

Environmental Impacts of Community-Based Homestay Ecotourism in Nepal

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Abstract

Community-based homestay is one of the growing rural tourism enterprises. It has been a strong support for fostering ecotourism around the globe by uplifting the local community. The present study was carried in Amaltari Madhawarti Homestay in the Nawalpur District of Nepal. The main aim of this study was to assess the environmental impacts of community-based homestay tourism. Twenty-four houses running homestays and same number of houses without homestay operation were surveyed and representative of the management committee were interviewed in this study. Solid waste production in these 24 homestays was quantified. Proper awareness towards waste management reduces the threat to environmental purity. Further, the role of proper waste management, energy use, and water use becomes a great asset to develop a sound ecotourism around homestays. Socio-economic benefits were received by the homestay in the form of increased income and preserved culture. People were able to make money to upgrade their living standard from their culture, hospitality, foods, and costumes. This boost in the economy had reduced dependence on natural resources and increased forest area and movement of wild animals.

Keywords

Homestay, Amaltari Madhawarti homestay, ecotourism, empowered, culture, economy

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Introduction

Movement of people has been taking place from ages either to get protected from harsh natural condition or in search of food (Theobald, 2005). The curious behavior of human beings has pushed them towards the pool of huge knowledge which they have been acquiring from a long time. The search for new land, new people, and the new socio-economic setup has made people travel across land and oceans. This nature of people to surf new places over time has been called as tourism (K C 2017a; K C & Thapa Parajuli, 2014). UNWTO defines tourism as the multi linear factor that brings changes to socio-cultural and economic aspects through entrepreneurial development, capital collection, and infrastructural advancement (UNWTO, 2017). Tourism has become a new social movement over a period that has impacted every facet of human life (Craik, 2002). Today, every nation of the world is investing in the tourism sector to multiply their economy and to receive economic benefits (Crouch & Ritchie, 1999). Tourism has become the largest hospitality sector serving millions of people annually.

The unstable political scenario within the nation and terrorist threats to entire South Asian region has affected the tourism prospect of Nepal (Thapa, 2012). The ten years long Maoist insurgency has cut off large international tourists to Nepal that has opened itself to the outer world after 1950. But chaos can sometimes be an inspirational factor for actors to act and make a positive stride towards building something beautiful out of it (Upadhayaya et al, 2011). At present, the pace is high in terms of revenue gained and tourist flow. The positive impacts of tourism towards economic makeover and associated socio-cultural factors cannot be ignored either for the present or the future (K C et al 2015; Gautam, 2011).

Nepal, a naturally blessed nation with rich cultural diversity has eye catching aesthetics to heart melting warmth of people (K C et al, 2015). It has identified several indicators for national developmental agenda like employment and per capita income. To meet these targets, the best way is by promoting tourism that helps in importing foreign currency (Burger, 1978). It is famous for adventure tourism and the positive impacts it has laid on the entire national economy cannot be neglected (Zurick, 1992). Likewise, it is famous for Buddhist and Hindu pilgrimage. World's highest peaks, rich biodiversity, and rich culture has the potential to unleash the developmental thread of Nepal (K C 2017b).

Nepal received around 1 million tourists in the year 2017 by air and land (MoCTCA, 2017). It received revenue of 650 million US Dollars with 54 US Dollars average expenses per tourist per day within this same period. Seventy percent of tourists visited Nepal for pleasure and among these, around 150 thousand visited Chitwan National Park. Visitors were accommodated in 1101 hotels which carried

the capacity of around 40 thousand beds per day along with private and community accommodation facilities through homestay (MoCTCA, 2017). Nepal has also launched several programs to attract tourists of different walks of life. Nepal has celebrated Nepal Tourism Year 2011, Visit Lumbini Year 2012, and Everest Diamond Jubilee Year 2013. At present Nepal is on the verge of celebrating Visit Nepal 2020.

Tourism has both positive and negative impacts (K C, 2018). So, a balance must be maintained to gain maximum benefits from this ever-growing enterprise. It can be a sustainable way of economic activity and at the same time can be a destructor of associated attributes (Gronau & Kaufmann, 2008). Seasonal tourism may create a chaotic situation due to overcrowding while off season may bring low income and unemployment among workers associated to the industry (Sheldon & Var, 1984). Tourism brings socio-cultural impacts and those communities that thrive within the changed scenario bring most profit out of this enterprise (Dogan, 1989). In many cases, the qualitative outcomes impacted by tourism is undermined by its quantitative benefits (Deery et al., 2012). Tourism can attract money from visitors for the conservation of natural capital, but mass flow of tourists can adversely affect the environment (Sunlu, 2003).

