Status and Conservation of Fishing Cat *Felis viverrina* in and around Koshi Tappu Wildlife Reserve, Nepal

Fishing Cat *Felis viverrina*

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Executive Summary

This report reveals to document the population and conservation status of Fishing Cat *Felis viverrina* at Koshi Tappu Wildlife Reserve and its adjoining areas, east Nepal from January 2011 to January 2012.

Fishing Cat is a medium-sized wild cat of the wetlands of South and Southeast Asia. It is enlisted as "endangered" on the IUCN Red List of Threatened Species and in Appendix II of CITES. Fishing Cat is primarily distributed in wetland habitats, which are increasingly being settled, degraded and converted into other landforms. The population of Fishing Cat is declining throughout its range. To date, no detail study has been carried out to find out its status, distribution and conservation in Nepal.

The major goals of the study were to find out current population, distribution of Fishing Cat in Koshi Tappu Wildlife Reserve (KTWR) by using camera trap, sign survey and gathered information of local perception towards the species by questionnaire survey and conducting Fishing Cat conservation awareness program by different educational activities among local people.

After reconnaissance survey in February 2011-April 2011, ten camera traps were deployed in the four blocks of the study area namely Kushaha, Madhuban, Prakashpur and Jabdi for two months (19th April 2011- 19th June 2011) along with sign survey in the track of camera trapping.

A total of 208 people were interviewed to share the information about Fishing Cat and its associated threats. Different educational activities and meetings have been carried out for three months in local schools and stake holders.

Some concrete evidences of Fishing Cat have been found from the study. Nine individuals of Fishing Cat and seven other mammalian species were trapped in camera. Signs were recorded by taking photographs. Socio-economic status of the local people was very poor and about 76% of respondent have seen Fishing Cat.

Wetland destruction, human settlement, hunting for food and fur trade, conflict between local people and the species, putting live wires around the ponds, changing agricultural practices, construction of aquaculture facilities and increased use of pesticides in agricultural fields are the potential threats to the species that has been identified by our study.

This study helped to change the people's negative perception toward Fishing Cat and its conservation. A total of 600 people of the local communities particularly in school students, fish farmers, cattle herders and community forest users groups have been participated in Fishing Cat conservation awareness program.

Introduction

Nepal has a great wealth of mammals; as many as 208 species are reliably reported (Baral and Shah, 2008). Taxonomic study on the mammals of Nepal was started by Hodgson (1831, 1833, 1835, 1836, 1837, 1838, 1839, 1841, and 1844). The contribution of Hodgson on the mammals of Nepal and Sikkim actually laid the foundation of Himalayan mammals. Later on, (Blyth, 1844) and (Horsefield, 1855) added several species to the list of mammals of Nepal. (Hinton and Fry, 1923) listed 34 genera and 44 species of mammals from Nepal. (Biswas and Khajuria, 1955 and 1957) collected small mammals from Khumbu region of eastern Nepal and described several species of rodents and pikas. (Abe, 1982) reported 28 species of small mammals from central Nepal. However, the information on Nepal's small mammals is scanty and scattered. Of the 208 mammal species in Nepal, only for large charismatic animals eg, Rhino, Tiger, Leopard, Gaur etc are concerned.

Fishing Cat *Felis viverrina,* a medium sized wild cat which inhabits the peninsular region of India, Nepal, Sri Lanka, Malaysia, Thailand, Java and Pakistan. One major portion of its distribution is found in the Himalayan foothill region of India and Nepal (Choudhury, 2003). It is found in swamps, oxbow lakes, reed grass wetlands and marshy areas of southern Nepal. It is nocturnal in behaviour and feeds predominantly on fish therefore plays a significant role in aquatic ecosystem (Haque and Vijayan, 1993). Besides, it feeds on crabs, rodents, birds, hard-shelled freshwater mollusks and most other small animals of its reach (Sterndale 1884, Phillips 1935, de Alwis 1973, Bhattacharyya 1988, Sanyal 1992). Birds are the least frequently taken prey item in Chitwan (D. Smith in litt., 1993). In Chitwan, Fishing Cats have been observed to tiger, as well as livestock carcasses (D. Smith pers. comm.). The species is listed as endangered in IUCN Red List of Threatened Species and Appendix II in CITES (IUCN, 2011).

