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Tourism Council of Bhutan



**[ASSESSMENT OF TOURISM CARRYING
CAPACITY FOR BHUTAN]**

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1. Background on tourism development and rationale for conducting a tourism carrying capacity assessment.

Recognizing that tourism can generate both positive and negative impacts Bhutan under the visionary leadership of the 4th Druk Gyalpo has ensured that sustainability remains an integral part of tourism development. Considering that the major attractions to Bhutan are founded on the rich cultural and natural heritage a cautious approach based on the policy of ‘high value low volume’ remains the guiding principle for Bhutan’s tourism journey. This time tested policy has been successful in shielding the country from the negative impacts while generating substantial benefits (refer to figure 1). Tourism is presently the highest earner for hard currency besides creating huge employment opportunities.

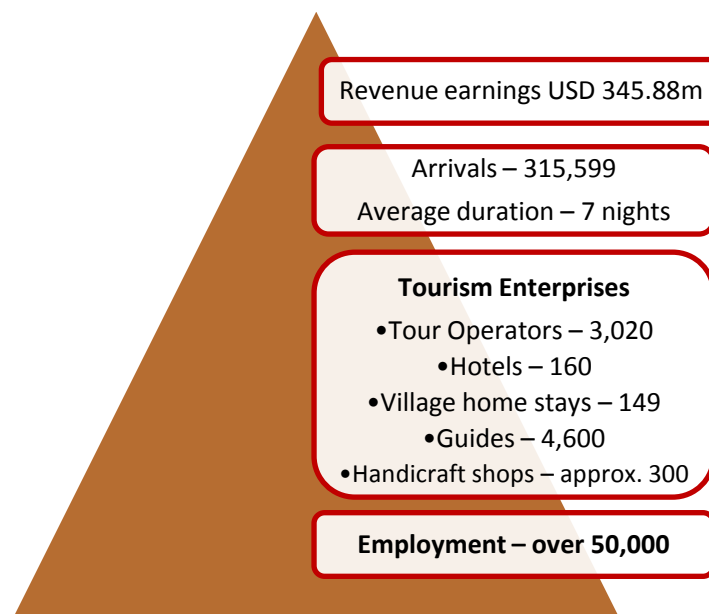
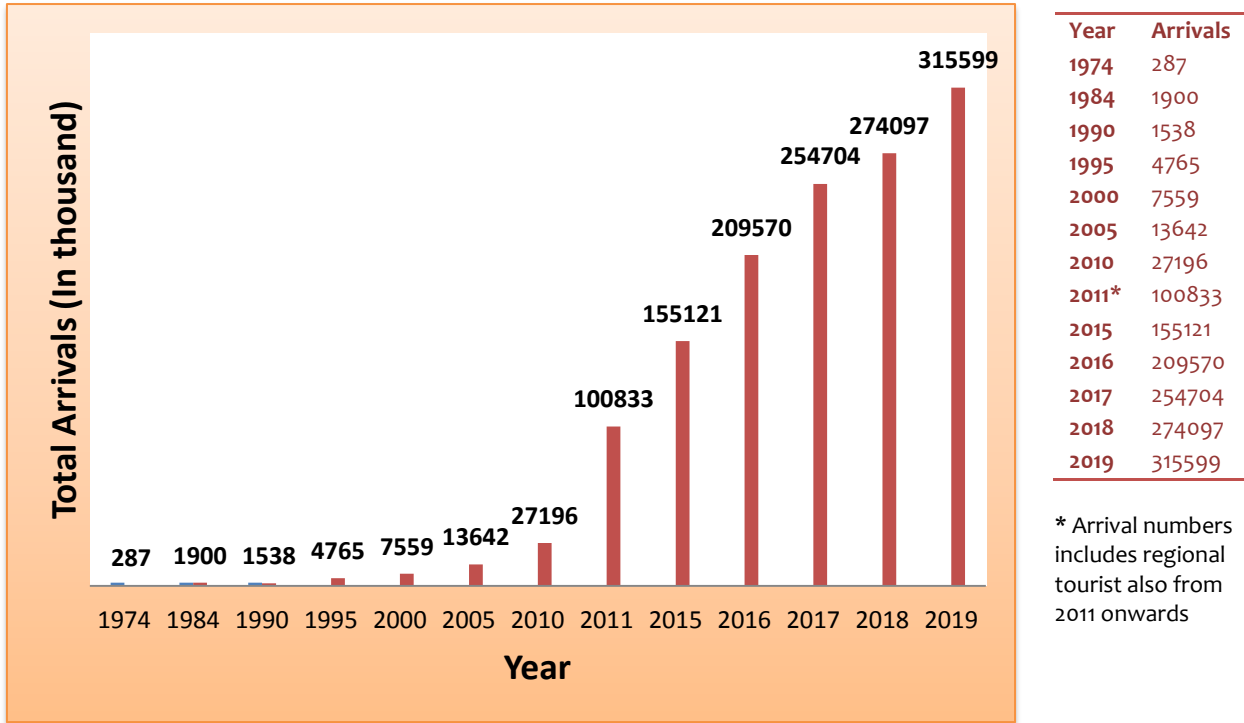