Ecotourism in the global and Nepalese perspective

According to the International Ecotourism Society, “Ecotourism is defined as the responsible travel to natural areas that conserve the environment, sustains the well-being of the local people, and involves the interpretation and education”. There are different approaches in defining ecotourism. Conservation authorities make it a holistic concept inclusive of social, economic, and environmental aspects while others see it as a mere nature-based tourism (Buckley, 1994). Whatever may be the thoughts of different concerned stakeholders, ecotourism puts together conservation and development and empowers local communities to uplift their locality themselves (Scheyvens, 1999). It can also help to reduce the production of green house gases (K C & Thapa Parajuli, 2015).

Ecotourism got global attention after its inclusion in Brundtland Report (Cole, 2006). It has become a global approach for sustainability and has been taken as an effective tool for conservation and as a means of security for local people economically and culturally (Das & Chatterjee, 2015). It has more advantages than disadvantages and splits its role in distributing benefits without destroying the natural capital (KC, 2017b). It is a well-managed form of tourism that regardless of mass tourism focuses on conservation ethics embedded in recreational activities that people seek from nature (Blamey, 2001).

Ecotourism has economic value which triggers benefits to the service providers that ultimately leads to consciousness among them to preserve natural capital for

ripping maximum benefits in the future (Lindberg, 1998). It brings about changes and developments in rural communities and let every people become aware about its social status, political awareness, and societal formation along with the wise use and distribution of resources (Foucat, 2002). Being an alternative form of tourism, it keeps environmental conservation and prosperity of people on top of its ethics and try to neutralize the negative effects laid upon by “grow at any cost” economic centered mass tourism (Fennell, 2002).

Ecotourism becomes more important in countries like Nepal (K C, 2016). It can be a yardstick in identifying the pitfalls and filling them to bring prosperity among people along with environmental conservation (Nepal, 2002). Ecotourism can help Nepal to meet the targets of economic prospect of sustainable goals (Regmi & Walter, 2017). For achieving maximum benefits through ecotourism, different ecotourist destinations have been established. National parks, conservation areas, and wildlife reserves are present in Nepal (K C, 2018). The provision of buffer zones in national parks, handover of management to community of some conservation areas, trekking trails, and community based cultural programs have aided in uplifting the situation of ecotourism in Nepal. This has helped local people to generate income, conserve natural capital, and boost the national economy and conservation strategies as a whole (K C & Thapa Parajuli, 2014, 2015). So, ecotourism has been deeply rooted in Nepal whose result can be seen now.

Community-based homestay ecotourism

Homestay is a modern concept whereby food and accommodation are provided to visitors for a certain monetary compensation. There is a mutual relationship between the host and the guest. During the stay, people get closer to the host family and become familiar with their culture, tradition, food, attire, and the community. Guests are greeted in their local tradition and can follow daily activities which the host family follows (Hamzah, 2008). Homestay is an aspect of green economy as people follow environmentally friendly activities for the preservation of planet from rapid environmental deterioration (Anand et al., 2012). It advocates for sustainability of nature, culture, society, and the economy (Lama, 2013). It also encompasses attitude towards environment and readiness of service providers to include unique traditions and cultures for the attraction of tourist (Chin et al., 2014)

Homestays are the important components that come under rural tourism. They are the best option for countries like Nepal that lags in infrastructural development facilities but has huge potential for tourism (Acharya & Halpenny, 2013). Nepal under Tourism Act 2065 B.S., to develop rural community and upgrade the livelihood of people along with conserving culture and environment, has formulated Homestay Directives under Government of Nepal Ministry of Culture, Tourism and Civil

Aviation (MoCTCA) in 2067 B.S. The main aim of homestay enterprise is to distribute benefits equally to all the people in a community, make equal participation of all people, increase local income, and upgrade the local livelihood (MoCTCA, 2011). Homestay makes a community resilient towards economic vulnerabilities and provide with employment opportunities engaging many people in this accommodation business (Sedai, 2011). It helps to cope with the negative impacts of tourism and boost the community participation in creating a sustainable way of managing tourists (Gu & Wong, 2006). Due to worldwide consciousness towards preservation of culture, traditions, and environmental protection; homestay operation is being highly flourishing across the world (Ibrahim & Razzaq, 2010)

For a homestay operation to be effective, there must be a mutual understanding between host and guests. Good educational approach, strong enthusiasm towards hospitality, and leadership role will help in generating maximum benefits from homestay operation (Regmi & Walter, 2016). Although homestay offers people of local community to have command over tourism activities making them able to run their own businesses, they are bound to make deals against their culture and traditions in many cases (Wall & Long, 1996). In some cases, misbehavior of guests towards hosts is seen and penetration of exotic cultures may take place pushing local tradition to vulnerabilities (K C, 2018). MoCTCA (2011) clearly mentions various factors to be followed by homestay operators in Nepal. Hosts are supposed to involve guests in jungle trek, eco-trek, and sightseeing. Beside this, they are also supposed to organize cultural programs, welcome ceremony for guests with their tradition, market their products, and provide information about local lifestyle and festivals. For a homestay to be eligible, it should have a provision of secured and clean rooms and surroundings. Toilets should be clean and there should be a provision of bucket, soap, and towel. Other than these, drinking water should be clean and filtered, public toilet should be clean, and place for keeping guests should be free from pollution.

