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**Assessment of Ecotourism Potential of Koshi Tappu  
Wildlife Reserve, Eastern Nepal**

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**Abstract**

*Tourism is forefront of many economy but come with negative externalities resulting in diminished environmental quality. In place of these mass tourism practices, different alternative forms of tourism are practiced with aim of enhancing positive externalities while keeping check and balance to negative externalities. Ecotourism is one such approach which is often highlighted as one of the most effective tool to reconcile the conservation and development aspiration. Ecotourism in its different localized version and their impacts on environment are studied in Nepal. Despite this, ecotourism potential of protected areas is less explored dimension in ecotourism studies. This holds true for the eastern region of the lowland Nepal. Location of destination, features of that destination along with the facilities and uniqueness offered by the place is different which are vital in defining the ecotourism potential of different locations. The study forms the basis for promotion of ecotourism in an area. This paper aims to explore the ecotourism potential of Koshi Tappu Wildlife Reserve. There are different tools and approach used to assess the ecotourism potential. This paper contains information collected from field observation, scheduled interview and key informant*

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*interview. Wild Water Buffalo, migratory birds along with the presence of other wildlife species make a place attractive destination for ecotourism. Satisfaction shown by the respondents for food, accommodation and hospitality offered adds value to the ecotourism potential. Areas with high scenic and cultural attraction in the vicinity of the park can be considered as positive additionally to attract tourist with diverse interest. As it is considered mandatory to include the component of education and interpretation to qualify as ecotourism, development and execution of the curriculum are essential. Beside this, exploration and marketing of other potential destination and enabling the local communities are equally vital.*

### **Introduction**

Nepal is in the forefront in the world in conservation of biodiversity through delineation of protected, with more than 23% of the land the allocated as protected area (Bhattarai et al., 2017). The coverage of the protected area has increased with the recent extension of the protected areas in the Terai region (Chitwan National Park and Parsa National Park). Compared to the early period of modern conservation history, started in the early 1970s, the approach in conservation is also on the verge of transformation (Bhattarai et al., 2017). Conservation movement is moving from the fence and fine approach to participatory approach (Bajracharya and Lama 2008; Bhattarai et al. 2017). A Participatory approach to conservation recognize local people as an important stakeholder of conservation. Conservation intervention can be successful if the intervention made for biodiversity conservation can simultaneously improve the living standard of the local people (Birdlife International Partnership, 2007). This issue becomes more relevant to protected areas located in low land Nepal, where relocation of human settlement has been carried out to establish a park ( Dhakal et al. 2011). Even in other protected areas where resettlement was not carried out, the establishment of the park has altered the lifestyle of the local resident. People living near the protected area are mainly poor directly depending on the protected area to fulfill their daily requirement such as firewood, fodder, water and other ecosystem services (DeFries, et al., 2010). Conservation objectives can be fulfilled only when proper harmony can be maintained between the conservation need and people's requirement through different conservation measures, especially aiming to improve the living standard of the people (DeFries et al., 2010; Nepal, 1997). Tourism can be one of the effective tool to reconcile conservation and developmental issues (Banskota, 2012).

### **Tourism and environment**

World tourism organization defined tourism as “the activities of persons identified as visitors”. “ A visitor is someone who is making a visit to a main destination outside his/her usual environment for less than a year for any main purpose [including]

holidays, leisure and recreation, business, health, education or other purposes” (UNWTO, 2010). Tourism is one of the fastest growing economic sectors in the world, which contribute to job and wealth creation, environmental protection, cultural preservation along with poverty alleviation (World Tourism Organization & United Nations Development Programme, 2018). Travel and tourism account for 10.4% of global GDP and 9.9% of total employment created in 2017 globally (WTTC, 2018b). In case of Nepal, the sector contributed altogether 4% of total GDP, while accounting 3.9% of all jobs provided (WTTC, 2018a). Besides their direct role in the development, they also act as a catalyst of development as they are the important mechanism of effectively transferring the wealth from rich to poorer countries and people (Sharpley, 2009). Besides the economic incentives provided by the tourism sector they also contribute to the conservation of natural and cultural heritage and empower the host communities (World Tourism Organization & United Nations Development Programme, 2018). Tourism can foster peace and intercultural understandings besides generating trade opportunities. Besides these, tourism also enhances the ability of local communities to use alternative forms of energy which contribute to forest conservation (Nyaupane & Thapa, 2006). Despite these potential benefits, tourism come up with negative externalities. These externalities are seen in physical, social and economic aspects of the environment (Ceballos-Lascuráin, 1996). Increase in number of tourist rises fuelwood demand, which ultimately upsurges pressure on natural resources (Pandey, et al., 1995). Mass tourism is also accused for the proliferation of the amount of waste. Besides these tourism results in degradation of biological, socio-cultural and economic diversity (Šimková & Kasal, 2012). It also brings a change in the loci of authority, land use pattern and in local and regional economy (Kunwar, 2017a). To minimize these negative consequences of tourism, different form of responsible tourism is practiced which are collectively known as a sustainable form of tourism (Kunwar, 2017b) among them ecotourism is one .