Figure 1: Some highlights of tourism impacts in 2019.

Further the positive image of the country has led to the emergence of Brand Bhutan which is held in great admiration by the International community positioning Bhutan as one of the top travel destinations. Guided by the principles of sustainable tourism the vision for Bhutan’s tourism is to be ‘A Green, sustainable, inclusive and a high value competitive destination’. Since the advent of the first tourists in 1974 the arrivals have been increasing (see table 1).

Table 1: The increasing trend in visitor arrivals (data source TCB).



The rapid surge in arrival numbers although making substantial economic contribution has raised concerns on rising adverse impacts abating the high value experience of the guests. The increased arrivals have triggered overcrowding in many of the popular visitation sites. Such a trend is potentially detrimental for increasing negative impacts if proper management interventions are not in place. Comprehending this situation and the need to prevent any further consequences a tourism carrying capacity assessment is proposed.

The assessment can help in getting an understanding to the perceptions of - What is the threshold or the maximum number of tourists that Bhutan as a destination can contain? Are we experiencing mass tourism or lacking in proper site management? What are the overall parameters needed to maximize on the economic benefits while ensuring that the ecological, socio-cultural values and visitor experience are not impaired? Carrying capacity will not provide the solutions but can be used as a management tool to provide informed decision to support the government’s aspiration of promoting overall sustainability.

Therefore, recognizing the emerging problem and concerns the aim of the study is to conduct an assessment of the tourism carrying capacity of Bhutan (country level) and with focus on Thimphu, Paro, and Punakha Dzongkhags which harbors the maximum arrivals.