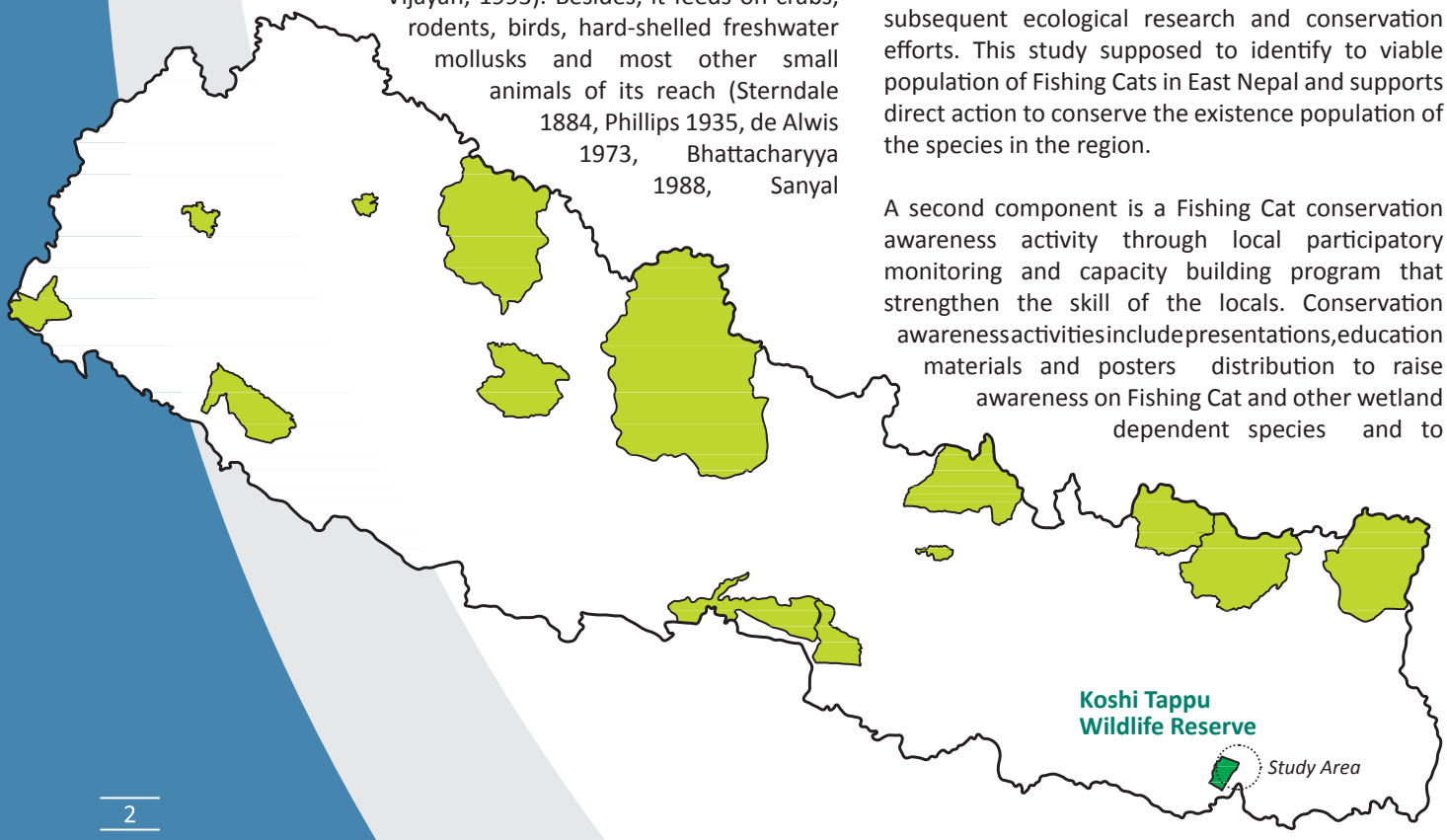
Wetland destruction is the primary threat faced by the Fishing Cats (Dugan, 1993). In addition, human settlement, hunting for food and fur trade (Sunquist and Sunquist 2002, Anonymous, 2005) changing agricultural practices, construction of aquaculture facilities, wood-cutting and increased use of pesticides in agricultural fields are the secondary threats (Nowell and Jackson, 1996). These activities bring out adverse impacts to the prey species of the cat, the top predators of smaller wetland ecosystem.

There is little concern about the species status in Southeast Asia where it is very infrequently encountered and believed to be declining. Only one report on the status, distribution of fishing cat has been included in IUCN/SSC (Bhattacharyya, 1989).

A study has been conducted within and around Koshi Tappu Wildlife Reserve between N 26.65° to N 27° 55.958' and E 87° 4.962' to E 87 °4.927'. A study aimed to find the status, habitat utilization, potential threats to species and to create conservation awareness in and around the settlements of Koshi Tappu Wildlife Reserve, Nepal.

The study has two components each contributing to Fishing Cat conservation in the study area. The first is a detailed ecological study of Fishing Cats in their natural habitat. It provides baseline information to biologists and government authorities to plan subsequent ecological research and conservation efforts. This study supposed to identify to viable population of Fishing Cats in East Nepal and supports direct action to conserve the existence population of the species in the region.

A second component is a Fishing Cat conservation awareness activity through local participatory monitoring and capacity building program that strengthen the skill of the locals. Conservation awareness activities include presentations, education materials and posters distribution to raise awareness on Fishing Cat and other wetland dependent species and to



encourage sustainable use of the wetlands.

Objectives

- To find out the status and distribution of Fishing Cat in KTWR and its vicinity,
- To find out the extent of habitat utilized by the species,
- To find out threats to species and
- To come up with practical conservation measures and to disseminate the knowledge through educational activities

Study Area

Koshi Tappu Wildlife Reserve(KTWR) and its adjacent areas have been selected as study areas. The KTWR including the buffer zone, covers an area of 348km², however the core area is only 175km² in rectangular shape. The existing vegetation of the reserve consists of diverse physiographic types, which harbors 658 species of plants (CSUWN, 2011) including submerged, aquatic, floating and tall reed grassland. The forest types include *Dalbergia-Acacia, Bombax* and the grassland includes *Typha, Vetivera, Phragmites, Saccharum* etc.

Four study sites namely Kushaha, Madhuban, Prakashpur and Jabdi VDC around KTWR were chosen for the study purpose.

The first study site has been chosen in Kusaha which extends between N 26°37.196' to N 26°37.319'and E 87°01.845' to E 87°01.923' with elevation ranging from 72 m to 105 m. Kusaha is headquarter of Koshi Tappu Wildlife Reserve, the first Ramsar site of Nepal.