### **Ecotourism**

Ecotourism is the new paradigm of tourism carried out with either cultural, educational, scientific, or adventure purpose (Weaver, 2002). It is the responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education to staff and guest (TIES, 2015). Eco-tourists seek an alternative of mass tourism thus they travel to new areas in a relatively undisturbed place with some cultural or environmental attraction. Thus, new and relatively unexplored protected areas can be the destination for Eco tourist. Ecotourism can be in achieving the sustainable development. Ecotourism, as they reinforce three pillars of sustainable development, can be a viable option for creating the win-win situation for the park and people ( Bajracharya & Lama, 2008; Shrestha, 2015).

In the protected areas, where park people relations are not harmonious, ecotourism can result in improved relations. Tourism activity results in reduction in local peoples' dependency with forest and grassland through the diversification of income sources (Adams et al. 2004; Barrett et al., 2011; Chan et al. 2007). In Nepal, major fraction of local people getting benefits from ecotourism practices get paybacks from tourist by offering hospitality through homestay. Well managed Homestay as an ecotourism product can be alternative to the mass tourism and can play crucial role in involving the remote population and contribute to conservation of wilderness and traditional cultures (Acharya & Halpenny, 2013). The benefits that can be achieved from ecotourism depends upon the potentiality of that site to attract and host tourist without affecting physical, social and economic aspects of environment in adverse manner and without deteriorating the experience of visitors (Navarro Jurado et al., 2012; Reilly, 1986).

### **Ecotourism in Nepal**

Recently, quantitative increment has occurred in the study of aspects of ecotourism in Nepal. Studies have made attempts to cover various aspects of ecotourism. Model of ecotourism practiced in Nepal (K.C., 2017), role of ecotourism in environmental conservation (K.C., Rijal, & Sapkota, 2015) and overall role in sustainable development (Nepal, 2002) have been explored. Besides that, the impact of climate change in ecotourism have been studied (K C & Thapa Parajuli, 2015).

Based on subjective judgement, different forms of ecotourism practiced in Nepal are classified as ecosystem ecotourism, rural ecotourism, sustainable ecotourism and cultural ecotourism (K.C., 2017). All these forms, though show some similarities with ecotourism, many fail to meet the principles of ecotourism (Blamey, 2001; Gaymans & Hikes, 1996; TIES, 2015). Ecotourism practiced within the conservation areas and buffer zones of protected areas of Nepal can be better fitted within the definition of ecotourism. Khata Biological Corridor Homestay commonly known as Dallagaon Homestay corridor of Bardiya National Park and Tharu Homestay of Amaltari within the Buffer zone of Chitwan Park, including other can be taken as the model homestay as they are found to be effective in luring tourists to that place, while enhancing the living standard of local people (Malla Thakuri & Nepal, 2018; NRB, 2015). Properly executed ecotourism are found to be effective to enhance the standard of living of local people through income generation which have ultimately contributed to other aspects of quality of life, such as education (Acharya & Halpenny, 2013; Baral & Stern, 2011; K. C & Thapa Parajuli, 2014; Nepal, 2002). Despite the role of ecotourism in sustainable development of buffer zones of protected area, tourism is more centered to a few destinations namely the Annapurna Conservation area, Chitwan National Park, Manasalu Conservation area and in some cases Bardiya National Park (K.C. et al., 2015; Nepal, 2002), so does the benefits of tourism activities. New areas can be

explored and expanded by studying the potential of other areas. But, study about the ecotourism potential are limited in case of Nepal.