MoCTCA (2019) has 324 homestays under record. These houses have 597 rooms with the capacity of 1006 beds. In Chitwan district, there are two community homestays (Ayodhyapuri-11 houses and Tharu/Meghauri-5 houses) and four private homestays registered in tourism office which have 53 rooms with the provision of 98 beds. In Nawalpur district, there are 4 community homestays involving 68 houses having 122 rooms with the provision of 259 beds. Chitwan National Park (CNP) (2017) enlists 5 registered community homestays in Buffer zone of Chitwan National Park with 72 homes with accommodation in 149 rooms through the provision of 317 beds. These homestays are in operation; Amaltari Madhawarti Homestays, Barauli Homestays, Piprahar Homestays, Tharu Homestays (Meghauri), and Ayodhyapuri Homestays. These homestays draw tourists from a pool of 118,621 tourists visiting CNP (MoCTCA, 2019).

In recent years, there is a large number of tourists staying in community-based homestays in Nepal. Due to the large number of tourists staying in these homestays near the protected areas, there might be positive or negative impacts on the environment. Environmental impacts of tourism are more important to study near the protected areas as these areas are more environmentally sensitive. More specifically, there is a need of study to assess the environmental impacts of community-based homestay near Chitwan national park of Nepal which is one of the most visited national parks of Nepal. Hence, the broad objective of this study is to assess the environmental impacts of Amaltari Madhawarti Homestay of Nawalpur district of Nepal. More specifically, the objective was to quantify waste production of 24 hours and to assess the waste management, energy use, water use practices, and socio-economic issues in the studied homestay.

Literature review

According to UNWTO, tourism is the world's third export business. Tourism accounts for 10% of world's GDP and one in every 10 jobs is provided by this enterprise. The flow of international tourists has increased dramatically after World War II (UNWTO, 2017). The number of international tourists was 25 million in 1950, 674 million at the end of the century, and 1235 million in 2016. In this period the size of tourism industry raised from 2 billion US Dollars to 1220 billion US Dollars. By 2030, the predicted number of international tourists is 1.8 billion (UNWTO, 2017). However, domestic tourists are also important factors in determining the fate of tourism industry as they are large in comparison to international tourist which is masked just because of absence of authentic data (Eijgelaar et al., 2008). As per MoCTCA (2019), Nepal received 1,173,072 tourists with highest number being from India in 2018. Nepal was favored mainly for holidays and pleasure followed by pilgrimage and mountaineering respectively. Protected areas (National Parks and Conservation area) were visited by majority of tourists to enjoy the nature and culture followed by Pashupati and Lumbini for pilgrimage.

According to Richins (2009), sustainable tourism is a way to create best possible environmental and socio-cultural vision through promotion of healthy management practices of resources and upliftment of peculiar local societies who have their own unique way of cherishing their traditions. Bhuiyan et al. (2011) studied on homestays in East Coast Economic region in Malaysia and noted that ecotourism has the potential to draw huge number of tourists with minimal negative impacts on environment and its natural capital and create sustained development of local community, its people and overall economy of the country. According to the study of Zambrano et al. (2010) in Osa Peninsula of Costa Rica, ecotourism helps in promoting ethical ground to preserve biodiversity and natural resources through schemes like afforestation. Unlike traditional mass tourism, ecotourism provides satisfaction through natural

ways not through addiction and alcoholism. Maikhuri et al. (2000) studied the tourism prospect and its impact on economic sector and other factors in buffer zone of Nanda Devi Biosphere Reserve in Indo- Tibetan border. They concluded that to bring balance between local needs and government benefits, ecotourism prospects must be established to empower community for enhancing economic well-being of local people. Further, alternative energy sources must be promoted to reduce pressure on fuel woods from forests which are the main attracting forces of ecotourism.

Gu and Wong (2010) have studied the homestays in Dachangshan Dao in Liaoning Province of North-East China that lies near the coastal region and found that homestays help in creating sustainable tourism with focus on conservation, local people's participation, and management of wastes and water resources. Hjortso et al. (2006) highlighted the role of community forestry in reducing the pressure on natural capital from anthropogenic activities near national park. Further, it has emphasized that there is importance of alternative energy sources in preventing forest resources from being overexploited in tourist visited area in buffer zone of Chitwan national park. There is a great role of community participation to manage tourists and forest resources in buffer zone. According to Ibrahim and Razzaq (2010), homestay program apart from contributing to develop sustainable environment, helps in uplifting socio-economic status of local people involved in homestay program. They have studied on the development of homestays in rural area of Malaysia that have caused the upliftment of local community.