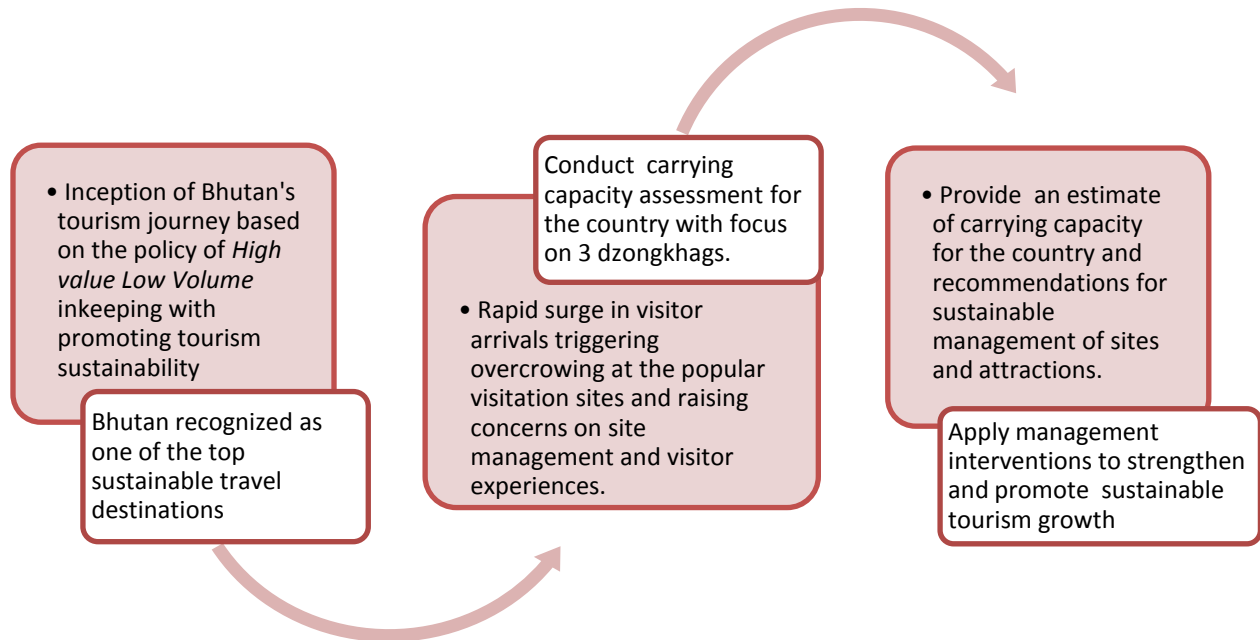


Figure 2: Rationale for study

2. Factors affecting overcrowding at the sites/attractions - an analysis of the current tourism trend

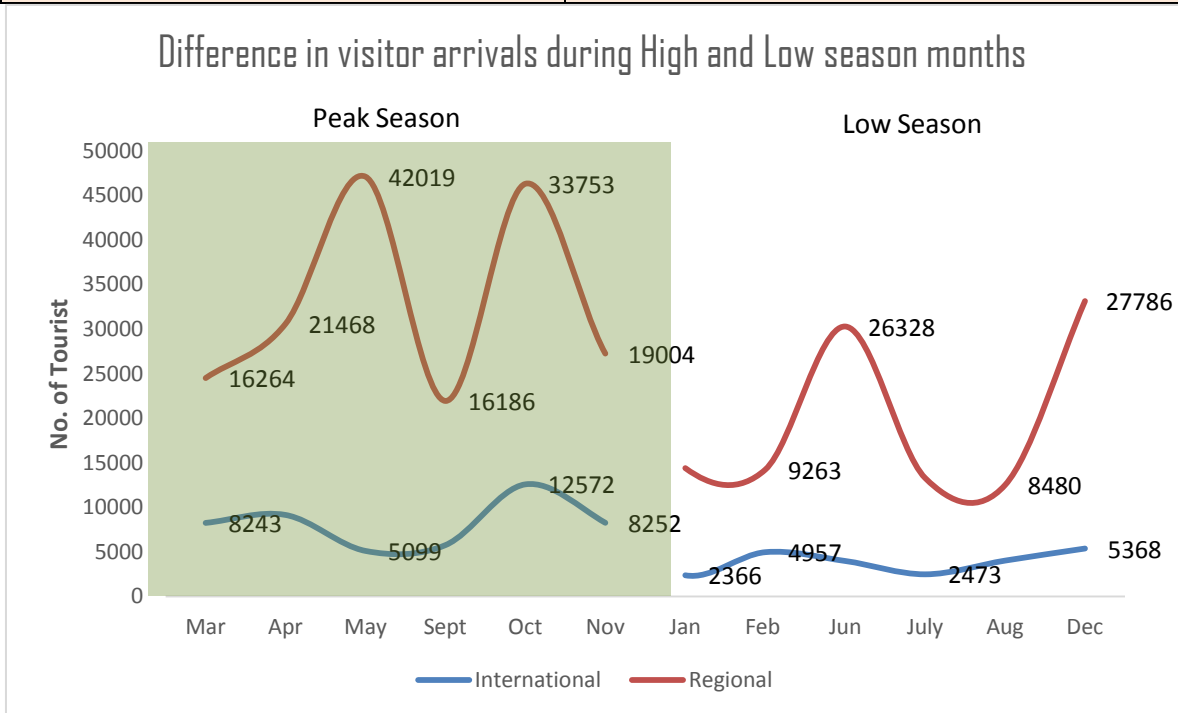
Prior to applying the carrying capacity assessment it is necessary to understand some of the major causes of overcrowding at the sites. There are several factors that either directly or indirectly influence the volume of visitors to the attraction sites. So before examining the tourism carrying capacity it is useful to get an understanding of these issues affecting the visitation sites.

- **Seasonality:** Though Bhutan may be a year round destination yet it is promoted and marketed in two seasons. The high season comprising of 6 months of March, April, May, September, October, and November and the remaining 6 months of June, July, August, December, January, and February considered as the low or off season. Such a marketing strategy will naturally influence majority of the visitors to come during the high season months. This situation leads to much higher number of visitors at the

attraction sites but only at certain period of the year. As a result seasonality prescribed by the biased marketing strategy is one of the key constraining factors leading to uneven numbers in arrivals as shown under table 2.