Madhuban was the second study site which is located between N26.65° to E87.07°in the Koshi zone of south-eastern Nepal.

The study has been carried out between N 26°41.340' to N 26°41.424' and E 87°4.962'–E 87°4.927' with altitude ranging from 81 m to 143 m in Prakashpur, a buffer zone area of Koshi Tappu Wildlife Reserve.

The study site in Jabdi has been located at N 26° 21.075' to N 27° 55.958' and E 87°09.452'–E 86°54.237' with elevation ranges from 101m to 117m.

Due to the presence of diverse types of wetlands, floodplain and large forest area, it represents variety of wildlife species, though it was established mainly for the protection of endangered wild water buffalo *Bubalus arnee*. The climatic condition favours tropical monsoon in the area.

Fig:
Study sites

Chapter 1

Presence of Fishing Cat at Koshi Tappu Wildlife Reserve

Methodology

During a reconnaissance survey in February 2011 to April 2011, the study team came across all the available trails and selected potential sites for intensive camera trapping based on sign abundance namely Kushaha, Madhuban, Prakashpur and Jabdi.

When sighting of this endangered cat was confirmed by the villagers, further possible evidences of their presence were confirmed by the use of camera trapping and sign survey.

Camera Trapping

Areas along streams or water sources such as swamps springs and mineral licks were selected for camera trapping to survey population of the species. In this method, transects of shorter than 1 km length were laid down on the available trails. Trap stations were selected based on sign abundance indicative of frequent activity to maximize the capture probability of the concerned species.

Fig: Camera trapping at one of the study sites

The GPS points of the trap stations were saved in the GPS

Ten cameras were placed in each block of four sites from 19th April 2011 to 19th June 2011 for a total of 60 days. Each camera was placed at 30–50 cm above ground with minimum distance between two consecutive cameras at 500 – 1000 m. The interval between successive triggers was kept at 15 secs. They were operated for 5 pm to 8am to avoid human movement during daytime.

Fig: Installation of camera trapping in the study area

Only independent images of species were counted as valid and habitat characteristics of the site were noted down. The identification of a species was done by following (Baral and Shah, 2008). These images were also used to analyze the activity pattern of some species.

Sign Survey

Sign survey has been done along a route of camera trapping at the edge of reed grass patches, rice paddies fields, mangrove areas and along banks of ponds. Camera and GPS were used to take some photographs and GPS reading of locations. This sign provide reliable data for the presence of Fishing Cat and other species in the area.

Result

The Fishing Cat along with other mammals were trapped in camera during the study.

Table 1 Diversity of mammals in and around of Koshi Tappu Wildlife Reserve 2011

Family	Scientific name	Common name	IUCN Red list
Felidae	*Felis chaus*	Jungle Cat	Least Concern
Leporidae	*Lepus nigricollis*	Indian Hare	Least Concern
Viverridae	*Viverricula indica*	Small Indian Civet	Least Concern
Hystricidae	*Hystrix brachyura*	Malayan Porcupine	Least Concern
Canidae	*Canis aureus*	Golden Jackal	Least Concern
Elephantidae	*Elephas maximus*	Asian Wild Elephant	Endangered
Bovidae	*Bubalus arnee*	Wild Water Buffalo	Endangered

Felis chaus Jungle Cat

Lepus nigricollis Indian Hare

Viverricula indica Small Indian Civet

Hystrix brachyura Malayan Porcupine

Canis aureus Golden Jackal

Elephas maximus Asian Wild Elephant

Bubalus arnee Wild Water Buffalo

Discussion

Some identifying features of Fishing Cat

- Size: It is larger than Leopard Cat and Jungle cat.
- Colour: It has olive brown coat, short legs and stocky body.
- Features:

a. It has black elongated spots in parallel lines over its back, merging into longitudinal stripes on neck; pale cheeks have two darker stripes.
b. Face markings are distinguished-two pure white longitudinal stripes extending across the forehead running to the inner corner of their eyes.
c. Fishing Cats are stout bodied, with a broad head and a short tail ringed in black and ending in a black tip.

Conclusion

Some concrete evidences of Fishing Cat occurrence and breeding at Koshi Tappu Wildlife Reserve in the form of photos, sign survey and local people sightings have been obtained. Analysis of the size, pelage patterns especially facial markings, marking on the ventral side of the tail, body characteristics, condition and behaviour indicated that these captures represented potentially nine individual Fishing Cats.

Fig: Kushaha I
Fishing cat was distinct by vertebral marking white colour inside ear and bushy and dark at the tip of tail.

Fig: Madhuban I
This fishing cat was featured with hind limb, tail tip, white ventral site and it seems to be male.

Fig: Madhuban II
It is characterized by vertebral marking and tail marking which is different from the fishing cat at Kushaha and Madhuban I respectively.

Fig: Madhuban III
It is distinguished by vertebral marking from Kushaha and Madhuban II and left forelimb with dark stripes.