### **Ecotourism potential**

Nature based attraction, and cultural features differ according to the geographical setting. This implies that, all places do not have equal potentials in regard of ecotourism (Wearing & Neil, 2009). The sites must contain unique, appealing features for ecotourist. Specific attraction, site and infrastructure, market demand, available capacity and socioeconomic linkages to biodiversity are determining factors for ecotourism potential (Carroll & Groom, 2006; Ceballos-Lascurain, 1996).

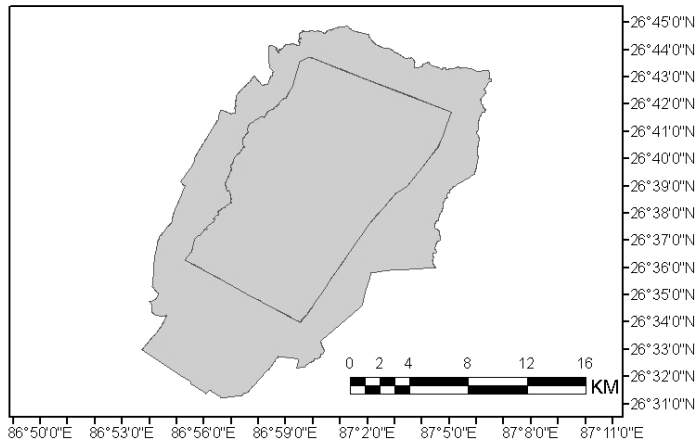
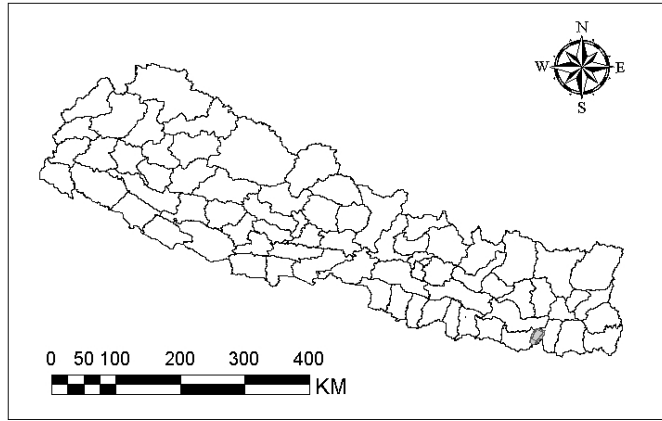
Researches regarding the assessment of ecotourism potential are limited in Nepal. Who-are-you Ban, a US-AID funded project, have made a comparative analysis of the ecotourism potential of 37 locations on Terai Arc Landscape (TAL) and Chitwan Annapurna Landscape (CHAL) with the motive of promoting community based ecotourism in Nepal (Shakya et al., 2013). In another study, road condition and lack of promotional activities were assessed as the hindrance for ecotourism development in Dhorpatan Hunting reserve (Aryal & Maharjan, 2017). Researchers have failed to acknowledge the ecotourism potential in the eastern Nepal. In this paper, we aim to explore the ecotourism potential of Koshi Tappu Wildlife Reserve, so that tailored plan can be devised and implemented in the area for reconciling conservation and development in the area.

### **Materials and Methods**

#### **Study Area**

The Koshi Tappu Wildlife Reserve is the only wildlife reserve of Nepal which lies at 26°38' N 87°00' E on the Bank of Sapta Koshi River in Sunsari, Saptari and Udayapur district of Eastern Nepal. The reserve is characterized by sandy and silty soils with patches of scrub and mixed deciduous riverine forest scattered on the high ground. The vegetation consists primarily of *Acacia catechu* and *Dalbergia sisoo* trees, with tall elephant grass *Saccharum spontaneum*, *S. arundinacea* and cattail *Typha elephantina*. The reserve was gazetted in 1976 mainly to conserve habitat for the remaining population of Wild Water Buffalo (*Bubalus arnee*). A total of 490 bird species has been recorded here. Koshi Tappu has been designated as a Ramsar site and an Important Bird Area (Shrestha & Pantha, 2018). Koshi Tappu Wildlife Reserve and its Buffer Zone is shown in figure 1.

