sunil Kandel	NTNC- BCC	Helper	8	Khusi Pradhan	Shree Nature Conservation School	Private
9	Ramji Chaudhary	NTNC- BCC	Subha	9	Pralad Tamatta	Shree Naya Gorakh BN	Army- SGT
10	Smarika Bhatarai	NTNC- BCC	Mahuta	10	Lakshiram Budhathoki	Shree Naya Gorakh BN	Army- SGT
11	Shree Narayan Dhami	NTNC- BCC	Phanit	11	Usha Kumari Chaudhary	CNP	Game Scout
12	Baliram Kachiony	NTNC- BCC	Mahuta	12	Tika Pun Magar	CNP	Game Scout
13	Lal Bahadur Mahatora	NTNC- BCC	Wildlife Technician	13	Mamata Sharma	CNP	Ranger
14	Dipak Srivastav	NTNC- BCC	Helper	14	Amrita Pudasaini	CNP	Ranger
15	Debaka Shiwakoti	NTNC- BCC	Senior Administrative Assistant	15	Chhatra Khadka	CNP	Ranger
16	Anil Prasai	NTNC- BCC	Senior Conservation Officer	16	Abinash Thapa Magar	CNP	Conservation Officer
17	Parmanand Gary	NTNC- BCC	Senior Administrative Assistant	17	Rabin Shahi	CNP	Kharidar
18	Rishi Ram Subedi	NTNC- BCC	Senior Natural Resources Assistant	18	Haresh Kumar Sahani	CNP	Kharidar
				19	Subidha Paudel	CNP	Senior Games Scout
				20	Mahesh Neupane	CNP	Conservation Officer
				21	Suresh Tamang	CNP	Driver
				22	Saru Mahato	CNP	Driver
				23	Krishna BK	CNP	Games Scout
				24	Devendra Chaudhary	CNP	Pachhuwa
				25	Surendra Chaudhary	CNP	Game Scout
				26	Ramesh Kumar Chaudhary	CNP	Game Scout
				27	Singa Bahadur Darji	CNP	Senior Game Scout
				28	Jeewan Bist	Shree Naya Gorakh BN	Senior Game Scout
				29	Tham Bahadur Gurung	Shree Naya Gorakh BN	Game Scout
				30	Umesh Khatri	Shree Naya Gorakh BN	Game Scout
				31	Surendra Tamang	CNP	Game Scout
				32	Prakash Bhatt	CNP	Senior Game Scout
				33	Deeepak Kumar Yadav	CNP	Baridar

Table 9B. Institute Program Record- Lothar and Meghauli.

SN	Name	Institute	Post	SN	Name	Institute	Post
	CNP Lothar				CNP Meghauli		
1	Ganesh Thapaliya	Khagendramalli Community Office	Member	1	Prava Kumal	Barahi Jungle Lodge	Naturalist
2	Bhim Prasad Mahato	Khagendramalli Community Office	Vice-President	2	Sudikshya Kumal	Barahi Jungle Lodge	Naturalist
3	Chandra Bikram Chaudhary	Ratnagar ward 10	President	3	Sakina Chaudhary	Barahi Jungle Lodge	Naturalist
4	Yogesh Dhakal	CNP	Ranger	4	Manish Limbu	Meghauli Game Scout	Naturalist
5	Ramsarand Baral	Khagendramalli Community Office	Member	5	Tara Devi Giri	Meghauli Game Scout	Game Scout
6	Om Prasad Yadav	CNP	Ranger	6	Rajendra Bahadur Shah	Meghauli Game Scout	Game Scout
7	Ashok Kumar Chhetri	CNP	Hudra	7	Netra Bahadur Thapa	Nepal Army	Army SGT
8	Hari Krishna Karki	Nepal Army	Army	8	Bibek Paswan	Nepal Army	Army SGT
9	Pragya Prasad	Nepal Army	Army	9	Krishna Bahadur Nepali	Nepal Army	Army SGT
10	Baburam Chaudhary	Khagendramalli Community Office	Member	10	Karsang Lama	Nepal Army	Army SGT
11	Bishnu Prasad Bhurtel	Khagendramalli Community Office	Member	11	Sagar Bishwakarma	Barahi Jungle Lodge	Naturalist
12	Dandyani Aryal	Khagendramalli Community Office	Secretary	12	Puspa Raj Mahato	Barahi Jungle Lodge	Driver
13	Min Prasad Dhakal	Katar Health Post	Staff	13	Buddhisara Chapagai	Meghaulisa	Accountant
14	Manti Mahato	Katar Health Post	Staff	14	Rajan Mahato	Hotel	Driver
15	Meera Darai	Khagendramalli Community Office	Member	15	Prabha Khatri	Meghauli BZ community	Assistant
16	Ishwori Aryal	Khagendramalli Community Office	Member				
17	Kabita Chaudhary	Khagendramalli Community Office	Member				
18	Nagraj Pathak	Khagendramalli Community Office	President				
19	Bikram Chaudhary	Shree Devidhan Community Forest	President				
20	Gaurab	-	-				
21	Binod Chaudhary	-	-				
22	Suraj Chaudhary	-	-				
23	Shanti Thapaliya	-	-				