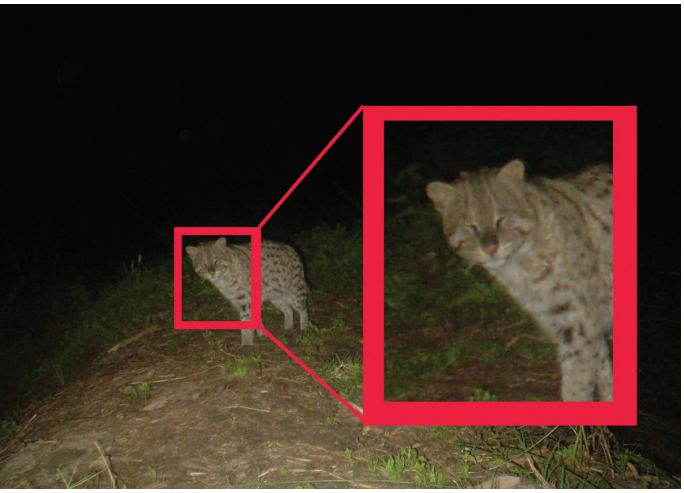


Fig: Madhuban IV
Facial marking is different

Fig: Madhuban V
Vertebral marking is distinct

Fig: Prakashpur I
Facial marking different

Fig: Prakashpur II
Body characteristic distinct

Fig: Prakashpur III
Body feature different

Sign Survey

We searched for tracks of Fishing Cats at the edge of tall reed bed and along bank of ponds after the local directed us to the areas and we requested them to accompany us. As our study sites involved areas in and around villages, often pugmark finding became difficult tasks. The cat shares its space with human and cattle.

Therefore, it is highly likely that pugmarks might get trampled. So, we could not able to trace the pugmarks on glasses and measured them. Signs were recorded only by taking photos.

Fig:Sign survey conducting at different tracks in the study area

Fishing Cat Conservation Program

Questionnaire Survey

A total of 208 respondents have been interviewed to share information on the status of species and associated threats in its survival. The survey was in human dominated areas adjacent to KTWR on the track of camera trapping. Generally, age ranges of 35 to 60 years of people were interviewed. (Interviewed questionnaire has been attached separately).

We showed pictures of Jungle Cat, Small Indian Civet and Fishing Cat to interviewees in order to reduce the chances of confusion in identification of different wild carnivores. Emphasis was given to informal discussions with local people, during which unreliable evidences were also documented. The questionnaire was divided into five section and main aims to study Fishing Cat, habitat, threats and the problems created by Fishing Cat to their properties and possible solution for its conservation. We also included a question on whether they were aware that Fishing Cats have been protected by Government of Nepal as like as water buffalo. We also asked people to gather information of general trend of Fishing Cat population and its causes of decline.

Result

The socio-economic status of the local people in and around Koshi Tappu Wildlife Reserve was poor. Almost all houses were made up of mud and dung. Most of the household has poor electrical facility. Few of the houses have sanitary facility with simple latrine.

Most people have seen Fishing Cat in and around their surroundings. Among four study sites, local people of Prakashpur have seen maximum number of species. Local people killed it by placing the live wires and poisoning around the pond during night time to save their chicken and fish from their farms. People had confusion in the identification of this species with Small Indian Civet.

Of 208 respondents, 76% of the total respondents have seen and 23% of them have not seen fishing cat.

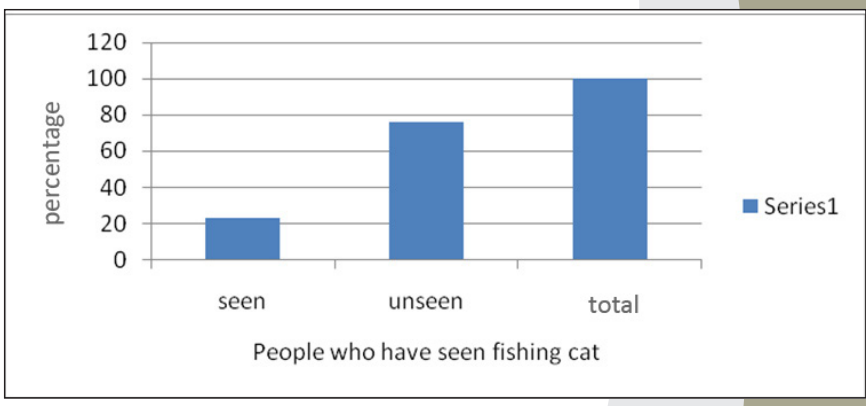
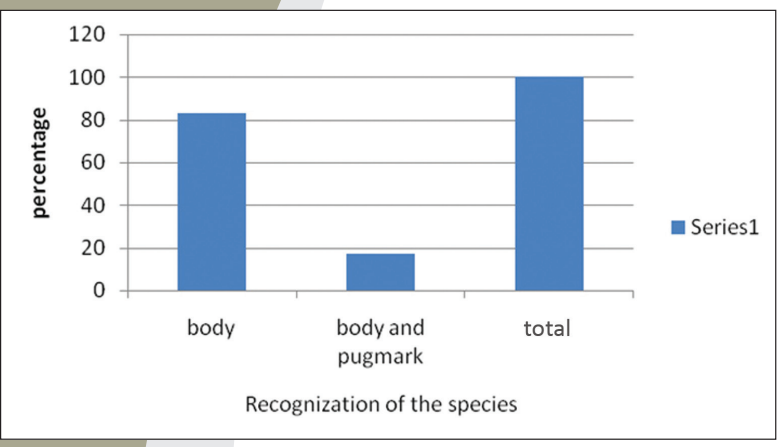
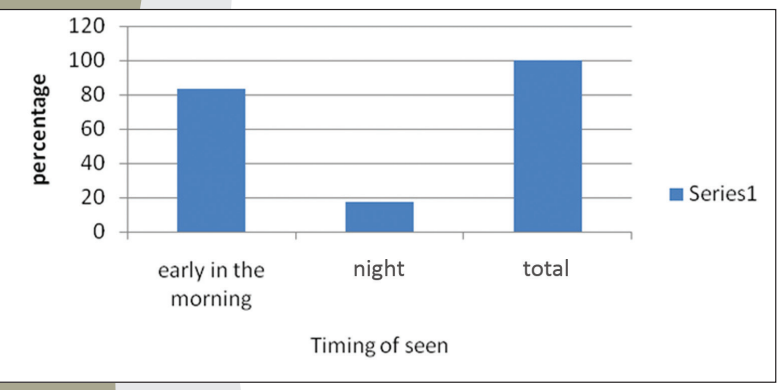


