

# Assessment of the benefits and costs of tourism in Ghandruk, Gandaki, Nepal

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## Abstract

*Tourism generates both positive and negative impacts to the destinations. Therefore, for maintaining the long term sustainability of tourism industry, tourism impacts should be comprehensively evaluated. However, such assessments are scanty in the Nepalese context. In this study, we assessed the economic, social, and environmental costs and benefits of tourism in Ghandruk, one of the most widely visited iconic tourism destinations both for the domestic and international visitors. Data on various social, economic and environmental benefits/costs were collected via questionnaire survey, group discussion and in person interview and analysed by a Leopold matrix. The results revealed that tourism generates noteworthy economic and social benefits to the destination community, while the negative impacts in all three aspects are minimal. This finding may have broader implications beyond the case study, and suggests that tourism if extended as the primary industry in other similar mountainous villages can play a pivotal role to enhance the socio-economic status of the country.*

**Keywords:** Economy, rural tourism, sustainable tourism, tourism impact

## Introduction

Ghandruk is one of the most widely visited mountainous destinations in Nepal. This mountainous village located in Kaski district, Gandaki province, is famous among both domestic and international tourists for the last four to five decades. The village offers not only a spectacular view of snow-capped mountains but also traditional typical Gurung culture. Therefore, Ghandruk is famous among the visitors both as the safest and easiest trekking destination and as a destination that offers a blend of nature and culture-

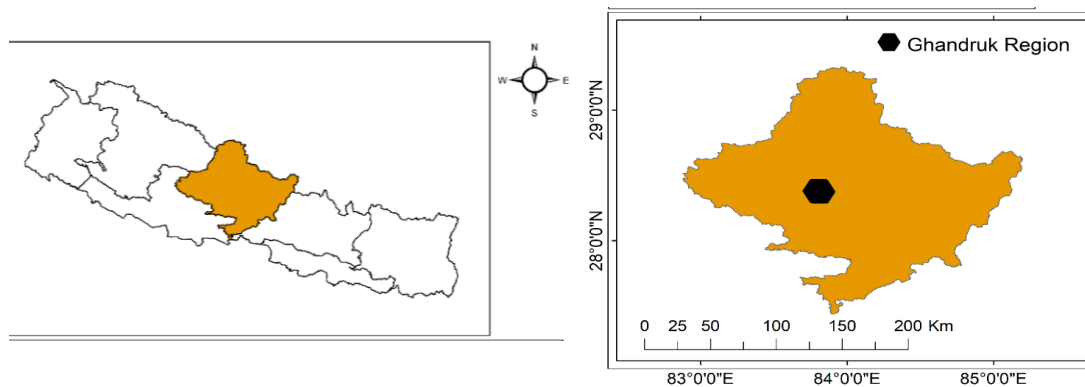
based tourism product. Currently, this destination is transforming from the traditional rural setting to urban setting and also experiencing the over pressure of tourism expansion. In this study, we assessed the economic, social, and environmental benefits and costs of tourism and evaluated the net impacts of tourism in Ghandruk. Here, we specifically addressed the following questions: (i) Does tourism generate net benefits/costs to the destination? (ii) if the net impact of tourism is positive, what are the major benefits and are the benefits equitable to the wider community of the destination? and if (iii) the net impact is negative, what are the major social, environmental, and economic costs of tourism to the destination community? The findings of this study will provide important insights regarding the further promotion of tourism industry in Ghandruk. Moreover, the findings will also be instrumental in formulating long term sustainable tourism policies in the context of Ghandruk and other similar mountainous tourism destinations across the country.

### Study site

The study site, Ghandruk, is located in Annapurna Rural Municipality, Kaski district, Gandaki Province, Nepal (Figure 1). The village located at an elevation of 2010 m asl lies towards the North-west of Pokhara. The village has a road access and thus can be easily reached from Pokhara by vehicular transportation in 4-5 hours. Although, in the past, the village was famous as a trekking destination, due to road connection, currently visitors prefer vehicular transport and thus the traditional identity of trekking destination has almost been lost. The village is a gateway to both Ghorepani-Poonhill trek and Annapurna-Machhapuchre base camp trek.

### Figure 1

*Study site showing its geographical location in Gandaki Province.*



**Ethical consideration**

Necessary permission for conducting research was obtained from the Hotel Association of Ghandruk. Before conducting surveys, a free, prior and informed consent (FPIC) was taken from all the respondents. All the respondents were informed that the collected information will be used only for this research and they were also assured that their identity will not be disclosed anywhere.