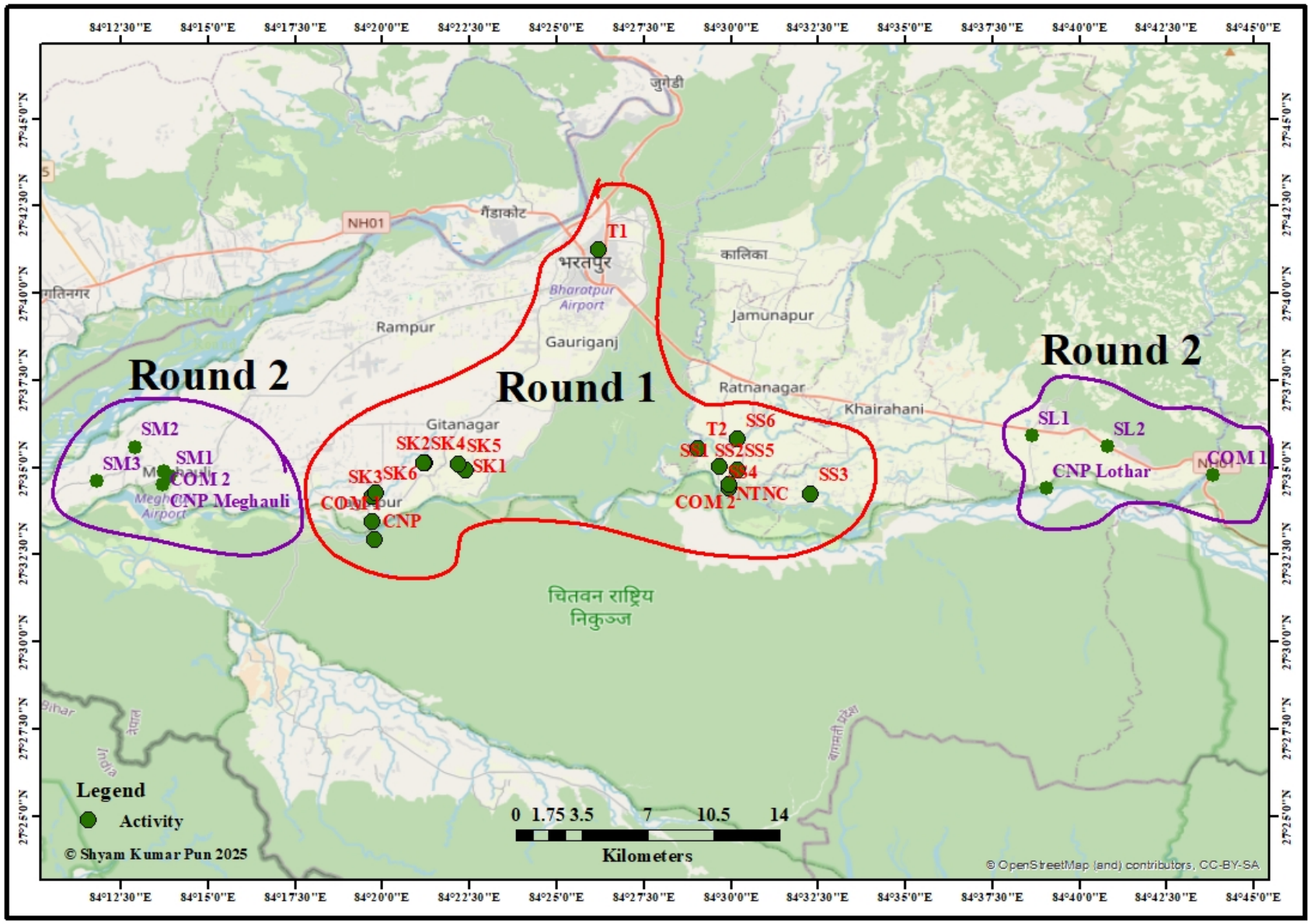


Fig. 42. Map of TAP: COM- Community, SK- School Kasara, SL- School Lothar, SM- School Meghauli, SS- School Saurah, T- Training.