Table 2: Seasonality impacting on arrival numbers (2019 data, TCB)

Peak season months			Lean season months		
Month	Arrivals		Month	Arrivals	
	International	Regional		International	Regional
Mar	8243	16264	Jan	2366	12031
Apr	9137	21468	Feb	4957	9263
May	5099	42019	Jun	3969	26328
Sept	5751	16186	July	2473	10818
Oct	12572	33753	Aug	4012	8480
Nov	8252	19004	Dec	5368	27786
Total	49054	148694	Total	23145	94706

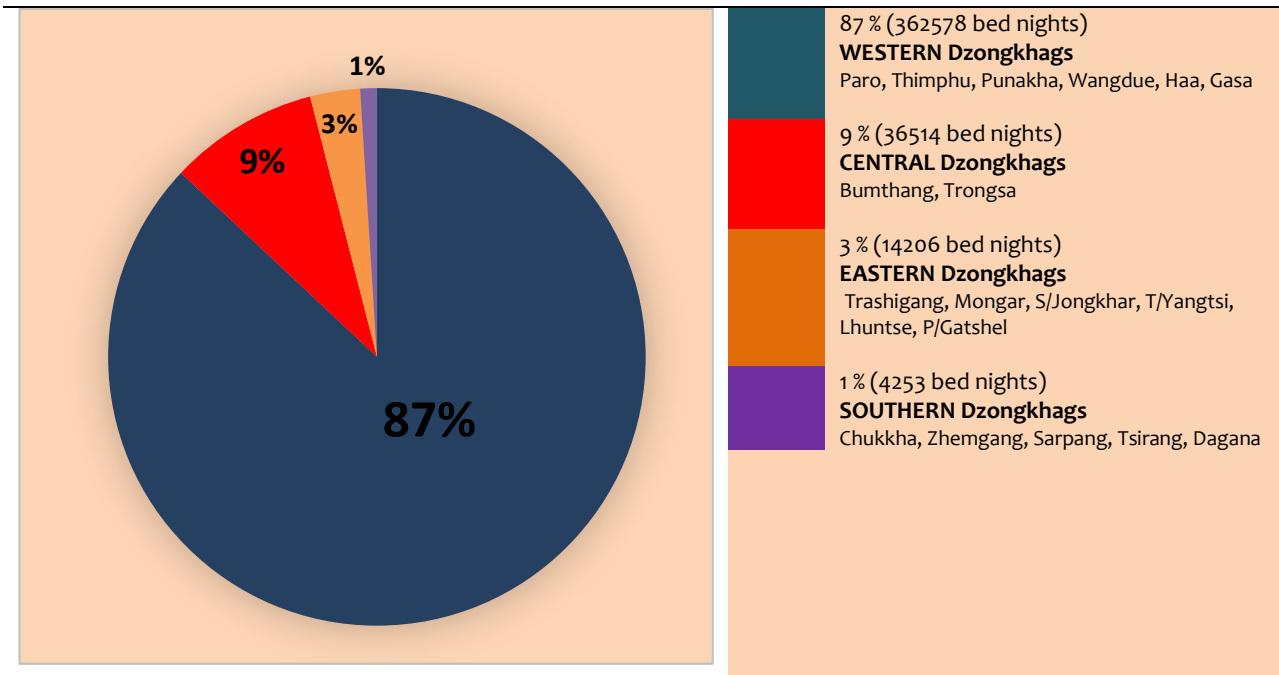


- **Access:** is a key factor influencing arrivals to places. The only international airport is located in Paro to facilitate air travel. Likewise for road access the most convenient

and major access route is via Phuentsholing. The two major access routes by air and road are located in the western region. This has promoted easy access to specific attractions and products in these areas.

- **Geographical concentration of arrivals:** Major access by air and road being in the western part of the country has resulted in overcrowding especially in the dzongkhags of Thimphu, Paro, Punakha predominantly during the peak season while the other dzongkhags suffer from paucity of arrivals. This has led to inequitable distribution of tourists. The map shown in figure 2 highlights the significant difference in visitation arrivals.

Table 3: Visitor bed nights showing maximum concentration in the western region leading to inequitable distribution of tourists (data source of 2019, TCB)



- **Lack/inadequate facilities and amenities:** majority of the visitation sites are the cultural monuments. There has been minimal investment in these areas towards facilities and amenities that could actually further enhance the visitors experience besides helping in reducing overcrowding. One limitation is also the lack of physical space or under utilization of it.

- **Lack of diversity in product development:** Although Bhutan’s attraction is based on Culture and Nature there is a stark difference in its choice with over 90% primarily representing cultural tourists. The cultural products are similar in most of the places showcasing dzongs, monasteries and tsechus (religious festivals). While there is scope for product development it presently lacks diversity leading to visitors focusing only on a few of the popular cultural attractions.
- **Lack of site management plans:** Visitor arrivals may have increased significantly at several sites but there has been no effort in developing management plans for any of the sites. This can potentially lead to overcrowding and induction of negative impacts. Site/visitor management plans needs to be developed that is all inclusive. Developing and implementing these plans can not only enhance visitor experience but ensure long term sustainability of the sites.