**Figure 1: Map showing KTWR and its Buffer Zone**

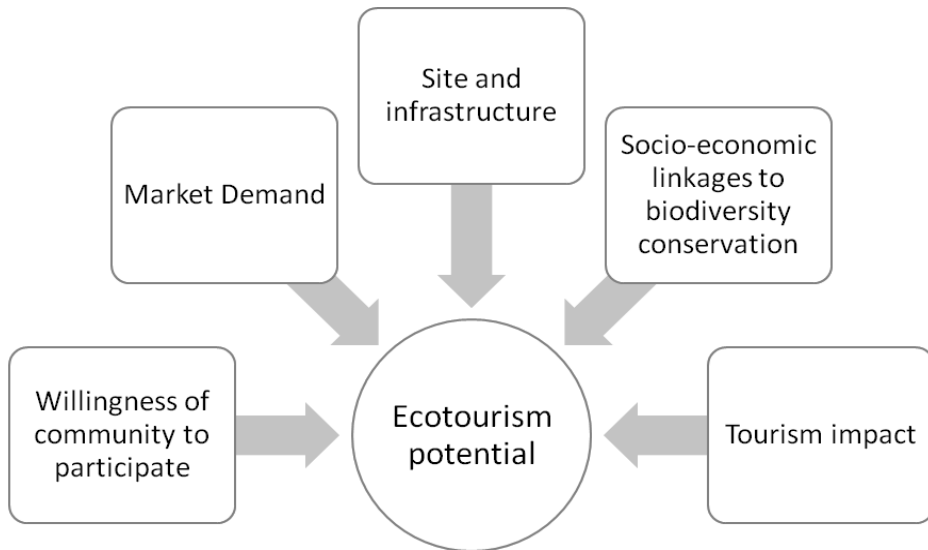


**Methods:**

**Conceptual framework:**

Ecotourism potential is the function of market demand, community’s willingness to participate in ecotourism activities, socioeconomic linkages of tourism to biodiversity conservation, the ability of the area to attract and host the visitors and environmental impacts of the tourism activities (Carroll & Groom, 2006). The conceptual framework used to evaluate the ecotourism potential is shown in figure 2. Qualitative and semi-quantitative approach was used to collect and interpret the results.

**Figure 2: Conceptual Framework for ecotourism Potential of Protected Area  
(Based on Groom et al., 2006)**



### Sample design

The sample was purposefully taken. All together 400 respondents, of whom have been to Koshi Tappu Wildlife reserve were contacted. Mail sent to them inviting them to fill the online schedule relating their perception about the different aspects relevant to the ecotourism potential of the site.

### Data collection

Data were generated using observational records, published literatures, scheduled interview and key informant interview. The annual flow of visitors was used to analyze market trends. Perception of visitors was collected to assess the site and infrastructure. Key informants were interviewed was used to know about the socioeconomic linkage of tourism activities to biodiversity conservation and community's willingness to participate. Besides, other potential locations to be included in tourist circuit were also analyzed. Field visits were carried out in April 2017 and May 2018. During the visit, beside field observation, key informant interview was also taken.

Perceptions of visitor were collected through an online survey. For the purpose, schedule of semi structured questions was prepared using the google form. Altogether 400 Undergraduate and graduate level students and teachers of three different colleges (Tri-Chandra Multiple Campus, Goldengate International College and Kathmandu Forestry College) who have been to Koshi Tappu Wildlife Reserve (KTWR) recently for field excursion were requested to provide their perception about

KTWR. To ensure the number of responses to be single per person, respondents were asked to log in to the form using google account. Visitor perception about the attraction, infrastructures and hospitality along with other facilities were collected. Schedule contained questions to assess perception about transportation, food, appealing features, hospitality, among others, following the guidelines adopted by IUCN (Ceballos-Lascurain, 1996). The schedule was mailed using google groups of each cohort of respondent. After twenty four hours, follow up email was sent. Not all respondents respond after follow up email. Thus, only 55 responses which were analyzed. Beside this, key informant interview and observation was also used.

### Data Analysis

Market demand was assessed analyzing the annual flow of the tourist for year 2005/06 to 2016/17. Man-Kandel test and Sen's slope index were used to assess whether the fluctuation of tourist number is either a stochastic event or actual increments of tourist number. Percentages of the responses of different visitors were analyzed to evaluate the site and infrastructures.

### Results

#### Market demand

From table 1 we can observe that the number of tourists in general, excluding 2014/15 and 2015/16, are increasing each year. The data for Sukhlaphanta National park and Koshi Tappu wildlife reserve doesn't follow the national trend though. The number of tourists has been found to be maximum in the year 2016/17 followed by 2015/16.