3.2.4 Awareness through Media (Fig. 43-45)

The aim of this portion as to disseminate people about knowledge of Indian softshell turtle and its important through printed material (pictorial guide book, banner, brochure, poster and t-shirts), installation of 3 signboard in three different location (Lothar, Kasara and Meghauli) and media (social, newspaper and online portal). This section was **fully achieved**.

a. Social Platform (Fig. 43 A-B)

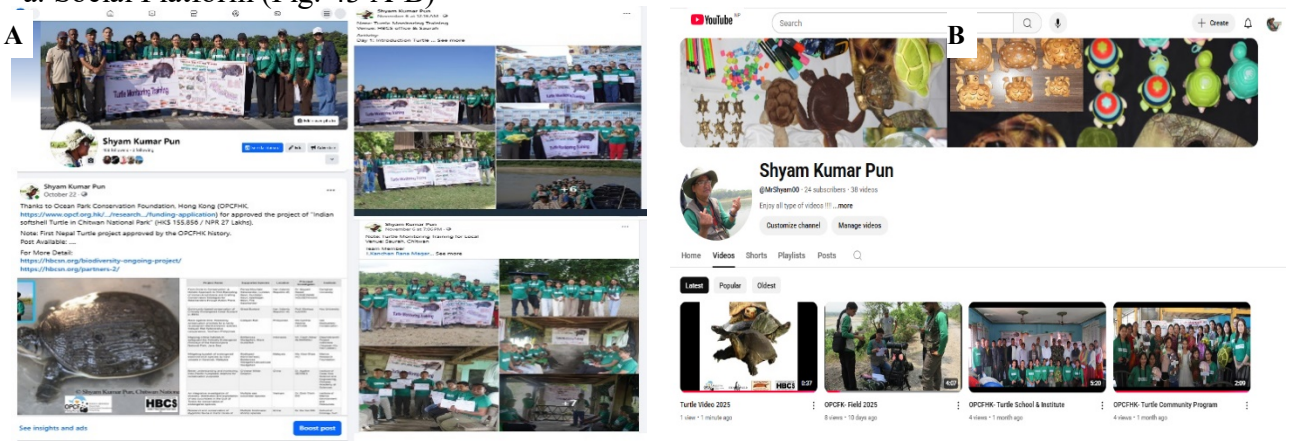


Fig. 63. A- www.facebook.com/shyamkumar.pun, B. www.youtube.com/@MrShyam00

b. Newspaper (Fig. 43C)- **https://media.chitwanpost.com.np/assets/20241209114904/cpost-12-9-2024.pdf**
Lokantra Sandesh & Namaste Bihani

c. Online Portal (Fig. 43D)- **https://saurahaonline.com/2024/12/15/253802/**
https://www.nepalraftar.com/2024/12/15/240630/
https://www.chitwanpost.com.np/20241209-12859

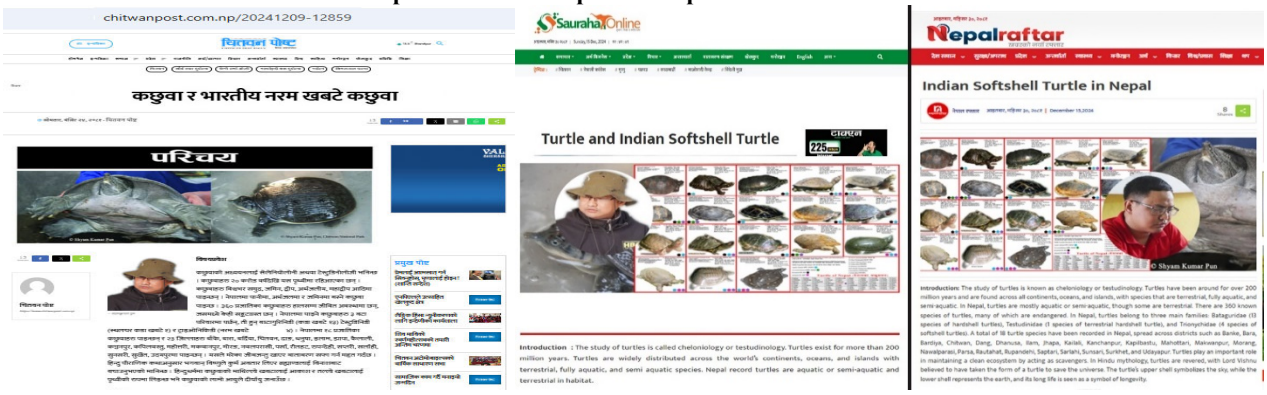


Fig. 43. Media – A-B. Social Platform, C. Article on Newspaper, D. Article on Online

d. Conservation Material (Fig. 44 A-G)

Fig. 44 (A-G). Conservation Materials- A. Toys, B. Certificate, C. Banner, D. Guide Book, E-F. Brochure, G. Poster/Signboard.

A

B

C

Fig. 45 (A-C). Signboard Installation- A. Lothar- Khagendramalli Post, B. Kasara- BBCFUG, C. Meghauli- Golaghat.

3. Recommendations

i. The periodic study on tortoise should be done in more areas on the research level of conservation strategies with SMART (specific, measurable, achievable, realistic and time-bound).
ii. Development of molecular markers for species identification and molecular phylogeny to analyze the evolutionary history.
iii. The study of harmful microorganisms such as viruses, bacteria, parasites and fungi have not yet been investigated on turtles.
iv. To introduce conservation breeding program for the turtles in different region of Nepal.
v. Citizen science approach that builds local capacity for conservation by promoting science in local context is essential and could achieve more in sustainable manner.
vi. Training should be given to custom officials for species identification.
vii. The conservation awareness program in large scale.