Baniya et al. (2017) have analyzed different pull and push factors for tourist arrival and suggested that visit of any tourist destination inside Nepal is mainly impacted by the state of natural beauty, cultural richness, and infrastructural advancement. According to Bhusal (2007), with richness in natural resources, rich biodiversity and cultural aesthetics, Chitwan National Park possesses a great chance to stand out as a major ecotourism destination. Tourism is one of the important sectors in this area that can contribute to the sustainable development. Karki et al. (2019) have carried out their study in Amaltari Madhawarti Homestay to analyze the economic aspect of establishment of homestay program. They noted that homestays empower entire community and help to conserve local environment. To meet the tourism management and environmental conservation targets; trainings, workshops, and hospitality management becomes crucial in the area. Acharya and Halpenny (2013) through their study in woman managed rural tourism in Barpak, Nepal observed that, being community enterprise, homestays help in empowering local people, reducing poverty, and increasing the flow of tourists by promoting natural capitals. Homestay management encourages local people towards environmental management in Barpak. Nepal Rastra Bank (NRB) (2015), had carried out the thorough study of Dallagaon Homestay of Bardiya, Nepal and had concluded that deficient budget, shortcomings

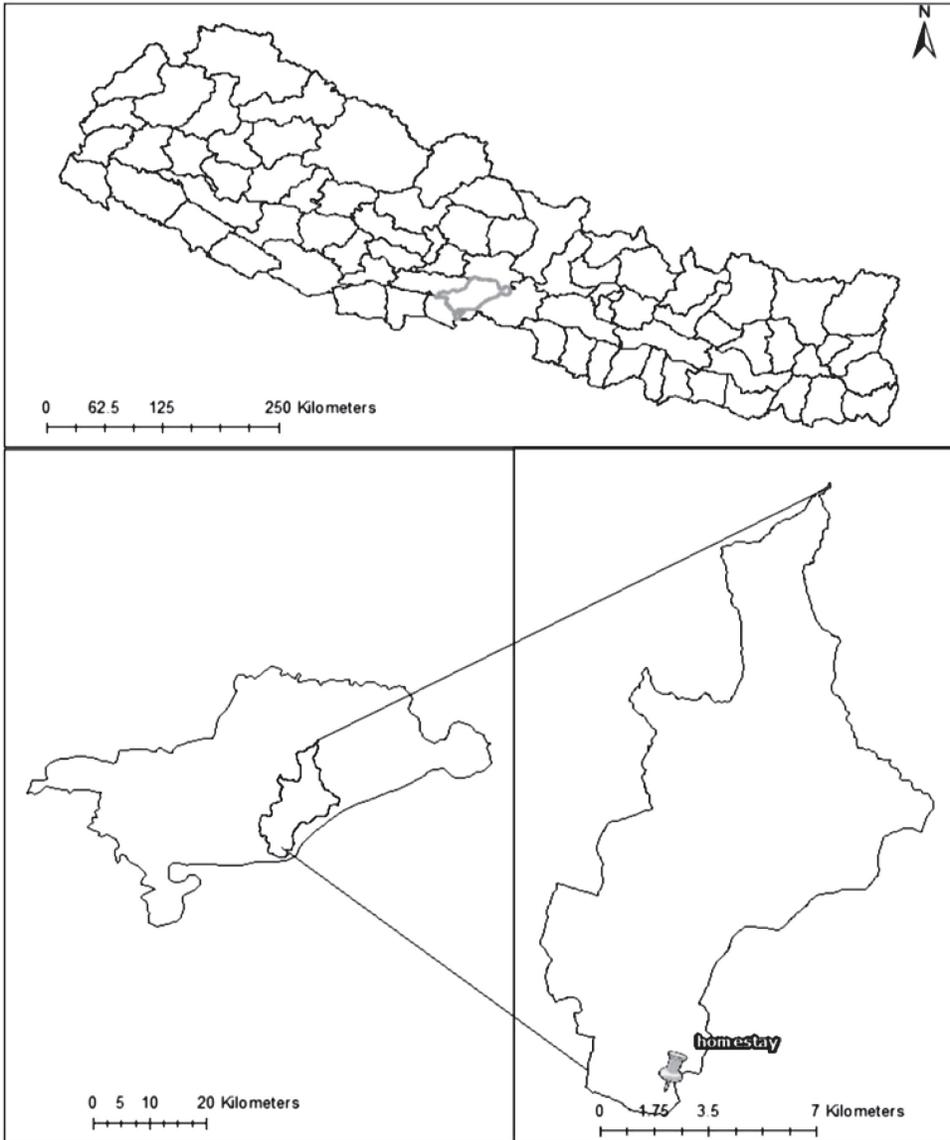
in skills and trainings, less priority on local foods, culture and trainings, and lack of skills to communicate can however affect the perception of visitors towards homestay operation.