**Table 1: Number of tourists visiting Koshi tappu Wildlife Reserve, Sukhlaphanta National Parks and All protected areas of Nepal**

| Year    | Sukhlaphanta National Park | Koshi Tappu Wildlife Reserve | All protected areas of Nepal |
|---------|----------------------------|------------------------------|------------------------------|
| 2005/06 | 57                         | 4207                         | 165304                       |
| 2006/07 | 352                        | 6145                         | 245910                       |
| 2007/08 | 1420                       | 4575                         | 291040                       |
| 2008/09 | 250                        | 196                          | 349195                       |
| 2009/10 | 491                        | 1894                         | 381789                       |
| 2010/11 | 358                        | 4660                         | 455237                       |
| 2011/12 | 517                        | 5704                         | 502092                       |
| 2012/13 | 471                        | 4446                         | 510205                       |
| 2013/14 | 984                        | 7349                         | 558577                       |



| Year    | Sukhlaphanta National Park | Koshi Tappu Wildlife Reserve | All protected areas of Nepal |
|---------|----------------------------|------------------------------|------------------------------|
| 2014/15 | 824                        | 8719                         | 517095                       |
| 2015/16 | 1920                       | 9247                         | 389223                       |
| 2016/17 | 2640                       | 11252                        | 604091                       |

The increase in the number of tourists in protected areas of Nepal was found to be increasing trend instead of being a stochastic event as shown in table 2. On average, the number of tourists in KTWR was found to be increased by 836 (249-1301) per annum. The tourist number in all protected areas of Nepal was found to be increased by 40071 (24809- 49159) while that of Sukhlaphanta was found to be 112 (55- 238) per annum as shown by the Sen's slope index.

**Table 2: Analysis of the visitors numbers in KTWR, SuNP and Tourist numbers from all protected areas of Nepal**

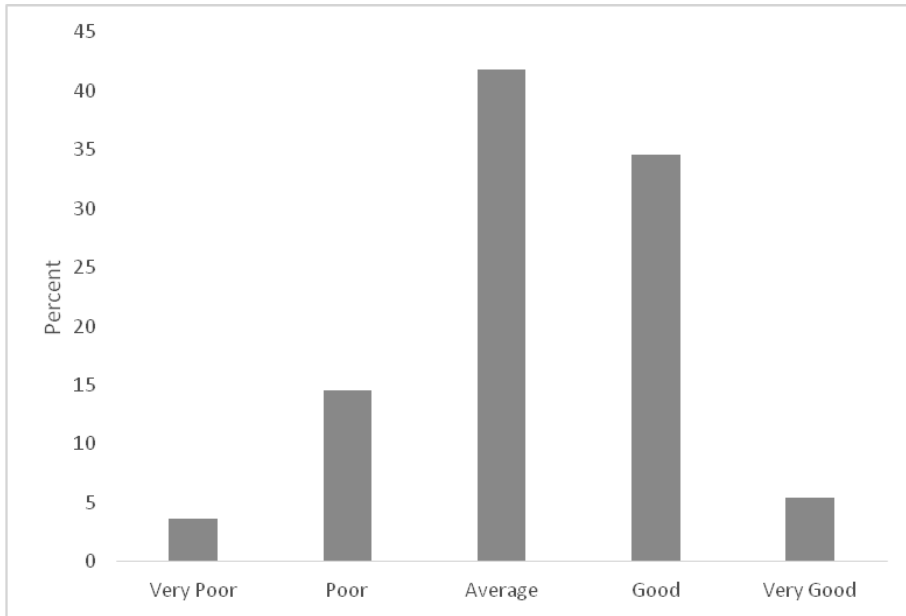
| Protected Areas                     | Man Kendall's Tau | Estimate | Sen's Slope             |          | Z      | P         | N  |
|-------------------------------------|-------------------|----------|-------------------------|----------|--------|-----------|----|
|                                     |                   |          | 95% confidence interval |          |        |           |    |
|                                     |                   |          | Max                     | Min      |        |           |    |
| <b>Koshi Tappu Wildlife Reserve</b> | 0.606             | 836.5833 | 1301.0                  | 249.5    | 2.6743 | 0.007488  | 12 |
| <b>Sukhlaphanta National Park</b>   | 0.636             | 112.1875 | 238.5714                | 55.2500  | 2.8115 | 0.0049314 | 12 |
| <b>All Protected areas of Nepal</b> | 3.6343            | 40071.11 | 49159.12                | 24809.00 |        | 0.0002787 | 12 |

#### Location

The Koshi Tappu wildlife reserve lies at the eastern Nepal. This is only the protected area of eastern Nepal, one of the few regions with high population density in Nepal. The park is located on the flood plain of Koshi River, the largest river of Nepal. Thus, the geographic location enhances the potential of the site as an ecotourism destination.