4. References

1. Ahmed, M.F. and Das, A. 2010. Tortoises and Turtles of Northeast India saving them from Extinction, 86pp.
2. Basumatary, R. and Sharma, D.K. 2013. The turtle fauna of Kaziranga National Park, Assam, India with notes on natural history and conservation status 6: 59-72.
3. DNPWC. 2019. Annual Report 2018-2019 for Chitwan National Park and Buffer Zone. Department of National Parks and Wildlife Conservation, Kathmandu, 102 pp.
4. Ernst, K., Shah, K.B., and Schleich, H. 1997. Schildkroten. Schultz in Nepal. ("Turtle protection in Nepal" in German"). REPTILIA, Technical Magazine, Germany 2(5), 7:43-48.
5. Hailey, A. 2000. The effects of fire and mechanical habitat destruction on survival of the tortoise *Testudo hermanni* in northern Greece. Biological Conservation 92: 321-333.
6. Joyce, W.G. 2017. A review of the fossil record of basal Mesozoic turtles. Bulletin of the Peabody Museum of Natural History. 58 (1): 65-113.
7. Kanwal, R. and Khan, M.Z. 2018. A study of status and recent conservation measures of Sindh province freshwater turtles. Journal of Entomology and Zoology Studies, 6(2): 953-960.
8. Karki, J. B., Pandey, B. Jnawali, S. R., Shrestha, R., Pradhan, N.M.B., Lamichhane, B.R. and Jhala, Y.V. 2015. Estimating the abundance of Nepal's largest population of tigers *Panthera tigris*. Oryx 49(1): 150-156.
9. Kästle, W. and Schleich, H. 2016. A Children's Book- Turtles, ARCO-Nepal, 55 pp.
10. Kästle, W., Rai, K. and Schleich, H. 2013. Field Guide of Amphibians and Reptiles of Nepal. ARCO- Nepal, 609 pp.
11. Khadka, B.B. and Lamichhane, S. 2020. First distribution records of *Pangshura tentoria, Chitra indica* and *Nilssonia gangetica* in the major rivers of Chitwan National Park, Nepal. Herpetology Notes 13.
12. Micheli-Campbell, M. A., Baumgartl, T., Booth, D. T., Campbell, H. A., Connell, M., and Franklin, C. E. (2013). Selectivity and Repeated Use of Nesting Sites in a Freshwater Turtle. Herpetologica, 69(4), 383–396.
13. Moll, E. O. 1997. Effects of habitats alternation of river turtles of tropical Asia with emphasis on sand mining and dams. Proceedings: Conservation of Restoration and Management of Tortoises and Turtles- An International conference. The New York Turtle and Tortoise Society, 295-300.

14. National Population and Housing Census (National Report)" (2011). Central Bureu of Statistics, Government of Nepal, November 2012. Archived from the original (PDF) on 18 April 2013. Retrieved 10 August 2022.
15. NTNC-BCC and CNP (2020). A Checklist of Fauna and Flora in and around Chitwan National Park. Biodiversity Conservation Center, Natioanl Trust for Nature Conservation and Chitwan National Park, Chitwan, 74 pp.
16. Pun, S.K., Standford, C.B. and Khadka, B.B, (2023). Distribution Records and Conservation status of Turtle in Chitwan, Nepal. Journal of Institute of Science and Technology, 28(1), 25-30.
17. Rashid, S.M.A. and Khan, S.M.H. 2000. Overview of turtle trade in Cambodia. In: van Dijk, P.P., Stuart, B.L. and Rhodin, A.G.J. (Eds.). Asian Turtle Trade: Proceedings of a Workshop on conservation and Trade in Freshwater Turtles and Tortoises in Asia. Chelonian Conservation Monograph 2:77-85.
18. Red Data Book of the Fauna of Nepal (NRDB). 1995. Biodiversity Profiles Project Technical Publication No. 4. Department of National Parks and Wildlife Conservation Ministry of Forests and Soil Conservation, His Majesty's Government of Nepal, Kathmandu, 43 pp.
19. Sarkar, D., Mital, A., Mandal, R., Kumar, R.S., and Talukdar, G. 2019. Community ponds: a tool for conservation, A case study of *Nilssonia gangetica* (Cuvier, 1825) in Kashipur village, Uttar Pradesh, India. Herpetology Notes, 12: 631-636.
20. Schleich, H. and Kästle, W. 2002. Amphibians and Reptiles of Nepal: Biology, Systematics, Field Guide. A.R.G. Gantner Verlag, Germany, 1295 pp.
21. Shah, K. B. and Tiwar, S. 2004. Herpetofauna of Nepal- A Conservation Companion. IUCN Nepal, Kathmandu, 237 pp.
22. Shi, Hai-Tao (2015). Identification Manual for the conservation of turtles in China, 174pp.
23. Shrestha, T.K. 2001. Herpetology of Nepal: A Field Guide to Amphibians and Reptiles of Trans Himalayan Region of Asia. Mrs. Bimala Shrestha, Kathmandu, Nepal, 280 pp.
24. Sriprateep, K., Aranyavalai, v., Aowphol, A., and Thirakhupt, K. 2013. Population structure and reproduction of the elongated tortoise *Indotestudo elongata* (Blyth, 1853) at Ban Kok Village, Northeastern Thailand. Tropical Natural History 13:21–37.
25. Thapa, T. B. 2011. Habitat Suitability Evaluation for leopard (*Panthera pardus*) using Remote Sensing and GIS in and around Chitwan National Park, Nepal (PhD Thesis). Saurashtra University, Rajkot, Gujarat, 228 pp.
26. Tikader, B.K and Sharma, R.C. 1985. Handbook: Indian Testudines. Zoological Survey of India, Calcutta, 156 pp.
27. Turtle Taxonomy Working Group [Rhodin, A.G.J., Iverson, J.B. Bour, R., Fritz, U., Georges, A., Shaffer, H.B., and van Duk, P.P.]. 2021. Turtles of the World: Annotated checklist and Atlast Taxonomy, Synonymy, Distribution and Conservation Status (9th Ed.). In: Rhodin, A.G.J., Iverson, J.B., van Dijk, P.P., Stanford, C.B., Goode, E.V., Buhlmann, K.A. and Mittermeier, R.A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs 8:1-472.
28. Whitaker, N. 2009. Captive breeding of the critically endangered red-crowned roof turtle *Batagur kachuga* (Gray 1831) at the Madras Crocodile Bank Trust. In: Vasudevan, K. (Ed.). Freshwater Turtles and Tortoises of India. ENVIS Bulletin: Wildlife and Protected Areas. Dehradun: Wildlife Institute of India, 143–148.