**Methodology****Research design**

The present research was based on the primary data collected via field visit's observation, group discussion, personal interview, and questionnaire survey with the stakeholders and local residents. The respondents were categorized into three groups (local governmental bodies, entrepreneurs and employee of the tourism industry, and local residents). Annapurna Rural Municipality (Kaski) was considered as the local governmental bodies, the first type of respondent. The entrepreneurs and the employees of the tourism industry (hotels, restaurants, and other tourism related business) of Ghandruk were considered as the second type of respondents. Local residents of Ghandruk who are not directly involved in tourism business were considered as the third type of respondents. The questionnaires were designed to assess the impacts of tourism on social, economic, and environmental sectors on a Likert scale ranging from -10 to 10 where scores from 1 to 10 represent the benefits with 1 the least benefit and 10 the most, while scores from -1 to -10 represent the cost of tourism with -1 the least effect and -10 the demoralising effect. We considered length of stay (tourism activities) as the predictor of various impacts tourism generates on the study site.

**Sampling**

The study uses both random and purposive sampling procedure for selecting the respondents. The first group of respondents, the local governmental body, was selected by purposive sampling because Annapurna Rural Municipality is the only local governmental body of the study site. The respondents of the second category (the entrepreneurs and the employees of the tourism industry) and the third category (local residents) were selected by random sampling method.

**Data collection**

The data were collected from March through October in 2019. Three different set of open ended questionnaires were asked for the three different groups of respondents. All the respondents were asked to evaluate the strength of impacts tourism generates on social, economic, and environmental sectors on a range of -10 to 10.

### **Data collection tools**

The study used field visit's observation, group discussion, personal interview, and questionnaire survey as the tools of data collection.

### **Data analysis process**

The data relating to the estimation of net impact of tourism were analysed using a Leopold matrix consisting of visitors' activities and various social, environmental, and economic factors on the two different axes as the cause-effect factors. The Leopold matrix is an interactive matrix that was first designed to evaluate the environmental impact of a project/activity in a particular destination but is also frequently used by researchers to evaluate cost and benefits of tourism and other industries (Baral & Rijal, 2022; Josimovic et al., 2014; Leopold et al., 1971; Snyder & Kaiser, 2009). The social, economic, and environmental costs/benefits were separately evaluated and finally, the net impact (costs/benefits) of tourism was evaluated based on the net benefits/costs to the social, economic and environmental factors. The data relating to the assessment of potential positive and negative impacts were analysed by qualitative approach.

### **Theoretical Framework**

Tourism, one of the biggest and fastest growing labour-intensive industries in the world (Zurick, 1992), has been considered as the backbone of economy in many countries due to its multiplier effects (Mayer & Vogt, 2016; Ridderstaat et al., 2013). On the one hand tourism generates many benefits to the destinations (Almeida-García et al., 2015; Dyer et al., 2007; Hernandez et al., 1996; Tsundoda & Mendlinger, 2009), on the other hand it creates several negative impacts on the destination community (Haralambopoulos & Pizam, 1996; Ko & Stewart, 2002; Sequeira & Nunes, 2008; Tsundoda & Mendlinger, 2009). Indeed, the benefits/costs tourism generates at a destination depends upon several intrinsic factors of the destination such as extent of tourism development, degree of dependency on tourism, resident's proximity to the site, type of tourism etc. and extrinsic factors such as visitors' behaviour, perception, support, tourism policy of the government etc. (Allen et al., 1988; Diedrich & García-Buades, 2009), and also vary with time and space (Besculides et al., 2002; Dyer et al., 2007; Haralambopoulos & Pizam, 1996; Mathieson & Wall, 1982). The findings from the previous studies suggest that for the long-term sustainability of tourism industry the negative impacts of tourism should not be overlooked. Therefore, policy makers and stakeholders are required to assess the net impact of tourism before expanding/establishing tourism to a particular destination.

In the recent year, there has been rapid increase in tourism activity in Nepal, both involving domestic and foreign tourist (MoTCA, 2019). Therefore, stakeholders such as private sectors, local governmental and non-governmental organizations/communities as

well as the provincial and central government have put their efforts in the expansion of existing tourism industry and/or establishment of new tourism destinations. The increased intention of expanding/establishing tourism industry across the different destinations not only promotes economic and social benefits but also likely to generate several negative consequences to the community and residents. Therefore, the net impact of tourism should be properly assessed to evaluate if the tourism could be the appropriate industry of the destination.