#### Physical facilities:

The park can be accessed from flight or using road transport. Travelling through road is commonly preferred route. Road transport is mostly used. Only a few of the respondent found travelling from Kathmandu to be problematic as shown in figure 3.

**Figure 3: Response of respondents about travel from Kathmandu to Park**

A similar pattern was observed in the response about the local transportation i.e. Transportation from Lauki to park headquarters, which is shown in table 3.

**Table 3: Response of the visitors about the local transportation facility**

| Response  | Percentage |
|-----------|------------|
| Very poor | 1.8        |
| Poor      | 5.5        |
| Average   | 36.4       |
| Good      | 45.5       |
| Very good | 10.9       |
| Total     | 100.0      |

The response about the food, accommodation and hospitality offered were mostly positive as shown in table 4.

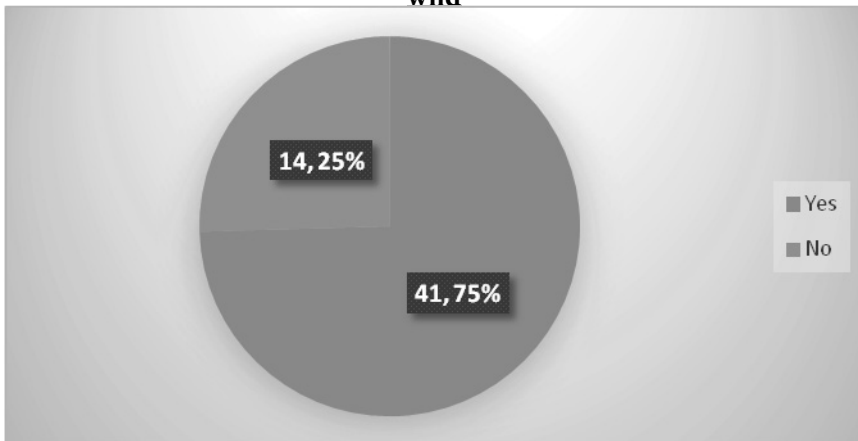
**Table 4: Rating provided by visitors about the quality of food, accommodation and hospitality offered**

| Response  | Food | Accommodations | Hospitality |
|-----------|------|----------------|-------------|
| Very poor | 3.6  | 5.5            | 0.0         |
| Poor      | 14.5 | 10.9           | 12.7        |
| Average   | 43.6 | 54.5           | 36.4        |
| Good      | 30.9 | 27.3           | 38.2        |
| Very Good | 7.3  | 1.8            | 12.7        |

**Major Attraction:**

The Koshi Tappu Wildlife reserve is famous for Wild Water Buffalo (*Bubalus arnee*) and migratory birds. The majority of the visitors who go to the park aspire to view Wild water buffalo in wild. Of total respondent, 75% of the respondent got a chance to view the species which rest quarter were quite unlucky as shown in the figure 3.

**Figure 4: Proportion of respondents who were able to view wild water buffalo in wild**



On 25<sup>th</sup> of March, 2018, wild water buffalo was observed at five minute walk from the park headquarter.

**Other Faunal diversity:**

Respondents report to observe various mammalian species in the Koshi tappu wildlife reserve. Wild Elephant (*Elephas maximus*), Ganges River Dolphin (*Platanista gangatica*), Wild boar (*Sus scrofa*), Golden Jackal (*Canis aureus*), Chital (*Axis axis*), Barking Deer (*Munticus muntjak*), Blue bull (*Bselaphus tragocamelus*), Jungle Cat (*Felis chaus*) and Bengal Fox (*Vulpes bengalensis*) are the major species observed

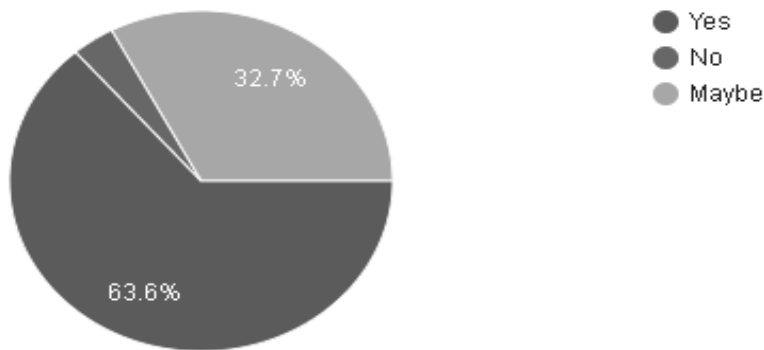
by the respondents. Beside these mammalian species, during visits, they report to observe Marsh Crocodile (*Crocodylus palustris*) and different birds in and around Koshi Tappu Wildlife Reserve.