Study area

From its establishment in 1973 A.D. as first protected area of Nepal, CNP has been contributing to development and enhancement of biodiversity conservation, species conservation, and ecotourism. It was established with the main intention of preserving forest resources realizing the threat from ever growing immigrants in the region from the hills of Nepal (Lipton & Bhattarai, 2014). CNP has been successful in implementing conservation activities, assisting in the improvement of community lifestyle, and reducing negative impacts in ecosystem and cultural richness in buffer zone through various approaches of legal and ethical concerns (Chitwan Tourism Plan, 2017). It was listed on UNESCO World Heritage Site in 1984 A.D. Also, Beeshazar and its associated lakes in its buffer zone were listed on Ramsar site in 2003. It has famous mammals—one horned Rhino, Royal Bengal Tiger, and Asian Elephant. It has been able to split the benefits to the people around the park (Spiteri & Nepal, 2008). Park management has involved residents directly residing around the park through different schemes of conservation and rights handover that has certainly helped to upgrade the condition of ecotourism in this area (Jones, 2007).

Amaltari Madhawarti Homestay lies in Baghkhori Village of 15 number ward of Kawasoti Municipality of the Nawalpur District in the Gandaki Province of Nepal. It has Badh River on its southern part and a community forest at its vicinity that provides a corridor for wild animals for their movement (figure 1). It lies at an altitude of 150 meters above sea level located at 27.57° N and 85.11° E. Baghkhori is inhabited by Tharu, Bote, and Musahar and lies in the buffer zone of Chitwan National Park. This area is very near to the park and can easily provide gateway for the visitors to CNP.

Amaltari Madhawarti Homestay was established on May 19, 2013 on 20th anniversary of the operation of WWF in Nepal. It is registered in regional tourism office in Bhairahawa. It was felicitated by the Government of Nepal as a model Homestay and declared as a tourism destination village in 2015 on World Tourism Day. This homestay has 24 houses; 21 houses of Tharu and 3 houses of Bote community that can accommodate 96 visitors. It provides the blend of local culture, traditions, foods, local hospitality, and nature experience.



Methods

For this study, primary as well as secondary data was collected from different sources. Initially, secondary data was collected from management committee reports, journal articles, books, and other relevant publications. Reports from various organizations and national guidelines on homestay were browsed. Mixed method

approach was used for data collection and analysis. Primary data was collected from household surveys, interview, and field observation. Brochure from the studied homestay was also used to collect other relevant information. Quantitative data was collected from household surveys, field observation, and secondary sources while qualitative data was collected from in-depth interview.

Field survey in Amaltari Madhawarti Homestay was carried out for 5 days from December 10-14, 2018. All the homestays and sampled local houses were observed by conducting a transect walk during the field visit to get information about community-based homestay management and its impact on the local environment. The existing gateway to the homestay was outlined and conditions of the road and Badh River, were noted. Data for this research were collected from houses with homestay operation, houses without homestay operation, and management committee. There was a total of 24 houses running homestay which were all considered for this study. Waste quantification was carried out in all 24 houses which were running homestay. Two polythene bags were distributed to all houses; one for biodegradable and the other for non-biodegradable wastes. Homestay operators were asked to collect segregated wastes into separate polythene for 24 hours from 3 PM on 12 December to 3 pm on 13 December 2018. The collected waste was observed and measured by the researcher with the help of weighing machine.

To study different aspects associated with homestay operation in the region, thoroughly designed questionnaires for homestay operators was used. To carry out the task, all 24 houses running the homestay were sorted out and same numbers of houses without homestay operation were listed randomly for questionnaire survey. The information about waste management technique (clean-up campaign, composting, burning, recycling, and municipal collection), use of packaged foods and disposable goods, type of toilet used, management of waste water, use of different energy sources (firewood, liquefied petroleum gas, solar, and hydro-electricity), and use of water sources (hand pump, water jar, and candle filter) was asked during the survey. In addition, non-homestay owners were asked questions about their involvement in community-based homestay operation, indirect economic benefits received from the supply of tourism products, and the impact of tourism in the community. Also, manager and treasurer of the Amaltari Madhawarti homestay were interviewed in Nepali language to get the insights about the homestay operation from the management perspectives. They highlighted about historical background of this enterprise, its plans, actions implemented by management committee for upliftment of socio-economic condition of community, conservation efforts, and overall impacts to the community. During the interview; data of tourist flow, revenue collection, and revenue mobilization was also gathered. Also, the information about benefit received by the local community in term of employment generation, cultural

heritage preservation, and feeling of togetherness among the community members were asked. The interview was noted in brief in a diary and was also recorded. Important points noted during interview was verified by the English translation of the recording. The interview data was analyzed descriptively in different section of the report. Quantitative data interpretation and analysis were done through bar diagrams, graphs, and charts using Microsoft Excel.