Appendices

Appendix 1: Indian softshell turtle School Questionnaire (GPS code- NAS)

Questionnaire No.: ..... Class: …….. Roll No.: ……. Date: .....

Name: ..... Gender: Male/Female

Address: .....

School: .....

1. In which season do Indian softshell turtles are seen the most?
   (a) Summer (b) Rainy (c) Winter (d) Throughout the year
2. At what time do Indian softshell turtles are seen the most?
   i. Morning (b) Day (c) Evening (d) Night
3. Do you know the ecological importance of Indian softshell turtles?
   i. Yes (b) No
   If yes, what is the importance? .....
4. What you see, Is the population of Indian softshell turtles increasing or decreasing than the past?
   i. Increasing (b) Decreasing (c) Don't Know
   If you see increasing/decreasing then what you think may be the reasons?
   .....
5. What you think are the major threats to Indian softshell turtles?
   i. Habitat loss (b) Hunting (c) Pollution (d) Fishing (e) Forest Fire (f) Predator
6. Have you observed any Indian softshell turtle adult or eggs or nests or hatchling in your area?
   i. Yes (b) No
   If yes, what do you do? .....
7. Have you seen other animals feeding on Indian softshell turtle eggs or hatchlings? Like birds, monitor, jackal etc. in your area?
   i. Yes (b) No
8. Do you think that Indian softshell turtles should be conserved?
   In your opinion, what measures should be adopted to conserve turtles?

....

Appendix 2: Turtle School Program Rating.

School:	**GPS: Longitude:** **Latitude:**	**Altitude (m):** **Date:**

S.No.	Name (Same Class)	Gender Male (M) Female (F)	Only Use Mix Class	Program Rating: Good (G) Bad (B) None (N)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
Total=		M- F-		G- B- N-

Appendix 3: Indian softshell Turtle Program (ITP) in School

(Q= Questionnaire, D= Drawing, E=Essay, Br= Brochure, Po= Poster, T= T-shirt)

S.N.	Name, Contact, Address, Phone, Email, Website.	Total Number		Coordinate		Range (m)	Activity			Distribution			Date	Day	Time
		Staffs	Students	Latitude (N)	Longitude (E)		Q	D	E	Br	Po	T			
1															
2															
Total															

Appendix 4: Indian softshell Turtle Program (ITP) in Communities and Offices.

(I= Interview, Q= Questionnaire, Br= Brochure, Po= Poster, T= T-shirt)

S.N.	Name, Contact, Address, Phone, Email, Website.	Total Number		Coordinate		Range (m)	Activity		Distribution			Date	Day	Time
		Staffs/ People	Present	Latitude (N)	Longitude (E)		I	Q	Br	Po	T			
1														
2														
Total														

Appendix 5: Nepal Turtle Record

DD = Data Deficient, E=Endemic, LC=Least Concern, NT=Near Threatened, VU= Vunerable, EN= Endangered, CR= Critically Endangered, NE=Not Evaluated, V= Vulnerable, S= Susceptible