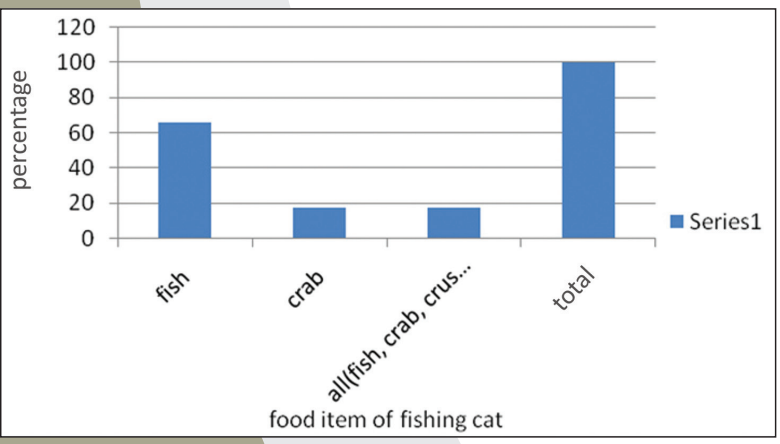
Fig: Settlements near by study area

About 83% of local people have identified the species from its body structures and seen in the early morning and 17% have known it only from its pugmarks and seen in the night.

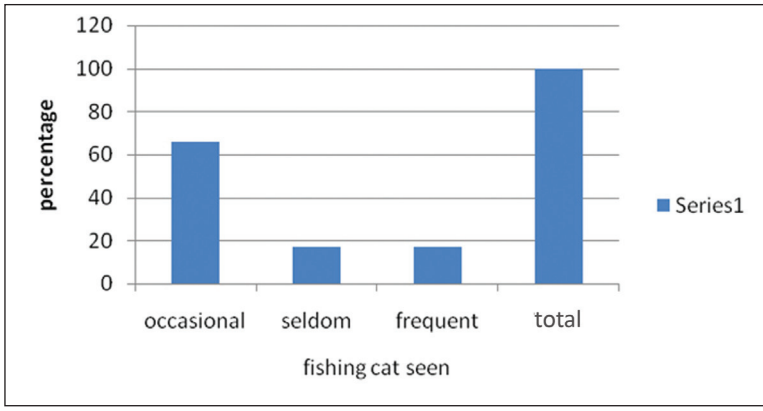




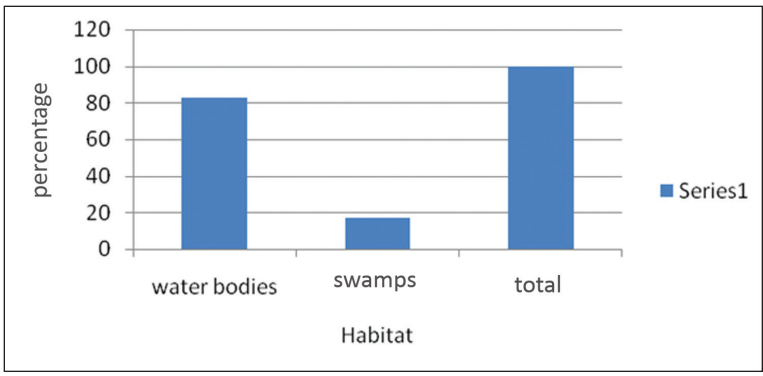
Regarding the food prefer by Fishing Cat, 66% of respondent informed that the species mostly feed on fish, 17% told that it also feed on crab and other crustaceans and 17% of them said that it feed on all aquatic creatures like crab, snail, fish, small grasses etc.



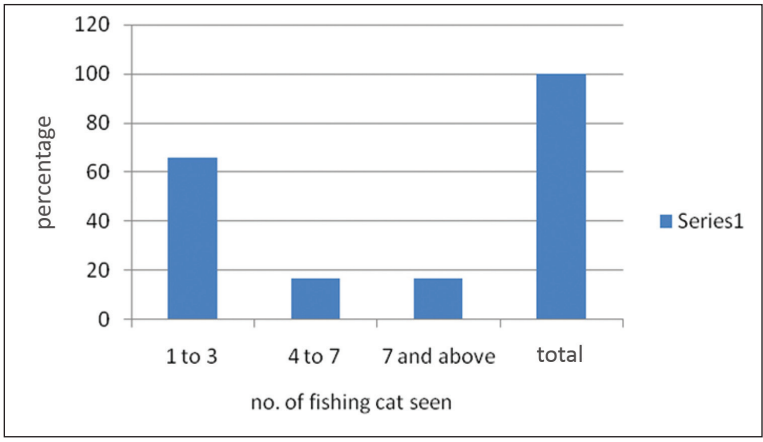
On the subject of habitat characteristic of the species, about 66% of the respondent informed that species have occasionally seen into their farms specially fish farms and poultry cages. 17% informed that it has been frequently seen and 17% have seldom seen.