Results and discussions

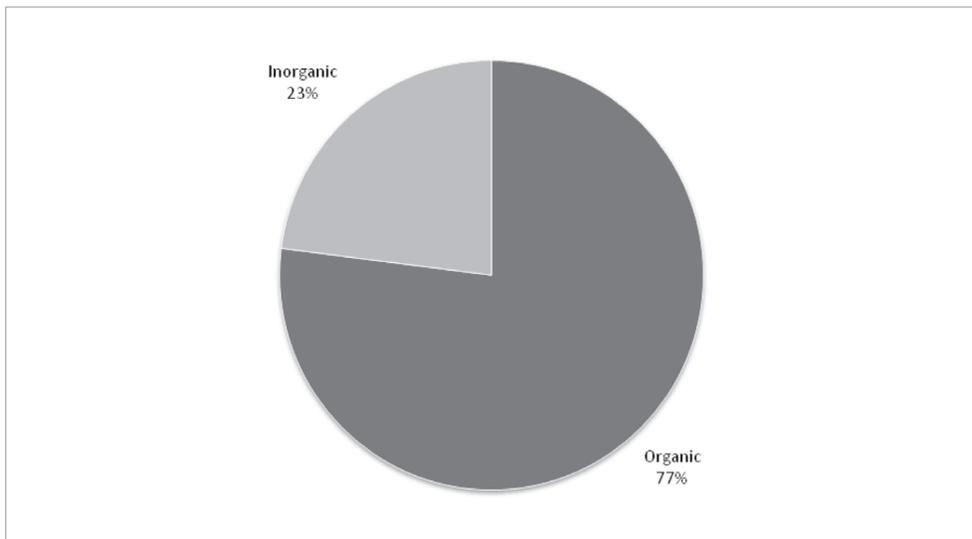
Amaltari Madhawarti Homestay is a unique rural touristic hotspot that was established as a community initiative to promote sustainable tourism. It is under Amaltari Consumer Committee. It lies near to forest due to which considerable work has been done in the field of conservation. It has been working not only to make a profit out of the homestay operation, but also aid to developing entire community through various efforts. It mainly works in five areas of concerns in the community. Awareness towards conservation has become its principle effort followed by the involvement in afforestation, fencing, education, and health similar to the study of Spiteri and Nepal (2008).

The development of ecotourism and social responsibility were also found to be given a special place. Initially, people were focusing on conservation. They were able to increase forest cover so that wild animals started roaming around forest as supported by the study of K C et al. (2015). They were also managing grassland and wetland with the collaboration of buffer zone committee. They have started homestay to receive benefits as a result of conservation activities. Through various subcommittees, different activities from security to conservation and promotional activities to community development are carried out similar to the study of K C and Thapa Parajuli (2015).

The design of all the homestay is same. A house running homestay has separate accommodation facility for the visitors that have two rooms with two beds each of single bed capacity. Each room has an attached bathroom with commode, a wash basin, and bath amenities. The room decoration is found to express the cultural identity of the community. These facilities are made under the provision of the Homestay Management Committee and should not be modified by a homestay owners similar to the study of Acharya and Halpenny (2013). If they do so, they will be fined.

Waste quantification and management

Majority of the waste produced was organic in nature (77%) weighting 8.803 kg. Inorganic waste shared only 23% of total production (2.585 kg). Food waste comprising of vegetable waste, fruit remain, and kitchen waste made most of the organic waste. Plastic, bottle, and paper were in domination for inorganic wastes.

Figure 2: Twenty-four hours waste production by homestays

Waste management practices were found to be focused with high priority near the homestays as supported by the study of K C et al. (2015). From the household survey, it was observed that kitchen was the main source of production of wastes in the form of vegetable remains, polythene, fruit remains, food remains, and wastewater. Agricultural activities were also the other important sources of waste production. The solid waste produced directly by visitors were water bottles, food wrappers, and beverages cans. These wastes were segregated into degradable and non-degradable waste. Cemented ring-shaped waste collectors were placed near the homestays.

Table 1: Organic and inorganic waste produced by homestays

Organic wastes	Percentage	Inorganic Wastes	Percentage
Pit composting	54%	Burning	33%
Pit composting and burning	17%	Burning and recycling	42%
Pit composting and biogas	13%	Burning and throw away	8%
Burning	4%	Municipality collection	4%
NA	13%	NA	13%

Further, homestays were found to follow other good environmental practices (K C, 2018). About 50% of the houses avoided packaged foods, but 38% were not seen serious about it. Further, 29% houses were promoting disposable goods, but 58% were not strict towards its use. Similarly, there is provision of regular cleaning campaign near the homestay where participant from each house is expected to attend the cleanup program. Fine was laid in case, they are unable to attend.

Houses running homestay were found to have provision of modern toilet with modern amenities for their use. Further, they have managed wastewater from kitchen and other activities with different approaches. Only 4% of the operators were found to let wastewater to the safety tank. About one-third of the homestays let waste water in the exhaust canal while 25% each let the wastewater to the crop field and family garden for irrigation purpose. They didn't have any provision of segregating waste water contaminated with chemicals from letting mixed in the wastewater.