SN	Scientific Name	Common Name	Nepali Name	Nepali Status	IUCN, CITES	Nepal District No.	World Distribution	Remarks D=Diurnal; N=Night C=Crepuscular
Order: Testudines/ Chelonia ; Family: Bataguridae/Geomydidae --- 7 Genera 13 Species; Asiatic turtles/Asiali Kachhuwaharu								
1	*Cyclemys gameli* Fritz, 2008	Assam leaf turtle	Thotari, Dhawase kanthe paate kachhuwa	-	NT, II	4	Nepal, Bangladesh, Bhutan, India, Myanmar,	-
2	*Geoclemys hamiltonii* Gray, 1830	Spotted Pond Turtle, Black Pond Turtle, Black Spotted Turtle, Hamilton's Terrapin	Thopale pokhari kachhuwa	-	EN,I	-	Nepal, Bangladesh, India, Pakistan	without exact locality D, C
3	*Hardella thurjii* Gray, 1831	Eastern crowned river turtle	Thotari, Brahminy khole kachhuwa	S	EN, II	10,15,75	Nepal, Bangladesh, India, Pakistan	Completely aquatic, without exact locality-D,C
4	*Batagur dhongoka* Gray, 1834	Dhond roofed turtle , Three striped roofed turtle	Thotari, Dhond chhane kachhuwa	S	CR, II	35,42	Nepal, Bangladesh, India	Not well documented, Highly aquatic, Food and traditional medicine- Bask
5	*Batagur kachuga* Gray, 1831	Painted roofed turtle, Red-crowned river turtle	Rangin chhane kachhuwa	V	CR, I	35, 42, 66, 71	Nepal, Bangladesh, India	Western and Central Terai, but confirming needed, Food and traditional medicine- Bask
6	*Melanochelys tricarinata* Blyth, 1856	Tricarinate hill turtle	Thotari, Padani kachhuwa, Tindharke pahadi kachhuwa	V	EN, I	10,31,32, 33,34,35, 42, 44,47, 66,71,75	Nepal, Bangladesh, Bhutan, India	Entirely terrestrial, deciduous (sheddig leaves annually)- N, C
7	*Melanochelys trijuga indopeninsularis* Annadale, 1913	Eastern black turtle, Bengal black turtle	Kalo pani kachhuwa, padani kachhuwa	S	LC, II	10, 15,35, 42, 44, 47, 66, 71, 75	Nepal, Bangladesh, India	Food and medicine-N, Bask
8	*Morenia petersi* Anderson, 1879	Indian eyed turtle, Indian ocellated turtle	Thotari, Baldhyangre kachhuwa	S	EN, II	44	Nepal, Bangladesh, India	Only Gaindatal, (doubtful)- D,N
9	*Pangshura tentoria flaviventer* Günther, 1864	Yellow bellied tent turtle	Pahelo bhude dhuri kachhuwa	-	LC, II	4, 10, 15, 42, 66, 71	Nepal, Bangladesh, India	Heavily caught by fisherman for food- D,N
10	*Pangshura tentoria circumdata* Mertens, 1969	Pink-ringed terrapin	Gulabi kanthe kachhuwa	-	LC,II	4, 10, 15,66	Nepal, India	Only eastern Nepal- D,N
11	*Pangshura smithii smithii* Gray, 1863	Brown/Pale footed roofed turtle, Smith's roofed terrapin	Thotari, Khaire dhuri kachhuwa	S	NT, II	4, 10, 15	Nepal, Bangladesh, India, Pakistan	Food and traditional medicine- D,N
12	*Pangshura smithii pallidipes* Moll, 1987	Pale footed brown roofed turtle	Pahelo khutte chhane kachhuwa	S	NT, II	66	Nepal, Bangladesh, India	Food and traditional medicine- D,N

13	*Pangshura tecta* Gray, 1831	Indian roofed turtle, Indian sawback turtle	Dhond, Bharatiya dhurikachhuwa	S	VU,I	10, 20, 35, 42, 44, 47, 66, 71, 75	Nepal, Bangladesh, India, Pakistan	Food and medicine- D,N
Family: Testudinidae --- 1 Genus 1 Species; Tortoises/Bhui kachhuwaharu								
14	*Indotestudo elongata* Blyth, 1853	Elongated tortoise, Yellow headed tortoise	Thotari, Hadaiya, Bhainkachhuwa, Pahelo tauke/Sunn kachhuwa	S	CR, II	3, 4,14, 32, 33, 34, 35, 42, 44, 47, 64, 66, 71, 75	Nepal, Bangladesh, Bhutan, Cambodia, India, Laos, Malaysia, Myanmar, Thailand, Vietnam	Sal forests, meat and traditional medicine- D
Family: Trionychidae --- 3 Genera 4 Species; Softshell turtles, Naram khabate kachhuwaharu								
15	*Nilssonia gangetica* Cuvier, 1825	Indian soft shell turtle	Naram khabate kachhuwa, Kataiya, Kainra, Badahar, Abhinasa, Palaiya (Tharu)	V	EN, I	4, 9, 10, 15, 20, 35, 42, 44, 47, 60, 65, 66, 71, 75	Nepal, Afghanistan, Bangladesh, India, Pakistan	Food and medicine, survive without food for more than a year- D,N
16	*Nilssonia hurum* Gray, 1831	Indian peacock soft shell turtle	Mayurpangkhi naram khabate kachhuwa, Kataiya, Katakhiri, Badahar,	S	EN, I	4, 9, 10, 15, 20, 31, 35, 42, 44, 47, 65, 66, 71, 75	Nepal, Bangladesh, India, Pakistan	Food and medicine-N
17	*Chitra indica* Gray, 1831	Narrow headed soft shell turtle	Sagaru tauke naram khabate kachhuwa, Badahar, Bathar, Badhar, Gynorhiya	S	EN, II	4, 10, 15, 35, 42, 66, 71	Nepal, Bangladesh, India, Pakistan	Nepal largest soft shell turtle, Food and medicine- D,N
18	*Lissemys punctata andersoni* Webb, 1980	North Indian flapshell turtle	Dhakani khabate kachhuwa, Putali kachhuwa, Goraiya, Matihara kachhuwa, Kubadi kachhuwa, Pher, Sewai	S	VU, II	4, 9, 10, 14, 15, 20, 21, 22, 31, 32, 33, 34, 35, 42, 44, 47, 60, 64, 65, 66, 71, 75	Nepal, India, Bangladesh, Myanmar, Pakistan	Highly exploited due to easy availability (utilized), Food and medicine- D,N