Pertaining to the habitat preferred by the species, 83% of total respondent stated that Fishing Cat is mostly found in water bodies and 17% informed that it has been seen in both water bodies and swamps.

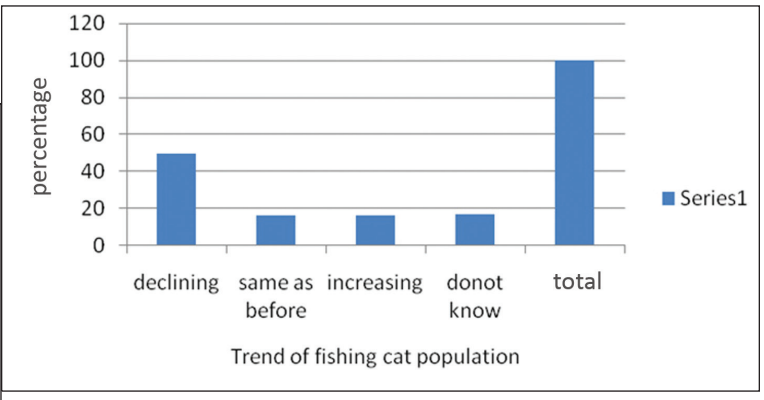


On the subject of Fishing Cat population seen about 66% of the total respondents have seen 1 to 3 numbers 17% have seen 4 to 7 numbers and 17% have seen 15 Fishing Cat during their life time.

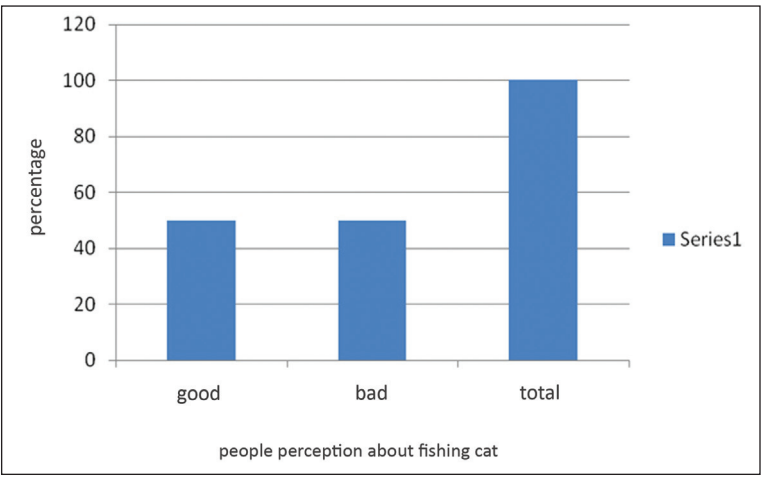


In question of Fishing Cat declining, 50 % of the respondents answered that Fishing Cat are declining day by day. They explored that species is declined due to lack of food, habitat and hunting the species through live current wires around the ponds by fish farmers and weak government policy. About 16.5% said numbers of species are same as before.16.6 %

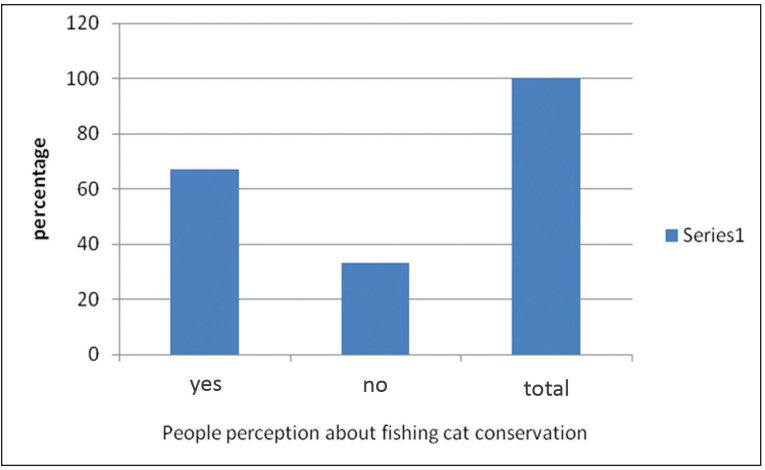
informed that the numbers of the species are increasing and 17 % do not noticed about population change.



In maximum instances the locals were confused between Small Indian Civet and Fishing Cat. About 50 % of the people know about the importance of Fishing Cat in ecosystem and 50% of people do not know the role of species in ecosystem.