Although, in the global context, there have been several studies to assess the net impacts of tourism (Allen et al., 1988; Almeida-García et al., 2015; Balaguer and Cantavella-Jordá, 2002; Besculides et al., 2002; Nunkoo and Gursoy, 2012; Pickering et al., 2018; Shih and Do, 2016; Truong et al., 2014; Tsundoda and Mendlinger, 2009), in the Nepalese context studies assessing the net impacts of tourism are scanty (Baral & Rijal, 2022). Therefore, there is need of comprehensive evaluation of tourism impacts in regard to Nepalese tourism. The findings of such comprehensive studies not only evaluates if tourism could be the appropriate industry of the particular destination but also provides important insights for formulating sustainable tourism policy.

### **Results and Discussion**

The quantification of the impact of tourism at Ghandruk revealed that among the seventeen evaluated factors (Table 1), eight are positively impacted while nine are negatively impacted. The result reveals that the impact score for the positively impacted factors (except opportunity for recreation and improved life style) were in the upper range ( $\geq 5$ ) while the score for all the nine negatively impacted factors were in the lower range ( $\leq -4$ ). For the positive impact, length of stay (tourism activity) did not play significant role while negative impacts differed significantly among the three tourism activities with the long stay tourism generating the highest negative impact and one-day tourism generating the least negative impact. We found that the trekking activity with one-night stay generated the highest net impact (37.5% of the total impact) relative to the net impact generated by leisure tourism (35.42%) and/or tourism with professional stay (27%). The result showed that both socio-environmental factors and economic factors were positively impacted by tourism industry cumulating the net impact to 45.9%. Of the total benefits generated by tourism industry at Ghandruk, the net economic impact was much higher (93.48%) than the socio-environmental impact (6.53%).

The assessment revealed that more than 80% residents of Ghandruk are directly involved in tourism business either as the promotor of tourism related business such hotels, restaurants, tea houses, souvenir house or as an employee of the tourism industry. Moreover, the results reveal that the residents not directly involved in tourism industry also got directly benefited from tourism as they not only get opportunity to sell their

agricultural products in a relatively higher price within their hometown but also get seasonal jobs during the peak season of tourism activity. Thus, the result revealed that tourism at Ghandruk provides equitable benefits to the wider community. The results revealed that service creation and job creation were the most impressive positive benefits of tourism. Likewise, revenue generation, opportunity for trade, health and security, recreation, improved life style, and infrastructure development were the other major positive benefits of tourism. Unlike the previous findings, the current finding reveals that the impacts of tourism at Ghandruk are neither affected by intrinsic factors of destination nor varied among different groups within the community as almost all the residents, regardless of their involvement to tourism industry acknowledge that tourism has been serving their community by providing several benefits. This result is consistent with the previous finding of Baral and Rijal (2022) at Ghorepani, Nepal while partially inconsistent with several global findings (Almeida-García et al., 2015; Haralambopoulos & Pizam, 1996; Tsundoda & Mendlinger, 2009). The result further reveals that the negative impacts of tourism at Ghandruk are not so obvious and within the tolerable limits. This result is consistent with the findings of Baral and Rijal (2022) while inconsistent with the several previous findings which suggest that tourism generates several negative impacts to the destination and its community (Ko & Stewart, 2002; Mayer & Vogt, 2016; Sequeira & Nunes, 2008; Tsundoda & Mendlinger, 2009). Therefore, it reveals that at its current form, tourism in Ghandruk is a key industry as it generates a very high level of economic and social benefits with no any obvious negative impacts. Disturbances in tourism industry of this village leading to decline in tourism activity not only affect the livelihood of local residents but also affect the economic and social development of the village which eventually affect the socio-economic development of the province and the country as a whole. Hence, all the stakeholders must act jointly in planning innovative approach for maintaining the long term sustainability of tourism industry at Ghandruk.