Source: TTWG 2021, NRDB 1995, www.iucnredlist.org (IUCN 2024) and https://checklist.cites.org/#/en (CITES 2024)

1.Taplejung	2. Panchthar	3.Ilam	4. Jhapa	5.Sankhuwasabha	6. Bhojpur	7. Dhankuta	8. Tehrathum	9. Morang	10. Sunsari
11.Solukhumbu	12.Okhaldhunga	13. Khotang	14. Udayapur	15. Saptari	16. Siraha	17. Dolakha	18. Ramechhap	19. Sindhuli	20. Dhanusa
21.Mahottari	22. Sarlahi	23. Sindhupalchok	24. Kavre	25. Bhaktapur	26. Lalitpur	27. Kathmandu	28. Rasuwa	29. Nuwakot	30. Dhading
31. Rautahat	32. Bara	33. Parsa	34. Makwanpur	35. Chitwan	36. Gorkha	37. Lamjung	38. Tanahu	39. Manang	40. Kaski
41. Syangja	42. Nawalparasi	43. Palpa	44. Rupandehi	45. Gulmi	46. Arghakhanchi	47. Kapilbastu	48. Mustang	49. Myagdi	50. Parbat
51. Baglung	52. Dolpa	53. Mugu	54. Jumla	55. Kalikot	56. Humla	57. Rukum	58. Rolpa	59. Pyuthan	60. Dang
61. Salyan	62. Jajarkot	63. Dailekh	64. Surkhet	65. Banke	66. Bardiya	67. Bajura	68. Accham	69. Bajhang	70. Doti
71. Kailali	72. Darchula	73. Baitadi	74. Dadeldhura	75. Kanchanpur	**Nepal District**				