Asian Pied Starling (*Gracupica contra*), gray heron (*Ardea cinerea*), Little Cormorant (*Microcarbo niger*), Plum headed parakeet (*Psittacula cyanocephala*), Green Bee Eater (*Merops orientalis*), Indian Pond Heron (*Ardeola grayii*), Purple Swamp Hen (*Porphyrio porphyrio*), Common coot (*Fulica atra*) were some of the birds reported from KTWR by respondents.

### Supply and Competitiveness (Uniqueness)

Koshi Tappu Wildlife Reserve appeared to be unique to 63.6% of the respondents, while 32.7% of the respondents was not sure about the uniqueness offered by KTWR. Single respondent found the park to be similar to that of Chitwan National Park while one respondent didn't visit the place properly to compare and explore the unique features of the park as shown in the figure 6.

**Figure 5: Perception of respondents about the uniqueness offered by KTWR**



### Scenic attraction

From the area, all three geographic landscape: mountains, mid-hills and Terai can be seen in single frame which makes the park one of potential ecotourism destinations. The landscape and flood plains made my Koshi River are other geographic areas with scenic attractions.

### Cultural attraction

Traditional houses can be observed in and around the park headquarter. Tharu culture can be observed in the houses. These houses with traditional Tharu culture can be one of attraction of the park. Only 56.4% of the respondents reported to be aware about the cultural attraction.

### **Available capacity**

During our field visit on March 2018, one Local NGO in partnership with the National Trust for Nature Conservation was providing nature guide training to ten youth from the buffer zone of KTWR. This was done with the aim of developing the capacity to guide the tourist and provide alternative livelihood options for local people. These were the first cohorts of nature guide in Koshi Tappu Wildlife reserve.

### **Community participation**

In Parkashpur and Kusaha area of the buffer zone of Koshi Tappu Wildlife reserve, 15 households have started home stay facilities with support from the park. This step was done with the motive to make local people involve in conservation activities and generate income from the tourism activities. Beside Homestay activities, local communities participate in conservation activities through 9 buffer zone committee, 425 sub-committee and 269 community based organizations.

### **Potential destination to include in ecotourism circuit**

Baraha Kshetera, Dharan, Bhedetar, Koshi Barrage, Chataradham, Budashubba, Namaste Jharana of the surrounding location were picked by the respondents to include in ecotourism circuit. Other location identified by the respondents to integrate within ecotourism circuit includes the Kanyam Tea state, Fikkal and Illam bazaar of Illam district.

### **Discussion**

Koshi Tappu wildlife reserve and its periphery can be a suitable area to practice cultural and religious ecotourism, ecosystem ecotourism and sustainable ecotourism (K.C., 2016, 2017; KTWR, 2018). The Homestay program initiated by local community and promoted by the park authority can be expected to be fruitful in creating the alternative livelihood options for the local people and ultimately contribute in creating harmonious relation between park and people (Acharya & Halpenny, 2013; Shrestha, 2015). Geographic location, transportation facilities and all other aspects make KTWR an alternative destination to the Chitwan National Park which now host the signification majority of the tourist visiting protected areas of Nepal (DNPWC/MoFSC/GoN, 2018).

The market demand of the KTWR can be said to be significantly higher to that of the parks with similar travelling distance from the capital city Kathmandu, which has privilege of only international airport, the major gateway to the majority of tourists to Nepal. In terms of distance from Kathmandu, both KTWR and SuNP lies at an around equal distance from Kathmandu. But the tourist reaching to KTWR is much higher and the rate of increase is also higher at Koshi (DNPWC/MoFSC/GoN, 2018). This indicates that market of Koshi Tappu wildlife reserve is growing faster enhancing the potentiality to develop as an ecotourism destination.