Energy use and water use

Homestay operators were seen moving from conventional means of energy to modern and renewable sources of energy as that observed by K C et al. (2015) in Ghandruk of Nepal. Initially, they were dependent on firewood from nearby forest but with strong enforcement in rules regarding the use of forest resources and regulations to extract the resources on certain time basis by consumer committee of Amaltari Buffer Zone Management Committee, shift towards renewable resources has been seen.

All homestay operators have installed solar panel as an alternative energy source for lighting. Firewood was still the main source of energy for cooking and heating (Table 2). However, use of improved stove that can save resource and prevent unnecessary pollution was found to be discarded by almost all houses. With the increase in income level of the houses, they have started using liquefied petroleum gas (LPG) in which one cylinder of gas last for around 2.5 months on average (Bhusal, 2007).

For electrical appliances, electricity was the main source of energy. On an average, each house spent Rs. 1000 per month. Facility of air conditioning and electric heaters was not available. Due to the shift in paradigm regarding energy use, people realized less frequent break of pulmonary diseases and reduced local deforestation. Further, all people agreed on the improvement of internal environment due to the use of less polluting energy sources (K C et al., 2015). About two-third of the operators thought that energy cost was the main concern to reduce overall family expenditure, while 13% were not affected by this, and 21% operators were in dilemma.

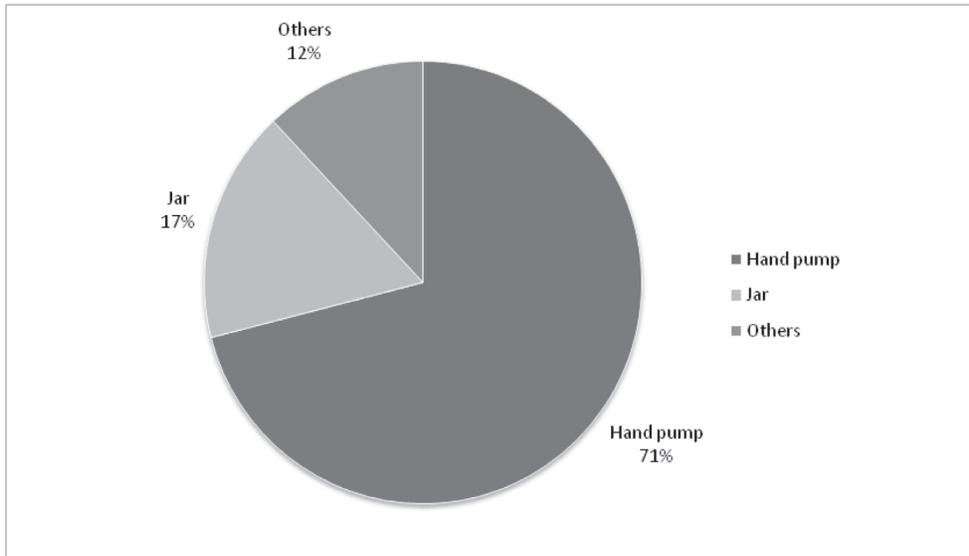
Table 2: Sources of energy

S.No	Activity	Source
1	Heating	Firewood
2	Cooking	Firewood and LPG
3	Lighting	Solar and hydro-electricity

Most of the homestay operators were using water from hand pump for drinking accounting to 71% and operators using jar water accounted only 17% (Figure 3). They

were mostly found using candle filter for treating water before use. One house was found using even a modern water purifier. Water quality test was not found to be in practice in the homestays. However, sanitation around water sources was maintained on regular basis. For fulfilling other purposes of water like washing, cleaning, and bathing, people were found to use Badh River on the southern side of the Baghkhori.

Figure 3: Water use



Socio-economic issues

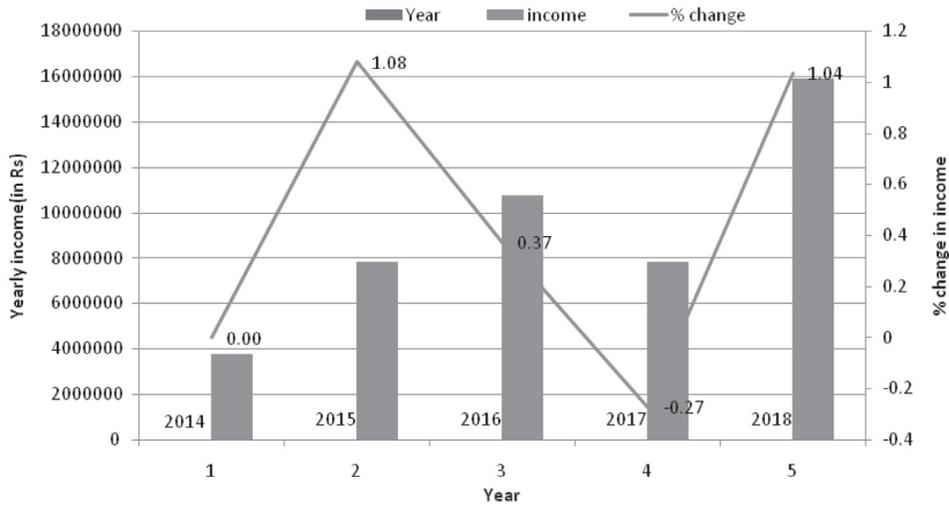
In Amaltari Madhawarti Homestay, 9500 Nepali visitors visited in 2014 that escalated to 10,770 in 2015 and 14,045 in 2016. The trend followed downward movement with 13,766 Nepali visitors in 2017 and 12,440 as of December 2018. This has brought change in the socio-economic condition of the people. It has improved the economic conditions of people and has showcased cultural richness. Old people who are familiar in Tharu and Bote culture are provided opportunity to generate money from different handicrafts. Youths who were attracted towards modern culture are now trained in their cultural dances, preparation of traditional recipes, and traditional costumes. Preservation of culture and local handicraft was given high priority as observed by Neupane et al. (2013).