**Table 1: Modified Leopold Matrix for assessing the net impacts of tourism in Ghandruk.**

Visitors Action Cost- Benefit factors		Trekking/ one night stay	Leisure tourism (Stay for < 1 week)	Professional stay (> 1 week)	Positive impact	Negative impact	Net impact on sub factors	Average impact on sub factors	Average impact on factors	Net impact of tourism	Net impact by factors (%)
		Socio-environmental factors	Culture	-2	-3	-5	0	3	-10	-3.34	0.299
Language	-3		-3	-5	0	3	-11	-3.67			
Education	-3		-3	-3	0	3	-9	-3			
Traditional skill	-3		-3	-3	0	3	-6	-2			
Life style	5		5	5	3	0	15	5			
Religion	-3		-3	-6	0	3	-12	-4			
Recreation	4		4	4	3	0	12	4			
Infrastructure	6		6	6	3	0	18	6			
Health and Security	7		7	7	3	0	21	7			
Environment	-2		-3	-4	0	3	-9	-3			
Economic factors	Equity depreciation	-2	-2	-2	0	3	-6	-2	4.29		93.48
	Job creation	9	9	9	3	0	27	9			
	Job seasonality	-1	-1	-1	0	3	-3	-1			
	Service creation	9	9	9	3	0	27	9			
	Inflation	-1	-1	-1	0	3	-3	-1			
	Trade	8	8	8	3	0	24	8			
	Revenue generation	8	8	8	3	0	24	8			
Positive Impact		8	8	8	24						
Negative Impact		9	9	9		27					
Impact by Visitor's action		36	34	26							
Impact by Visitor's action (%)		37.5	35.42	27.08							



## Conclusions

Ghandruk, one of the iconic tourism destinations both in the domestic and global tourism arena, is currently transforming from the traditional rural setting to urban setting and also experiencing the over pressure of tourism expansion and thus covets the immediate assessment of tourism impact. We conclude that tourism industry in Ghandruk has been generating several positive benefits to the destination while negative impacts are meagre. Thus, tourism at Ghandruk has been serving the wider community as the major mean of livelihood, and backbone of economic and social development. The current finding further suggests that tourism industry of Ghandruk at its current form is within the threshold limit indicating the potentiality of further expansion of tourism industry. However, given the higher negative impacts of long stay tourism than a short-haul tourism, further expansion of tourism industry should be focused towards developing the short-haul tourism with the trekking and culture tourism as the major products. Moreover, considering a few anticipated negative impacts, there is a need to devise an innovative approach to mitigate the negative impacts so that the long run sustainability of tourism industry of this iconic destination could be achieved. This model, if becomes successful, will provide important insights in promoting/expanding tourism industry across several mountainous destinations within the province and the entire country. Moreover, considering the limited literature in tourism assessment in the Nepalese context, this study not only advances our current understanding on tourism but also indicates the need of similar comprehensive evaluation of tourism impact across other tourism destinations of the entire country which would eventually generate evidence-based knowledge in promulgating the sustainable tourism policy of the country.

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## References

- Allen, L. R., Long, P. T., Perdue, R. R., & Kieselbach, S. (1988). The impact of tourism development on residents' perceptions of community life. *Journal of Travel Research*, 27(1), 16–21. <https://doi.org/10.1177/004728758802700104>
- Almeida-García, F., Balbuena Vázquez, A., & Cortés Macías, R. (2015). Resident's attitudes towards the impacts of tourism. *Tourism Management Perspectives*, 13, 33–40.



<https://doi.org/10.1016/j.tmp.2014.11.002>

Balaguer, J., & Cantavella-Jordá, M. (2002). Tourism as a long-run economic growth factor: The Spanish case. *Applied Economics*, 34(7), 877–884. <https://doi.org/10.1080/00036840110058923>

Baral, R., & Rijal, D. P. (2022). Visitors' impacts on remote destinations: An evaluation of a Nepalese mountainous village with intense tourism activity. *Heliyon*, 8(8), e10395. <https://doi.org/10.1016/j.heliyon.2022.e10395>

Besculides, A., Lee, M., & McCormick, P. J. (2002). Residents' perceptions of the cultural benefits of tourism. *Annals of Tourism Research*, 29(2), 303–319. [https://doi.org/10.1016/S0160-7383\(01\)00066-4](https://doi.org/10.1016/S0160-7383(01)00066-4)

Diedrich, A., & García-Buades, E. (2009). Local perceptions of tourism as indicators of destination decline. *Tourism Management*, 30(4), 512–521. <https://doi.org/10.1016/j.tourman.2008.10.009>