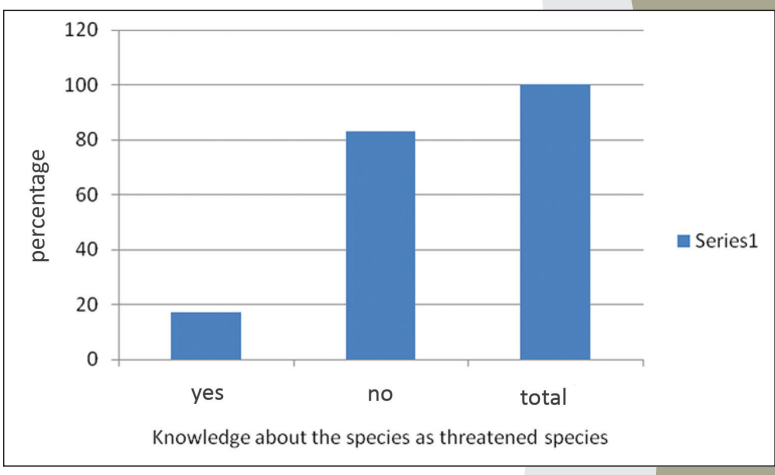


Regarding the species conservation, 67% of the people agreed to conserve for the next generation since it is dramatically declining and it might be extinct from the world. Remaining 33% argued that it should be killed because it feeds their chicken and fish from their farms.



On the topic of people's level of knowledge of threatened species, 82% do not know that Fishing Cat is listed as endangered category. Only 8% have known it as an endangered species.

About the news related to Fishing Cat and its conservation,100%ofthe respondents have not heard any kinds of news. However, people have given their perception towards Fishing Cat conservation. They suggested that food and habitat should be provided and awareness programshould be launched to fish farmers in around Koshi Tappu Wildlife Reserve. Government of Nepal should also move forward to Fishing Cat conservation as like as wild water buffalo conservation. Compensation should be provided by the Koshi Tappu Wildlife Reserve to fish farmers.



Chapter 3

Education and Awareness Program

An effective participatory approach with local communities for the protection of Fishing Cat by informing and involving them in education and awareness program have been conducted in and around Koshi Tappu Wildlife Reserve. The conservation knowledge about Fishing Cat identification, habitat, food, role in ecosystem and potential threats and possible conservation action from the local level have been disseminated to a total of 600 people of the local communities particularly in school students, fish farmers, cattle herders and community forest users groups. Among them, 400 were the school students and rest of them were fish farmers, stake holders and community forest users group. Students often play an important role in conveying information and convincing their parents and neighbour towards the species conservation.

For a program, a banner and posters for presentation has been prepared in Nepali language which simply delivered conservation message. Besides this, some educational materials such as colour charts, pamphlets, images, posters have been used to make a program more effective and attentive. These educational materials have been distributed to school and officials building throughout the area. An educational team have been formed and sent to visit local schools to talk with teachers and students about the role of Fishing Cat and other species play in the local ecosystem.

Other outreach activities include collaborating with local environmental conservation groups where we presented our work, participating in their campaigns and meetings.

Fig: Banner for Fishing Cat conservation awareness

Activites at Shree Basanta Ritu H. Sec. School

Education at Prakash H. Sec School

Conclusion

Education and other public outreach activities have been carried out to raise their specific attention towards Fishing Cat conservation along with biodiversity conservation as a whole. Wetland destruction, human settlement, hunting for food and fur trade, conflict between local people and the species, putting live wires around the premises of their ponds, changing agricultural practices, construction of aquaculture facilities and increased use of pesticides in agricultural fields were the potential threats to the species that has been identified by our study. Most people could easily identify the species and they are more aware than before. There was a marked rise in local people antagonistic attitude towards the cat. Compensation systems could decrease the people's tolerance towards the cat, alienating it more.

Discussion with local stakeholders on Vulture and Fishing Cat conservation

Awareness activities at Janta H. Sec. School

Activities at Shree Mohan H. Sec. School

Chapter 4

Benefit and Involvement of the locals

Two local residents to assist with sign survey, camera trapping and communicating with other local residents have been hired in the project. Their jobs were to interact during interview survey, send messages about the project updates and help raise awareness in the community. Villagers also reported about their Fishing Cat sightings or loss of their livestock to us and our assistants.

Project Monitoring and Evaluation

Post questionnaire have been done to similar places where an awareness program had been conducted to gather response and impacts of our study. Of 100 people surveyed, 92 of them could easily identify Fishing Cat and no confusion has been existed with its identification. Local people had seen them around ponds and chicken coups. They have been raising their positive attitude towards species conservation. We have mentioned the presence of Fishing Cat in the paper "Small Mammal's Survey in and around Koshi Tappu Wildlife Reserve, Nepal" with an acknowledgment to Chicago Zoological Society in second seminar which was held on 15th May 2011 by Small Mammals Conservation and Research Foundation.

Recommendations

Following are some recommendations that have been taken as references for further study.

- Government of Nepal should give special attention to Fishing Cat conservation.
- Awareness program should be done to identify Fishing Cat and distinguishing features with Small Indian Civet.
- More comprehensive survey for Fishing Cats should be done in the other parts of the country in order to understand their distribution and to idetify further threats. The results obtained can be used to promote conservation of the species and its habitats.
- There should be plans to raise both local and national appreciation for Fishing Cats and other carnivores in area through newspaper and television coverage of the project.
- Continuous research on Fishing Cat and its regular monitoring in the areas should be conducted along with education outreach programs.