Although efforts have been made to establish the new population of Wild Water Buffalo at Chitwan national park (DNPWC/MoFSC/GoN, 2018), till date, Koshi Tappu is remembered for wild water buffalo. Recent census of Wild water buffalo has counted 416 individuals of the wild buffalo in the park. If the population of wild water buffalo gets established at CNP and park continue to face threats from herds of domestic buffalo, which graze in large number within the park (Khatri, Shah, Tachamo Shah, & Mishra, 2010; KTWR, 2018), KTWR will remain with no identity.

KTWR is the first wetland area to be listed as a Ramsar site. Beside wild water buffalo, parks is considered as the paradise for the winter migratory birds of Nepal (Baral, 2005; Khatri et al., 2010; Shakya et al., 2013). Along with being the home of 416 individuals of Wild water buffalo the area host 490 species of Birds within a small area. The area also provides habitat for four other protected species, namely Indian Pangolin (*Manis crassicaudata*), Striped Hyaena (*Hyaena hyaena*), Asian Elephant (*Elephas maximus*) and Ganges River Dolphin (*Platanista gangetica*). Along with Wild Water Buffalo, the park is home to five of 27 protected mammals of Nepal (Shrestha & Pantha, 2018). Beside these, four of the nine protected bird species (Black stork, White stork, Bengal Florican and Lesser florican) and all three protected reptiles of Nepal are found within the boundary of KTWR (Shrestha & Pantha, 2018). These protected mammals, birds and reptile add value of KTWR as an ecotourism destination. For development of ecotourism, cultural features are equally important as compared to environmental features (Wearing & Neil, 2009). But, nearly half of the respondents didn't become aware about the cultural attraction. Thus, proper marketing might be necessary (Sangpikul, 2010; Wearing & Neil, 1988).

Satisfaction shown by the respondent towards the food, accommodation and hospitality shown by the KTWR can be beneficial in attracting more tourist to the areas (Ceballos-Lascurain, 1996). The aspiration shown by the local communities to participate in the ecotourism and ultimately in biodiversity conservation can be taken as the positive sign. To grab this aspiration to fulfill the conservation goal, concerned government authority should facilitate the ecotourism development through policy intervention (Carroll & Groom, 2006). Though, 15 Homestay were initiated with the support from the park, in the vast region that number won't be sufficient to hold the tourist and to make meaningful contribution to improve the park people conflict, reported in the park (Limbu & Karki, 2003). The number of Homestay can be enhanced and location of Homestay and services provided by them can be diversified. These Homestay can serve as turning point in luring tourist to a remote destination within the buffer zone of the park and address the livelihood requirement of the park (Acharya & Halpenny, 2013). They can also help in formation of collaborative network with other potential ecotourism destination of the locality. Beside the location identified by the respondents, some other location such as Indra

canal (first irrigation canal of eastern Nepal), Pandabas area (Phattepur) of Saptari district and other unexplored areas of Saptari, Udayapur, Jhapa, Morang and Sunsari District can be explored and kept in the ecotourism circuit to hold the tourist for more than a single day. Beside this, development of the curriculum to enhance the education and interpretation experience of visitors are equally crucial (TIES, 2015; Walter & Reimer, 2012). If properly planned and executed, ecotourism can reinforce all three pillars viz. Physical, social and economic aspects of sustainable development in the periphery of KTWR as indicated by different parks of Nepal and throughout the world (Cater, 1993; Mcalpin, 2008; Nepal, 2002; Place, 1995).

### **Conclusion**

The accessibility of location, the uniqueness in appeal and high diversity of birds, mammals and reptiles within a small location makes Koshi Tappu Wildlife Reserve as the potential ecotourism destination. Beside these, aspiration shown by park authority and the local community towards ecotourism and the presence of cultural heritage makes this place a potential location for all forms of ecotourism commonly practiced in Nepal viz. Ecosystem, cultural, rural, and sustainable ecotourism. This statement is backed by exponentially increasing number of tourists in the area. Still, to make the perfect destination for ecotourism, further research on the aspects of seasonality of the tourist flow and the impact of tourism in environment are to be explored in depth. Planning of the ecotourism circuit and proper marketing of that circuit are highly essential. Beside this, the number of visitors in the park can be enhanced through the development of curriculum and execution of ecotourism curriculum both for visitors and local to enhance the interpretation experience. For this, local people, park authority and other private sector should carry out their activities in a coordinated manner.

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