Dyer, P., Gursoy, D., Sharma, B., & Carter, J. (2007). Structural modeling of resident perceptions of tourism and associated development on the Sunshine Coast, Australia. *Tourism Management*, 28(2), 409–422. <https://doi.org/10.1016/j.tourman.2006.04.002>

Haralambopoulos, N., & Pizam, A. (1996). Perceived impacts of tourism: The case of samos. *Annals of Tourism Research*, 23(3), 503–526. [https://doi.org/10.1016/0160-383\(95\)00075-5](https://doi.org/10.1016/0160-383(95)00075-5)

Hernandez, S. A., Cohen, J., & Garcia, H. L. (1996). Residents' attitudes towards an instant resort enclave. *Annals of Tourism Research*, 23(4), 755–779. [https://doi.org/10.1016/0160-7383\(95\)00114-X](https://doi.org/10.1016/0160-7383(95)00114-X)

Josimovic, B., Petric, J., & Milijic, S. (2014). The use of the Leopold matrix in carrying out the EIA for wind farms in Serbia. *Energy and Environment Research*, 4(1), 43–54. <https://doi.org/10.5539/eer.v4n1p43>

Ko, D. W., & Stewart, W. P. (2002). A structural equation model of residents' attitudes for tourism development. *Tourism Management*, 23(5), 521–530. [https://doi.org/10.1016/S0261-5177\(02\)00006-7](https://doi.org/10.1016/S0261-5177(02)00006-7)

Leopold, L., Clarke, F., Hanshaw, B., & Balsley, J. (1971). *A procedure for evaluating environmental impact*. US Geological Survey Circular 645 (2nd ed.). US Department of the Interior, Washington D.C.

Mathieson, A., & Wall, G. (1982). *Tourism: economic, physical and social impacts*. Longman: Harlow, UK.

Mayer, M., & Vogt, L. (2016). Economic effects of tourism and its influencing factors. *Zeitschrift Für Tourismuswissenschaft*, 8(2), 169–198. <https://doi.org/10.1515/tw-2016-0017>

MoTCA. (2019). *Nepal tourism statistics 2018*. Ministry of Culture, Tourism & Civil Aviation, Government of Nepal, Singha Durbar, Kathmandu.

- Nunkoo, R., & Gursoy, D. (2012). Residents support for tourism: An identity perspective. *Annals of Tourism Research*, 39(1), 243–268. <https://doi.org/10.1016/j.annals.2011.05.006>
- Pickering, Rossi, S. D., Hernando, A., & Barros, A. (2018). Current knowledge and future research directions for the monitoring and management of visitors in recreational and protected areas. *Journal of Outdoor Recreation and Tourism*, 21, 10–18. <https://doi.org/10.1016/j.jort.2017.11.002>
- Ridderstaat, J., Croes, R., & Nijkamp, P. (2013). Modelling tourism development and long- run economic growth in Aruba. *Tinbergen Institute Discussion Paper*, 145, 1–22.
- Sequeira, T. N., & Nunes, P. M. (2008). Does tourism influence economic growth? A dynamic panel data approach. *Applied Economics*, 40 (18), 2431-2441. <https://doi.org/10.1080/00036840600949520>
- Shih, W., & Do, N. T. H. (2016). Impact of tourism on long-run economic growth of Vietnam. *Modern Economy*, 7(3), 371–376. <https://doi.org/10.4236/me.2016.73040>
- Snyder, B., & Kaiser, M. J. (2009). Ecological and economic cost-benefit analysis of offshore wind energy. *Renewable Energy*, 34(6), 1567–1578. <https://doi.org/10.1016/j.renene.2008.11.015>
- Truong, V. D., Hall, C. M., & Garry, T. (2014). Tourism and poverty alleviation: Perceptions and experiences of poor people in Sapa, Vietnam. *Journal of Sustainable Tourism*, 22(7), 1071–1089. <https://doi.org/10.1080/09669582.2013.871019>
- Tsundoda, T., & Mendlinger, S. (2009). Economic and social impact of tourism on a small town: Peterborough New Hampshire. *Journal of Service Science and Management*, 2(2), 61–70. <https://doi.org/10.4236/jssm.2009.22009>
- Zurick, D. N. (1992). Adventure travel and sustainable tourism in the peripheral economy of Nepal. *Annals of the Association of American Geographers*, 82(4), 608–628. <https://doi.org/10.1111/j.1467-8306.1992.tb01720.x>