Fig: Glimpse of Second Seminar on Small Mammals Conservation and Research Foundation

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Annex

Trap Night Collection

Koshi camp Madhuban (Block-1)

SN	Date	Number of Camera	Camera Trap Night
1	19-02-2011	4	4
2	20-02-2011	5	9
3	21-02-2011	6	15
4	22-02-2011	6	21
5	23-02-2011	6	27
6	24-02-2011	6	33
7	25-02-2011	6	39
8	26-02-2011	6	45
9	27-02-2011	6	51
10	28-02-2011	6	57
11	01-03-2011	6	63
12	02-03-2011	6	69

Prakashpur (Block-2)

SN	Date	Number of Camera	Camera Trap Night
1	03-03-2011	6	6
2	04-03-2011	6	12
3	05-03-2011	6	18
4	06-03-2011	6	24
5	07-03-2011	6	30
6	08-03-2011	6	36
7	09-03-2011	6	42
8	10-03-2011	6	48
9	11-03-2011	6	54
10	12-03-2011	6	60

Jabdi (Block-3)

SN	Date	Number of Camera	Camera Trap Night
1	13-03-2011	6	6
2	14-03-2011	6	12
3	15-03-2011	6	18
4	16-03-2011	6	24
5	17-03-2011	6	30
6	18-03-2011	6	36
7	19-03-2011	6	42
8	20-03-2011	6	48
9	21-03-2011	6	54
10	22-03-2011	6	60

Kusaha, (Block-4)

SN	Date	Number of Camera	Camera Trap Night
1	24-03-2011	6	6
2	25-03-2011	6	12
3	26-03-2011	6	18
4	27-03-2011	4	22
5	28-03-2011	6	28
6	29-03-2011	6	34
7	30-03-2011	6	40
8	31-03-2011	6	46
9	01-04-2011	6	52
10	02-04-2011	6	58
11	03-04-2011	4	62

GPS Point of Camera Trapping

GPS Points of Prakashpur (03-03-2011 to 12-03-2011)

SN	Camera Trap	Location	Elevation	Distance	Bearing
1.	1	N 26°41.340' E087°04.962'	143m	2.44mi	NE
2.	2	N 26°41.350' E087°o4.999'	81m	2.47mi	NE
3.	3	N 20°41.318' E087°04.981'	140m	2.43mi	NE
4.	4	N 26°41.388' E087°04.897'	87m	2.47mi	N
5.	5	N 26°41.426' E087°04.927'	89m	2.52mi	N
6.	6	N 26°41.424' E087°04.927'	88m	2.52mi	N

GPS Points of Jabdi (13-03-2011 to 22-03-2011)

SN	Camera Trap	Location	Elevation	Distance	Bearing
1.	1	N 26°46.958′ E087°08.470′	117m	0.24mi	N
2.	2	N 26°21.075′ E087°09.452′	102m	29.48mi	S
3.	3	N 26°46.966′ E087°08.433′	114m	0.25mi	N
4.	4	N 26°46.894′ E087°08.405′	108m	0.16mi	N
5.	5	N 27°55.958′ E086°54.237′	101m	80.73mi	N
6.	6	N 26°46.942′ E087°08.403′	111m	0.22mi	N

GPS Points of Kusaha (24-03-2-11 to 03-04-2011)

SN	Camera Trap	Location	Elevation	Distance	Bearing
1.	1	N 26°37.196′ E087°01.845′	102m	0.28mi	SW
2.	2	N 26°37.308′ E087°01.922′	82m	109.43ft	NE
3.	3	N 26°37.319′ E087°01.923′	87m	173.17ft	N
4.	4	N 26°37.292′ E087°01.912′	79m	4.84ft	SE
5.	5	N 26°37.319′ E087°01.918′	72m	135ft	N
6.	6	N 26°37.209′ E087°01.854′	105m	2.90mi	E

Himalayan Nature

Chicago Zoological Society

Questionnaire Form

Status and Conservation of Fishing Cat *Felis viverrina* in Koshi Tappu Wildlife Reserve, Nepal

Name ..... Age ..... Sex ..... Family size .....

Education ..... Occupation .....

VDC ..... Ward No .....

1. Have you ever seen Fishing cat?
   a. Yes b. No
2. At what time have you seen it?
   a. Day b. Night
3. How can you recognize the species?
   a. Sign b. Body c. Cast d. Pugmark
4. Do you know what does it feed?
   a. Fish b. Crabs and rodents c. Mollusks& Birds d. All
5. How many times have you seen the species here?
   a. Often b. Seldom c. Occasionally
6. Where do you observe the frequent movement of Fishing Cat?
   a. Swamps b. Marshy areas c. Land d. Water bodies
7. How many fishing cat have you ever seen in your lifetime?
   a. 1 to 3 b. 4 to 7 c. 8 and above
8. What is your opinion about the population of fishing cat?
   a. The number is increasing. If yes what do you think the reason?
   b. The number is decreasing. If yes what do you think the reason?
   c. Same as before d. Not sure
9. Do you know what role does it play in ecosystem?
   a. Good b. Bad c. Do not know
10. Would you like to conserve Fishing Cat?
    a. Yes If yes why b. No If No, why
11. Do you know it is a threatened animal?
    a. Yes b. No
12. Have you heard any news about Fishing Cat?
    a. Yes If yes, then mention the sources b. No
13. In your opinion, what are the things to be considered for the conservation of this species?

List of Schools and Community Forest Users' group participated in Fishing Cat Conservation Awareness Program

- Shree Basanta Ritu Secondary School, Dikjhora
- Shree Prakash Higher Seconary School, Sunsari
- Shree Mohan Secondary School, Madhuban
- Janata Higher Secondary School
- Sapta Koshi Community Forest users' group
- Shree Shanti Nagari Community Forest Users' Group
- Madhuban Community Forest Users' Group
- Human Development, Environment and Protection, HUDP

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