Bote communities involved in fishing and Tharu communities involved in agriculture were provided alternative economic activities. They have also established their own tourism cooperative for the upliftment of the entire community. The results of its effectiveness were clearly seen. Road in the area was black topped with roadside

plantation. Also, there was provision of streetlights and dustbin on the roadside. Tourism has brought change in livelihood of the people (K C & Thapa Parajuli, 2014). It has also increased the source of income and provided alternative livelihood opportunity (K C 2017b).

Homestay operators were seen positive for this community based rural approach of tourism. They have realized the clear changes in different parameters of socio-economic aspects (Lipton & Bhattarai, 2014). It has improved the economic condition of people that has ultimately enhanced the lifestyle. About 79% operators have realized the change in economic condition of the family after establishment of the homestay. Further, 83% operators were empowered and 88% have been able to upgrade their lifestyle. They were seen favoring this enterprise overall and they have been getting support from the community (Acharya & Halpenny, 2013). They have been able to preserve their cultural identity and 79% operators were against the cultural degradation as a result of this homestay.

Revenue flow has been seen to be fluctuating (Figure 4). In the year 2014, this place withdrew a total amount of Nepalese Rs. 3,764,714. In 2015, it increased by 1.08% as compared to 2014. This further increased by 0.37% in 2016 and this place was able to make a total amount of Nepalese Rs. 10,748,652. The next year, 2017 was however showed depreciation in revenue with 0.27 % decrease in income as compared to that from previous year. However, 2018 imported a total amount of Rs. 15,912,004 with 1.04 growth percent. Amaltari Madhawarti Homestay has been a place of interest recently for visitors from different walks of life. It has gained mouth to mouth advertisement and has been able to attract large number of tourists from the time of its inception. Most visitors were found to visit this place for holiday purpose and share of visitors coming here for research purpose is also considerable. People were found to be attracted to this place mainly due to its unique blend of food, hospitality, nature walks, and different jungle activities.

Figure 4: Trend of revenue flow

Community-based homestay is a community enterprise so considering only homestay operators becomes unfair. Entire community, its environmental aspects, cultural factors, and economic strata get touched by this enterprise. For analyzing success of any homestay operation, impacts it lay on community must be considered. For this, non-homestay operators were asked a set of questions and their views on those topics were taken through rating from 1 to 5 denoting strong disagreement to strong agreement. Non-homestay operators were seen to be positive towards this community initiative as they have been benefitted from this operation. Homestay operation is a locally oriented tourism activity. Visitors seek local taste in food, culture, and recreational activities. Homestay operators alone could not fulfill all these requirements and they need support from other community members who are not involved in tourism. This was found to be prevalent in Amaltari Madhawarti Homestay. Local people were involved in different economic activities, cultural programs, and tourism activities. They were receiving indirect economic benefits from the supply of vegetables, fishes, ducks, and hens.

The operation of this homestay has been found to withdraw a considerable amount of money. Much of the income is distributed to the homestay operators accounting 90% of the money. 2 % of the income go each to conservation and social development, 1% of the income go each for health and education, and 3 % of the income go to the management. Different areas of concerns were focused for uplifting entire community. Non-homestay operators are also to be considered to analyze the overall success of this community initiative. Majority of the non-homestay operators'

respondents were in favor of increment in tourism infrastructures, addition of modern facilities, and foods.

Conclusions

Homestay in Baghkhori has become a positive catalyst to the entire community living here. It has been able to foster entire ecotourism of the region and promote sustainable development of the area uplifting all social, economic and environmental factors. With the gain of economic benefits, conservation activities have been eased; the operation of homestay has started empowering the entire community socially, culturally, and economically. Waste management, energy use, water use, and economic benefits were sustainable till the date. So, homestay operation is one of the important aspects to promote a sustainable ecotourism that facilitates local people to engage in tourism activities and preserve the uniqueness that becomes exotic for most of the visitors.

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