Appendix 6: Nepal Turtle Morphometric

SN	Turtles cm → IUCN/CITES	Shrestha 2001	Shah & Tiwari 2004	Kästle 2013	Kästle 2016	CRF (vary)	Wiki	IUCN	CITES	COP (vary)	Tikader 1985	Ahmed 2010	Hai 2013	Basumatary 2013	TTWG 2021	Size (Max)
1	***Cyclemys oldhamii*** Gray, 1863 **NE/II**	-	C 24 P 21 W 17.5	C 24 P 21	24	-	-	-	36	-	-	-	24	-	M 24.1 F 26	**M 24.1** **F 26**
2	***Geoclemys hamiltonii*** Gray, 1830 **EN/I**	-	-	-	35 5 kg	CL40.5 5.2 kg	41	40.5 6 kg	36	-	31	-	35 7 kg	M CCL40, PL 31 F CCL27, PL 20	M 39.2 F 40.5	**M 39.2** **F 40.5** **6 kg**
3	***Hardella thurjii*** Gray, 1831 **EN/II**	-	M 17.8 F 61	43.5x31x20 LxWxH	50 M 17	CL47.2 10.5 kg	46	-	-	-	20	-	53	CCL 51 Pl 45 10 kg	M 20.5 F 65.3	**M 20.5** **F 65.3** **10.5 kg**
4	***Batagur dhongoka*** Gray, 1834 **CR/II**	-	M 25.5 F 40.6	48x35x17.5 LxWxH	48x35x17. 5 LxWxH	-	-	M 26 F 48	M 26 F 48	M 26 F 48	20	48	-	-	M 26 F 48	**M 26** **F 48** **25 kg**
5	***Batagur kachuga*** Gray, 1831 **CR/I**	-	M 30 F 50	M 29x22.1x10 .9 LxWxH M 3.1 kg	F 56x32x22 LxWxH F 22 kg	-	56 25 kg	M 29 F 56	M 29 F 56	M 29 F 56 25 kg	39	-	-	-	M 29 F 56	**M 30** **F 56** **25 kg**
6	***Melanochelys tricarinata*** Blyth, 1856 **EN/I**	-	M 17.4/14.0 F 14.6/13.5 C/P	16	14.6 10.1 6.7 L xWxH	17.4	-	-	15	-	17	-	16	CCL 22.5 CCW 20 PW 12.5 PL 16.6	M 19.6 F 18.5	**M 19.6** **F 18.5** **461.5 gm**
7	***Melanochelys trijuga indopeninsularis*** Annadale, 1913 **LC/II**	-	C 33.5 W 23.0	34	33.5 23 14.5 LxWxH	34.2	38-45	33-43	-	-	34	-	50	-	M 34.2 F 26.2	**M 34.2** **F 26.2** **760 gm**
8	***Morenia petersi*** Anderson, 1879 **EN/II**	20 300 gm	M 19.4/ 820 g F 22.2/ 1.15kg	M 19.4 F 22.2 1.15kg	20	18-22.2 1.15kg	M 12 F 20	-	-	-	-	-	24	-	M 19.4 F 26	**M 19.4** **F 26** **1.15 kg**
9	***Pangshura tentoria flaviventer*** Günther, 1864 **LC/II**	-	L 7.4 W 6.3	C 7.4x6.3 LxW	20	-	27	-	M 14 F 27	M 14 F 27	19	-	-	M CCL11 PL 9 F CCL 16 PL 12	M 17.9 F 20.4	**M 17.9** **F 27**
10	***Pangshura tentoria circumdata*** Mertens, 1969 **LC/II**	-	M 7.7-8.8 F 18-27.1	M 8.8 F 27	M 8.8 F 27	-	27	-	M 14 F 27	-	-	19	-	M CCL 11 PL 9 F CCL 16 PL 12	M 8.8 F 27.1	**M 14** **F 27.1**

11	***Pangshura smithii smithii*** Gray, 1863 **NT/II**	-	M 10-10.8 F 15-23	M 10.8 F 23 2 kg	23 12 1.2 kg	-	20	-	M 10 F 23	M 10 F 23	23	-	M 12 F 23	CCL 21 PL 19	M 12.8 F 24	**M 12.8 F 24 2 kg**
12	***Pangshura smithii pallidipes*** Moll, 1987 **NT/II**	-	M 10-10.8 F 15-23	M 10.8 F 23 2 kg	-	-	20	-	M 10 F 23	M 10 F 23	23	-	M 12 F 23	CCL 21 PL 19	M 10.8 F 23	**M 10.8 F 22.3 2 kg**
13	***Pangshur tecta*** Gray, 1831 **VU/I**	-	M 5.8-7.1/48-67 gm F 24/ 1120g	M 7.1 F 24 67-1120 gm	23	-	23	-	C 18	-	23	-	25	M CCL 11 PL 9 F CCL 25 PL 20	M 27.6 F 33.9	**M 27.6 F 33.9 1.1 kg**
14	***Indotestudo elongata*** Blyth, 1853 **CR/II**	-	M 25/ 28.35 F 28/ 32.90 C/kg	M 33 F 29	Hatch 4.5-5 3.2 gm	36	30 3.5 kg	20-35 >1 kg	-	-	27	SCL 27.5 PL 23.5 PW15.7	27.5	-	M 38 F 31	**M 38 F 32.9 3.5 kg**
15	***Nilssonia gangetica*** Cuvier, 1825 **EN/I**	45	M 42.5x29.8 F 46x32.5 LxW	94 100 kg	89 x 75 L x W	-	94	-	45	-	45	-	70	-	M 77 F 94	**M 77 F 94 100 kg**
16	***Nilssonia hurum*** Gray, 1831 **EN/I**	60	M 39-45.5 F 24.5-41	60	M 45.5 F 41 9.1 kg	60	-	-	60	-	60	-	60	CCL 47 CCW 33 PL 18 SL 24	M 45.5 F 60	**M 45.5 F 60 9.1 kg**
17	***Chitra indica*** Gray, 1831 **EN/II**	80 J 8-17.5	18.30 265 kg	C 115 250 kg	100 100 kg	110/57 kg	-	-	183	-	90	-	115 120 kg	CCL 16.2 CCW 15 SL 29	M 61.5 F 99	**M 61.5 F 115 250 kg**
18	***Lissemys punctata andersoni*** Webb, 1980 **VU/II**	M 17.5 F 27.5	M 16.2 F 35	35 5.2 kg	-	M 23 F 35 Hatch 3.6-3.7	24-37	-	28	-	24	-	27 7 kg	-	M 23 F 37	**M 23 F 37 7 kg**

CRF= Chelonian Research Foundation, COP= Conference of Parties, M= Male, F= Female, J= Juvenile, C= Carapace, P= Plastron, L= Length, W=Width, H= Height,