Figure 3: Factors influencing (directly or indirectly) overcrowding at visitation sites and attractions

3. Using Tourism Carrying Capacity (TCC) as a tool for sustainable tourism development

3.1 What is sustainable tourism?

The Royal Government of Bhutan is committed to pursue a tourism development model based on sustainability. The principle of sustainable tourism focuses on maximizing on the positive benefits while reducing or minimizing the negative impacts. The four core attributes of sustainability are economic viability, environmental sustainability, socially and culturally acceptable, and sustainable management. These attributes of sustainable tourism development bear similarity to the four pillars of Gross National Happiness. This affinity makes it easier for Bhutan to embrace the principles of sustainable tourism development.

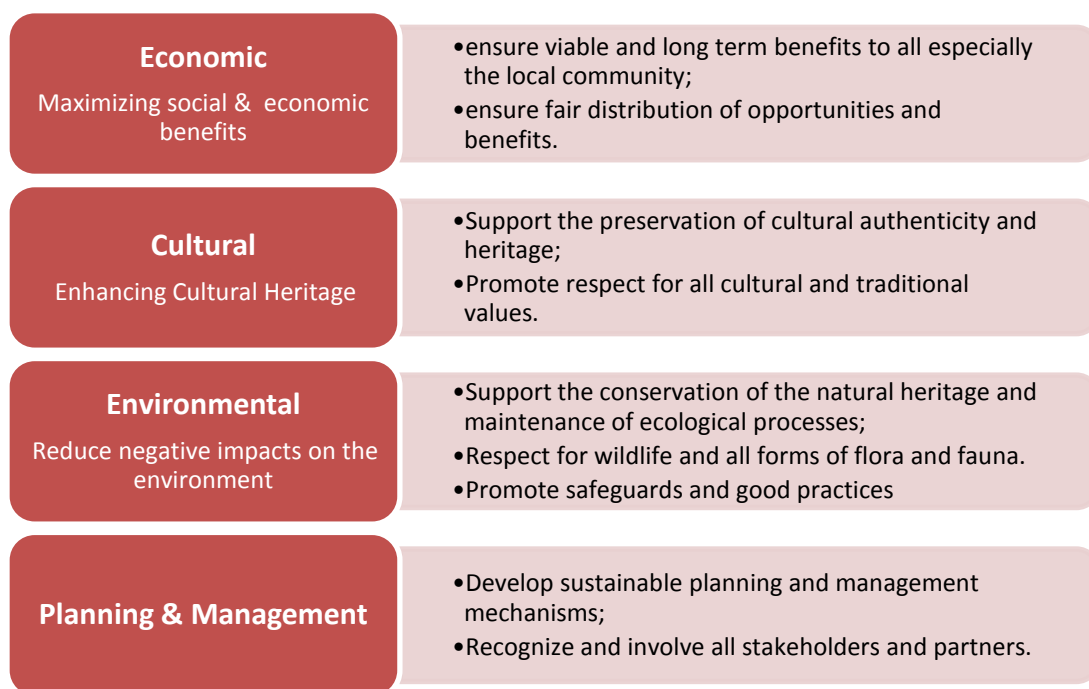


Figure 4: The principles of sustainable tourism

While the government aspires to develop sustainable tourism the reality is that is not possible to assess the sustainability of a destination in an absolute manner. Nonetheless it is more possible to define scenarios for evaluation. Therefore, it should be based on a robust analysis of environmental, social and economic conditions of the area and on an evaluation

of existing physical, economic and social limits to current and potential development of tourist activities, i.e. an assessment of the actual carrying capacity of the destination¹. Hence, carrying capacity assessment is being attempted to be used as a tool for planners to understand the implications of visitor numbers vis-a-vis the sustainable management of visitation sites.

3.2 Understanding Carrying Capacity

Carrying capacity as defined by the World Tourism Organisation is *'the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction'*. In other words it is also defined as *'the level of human activity an area can accommodate without the area deteriorating, the resident community being adversely affected or the quality of visitors experience declining'* (Middleton & Hawkins Chamberlain, 1997). Both these definitions inform us that carrying capacity is the point at which a destination or attraction starts experiencing adverse impacts as a result of the number of visitors.

As per the UNWTO definition the physical (or ecological), social and economic carrying capacity are described as follows:

- *Physical (or ecological) carrying capacity* is the threshold limit beyond which natural and cultural heritage of a destination are damaged by tourism; physical carrying capacity of a destination is determined through the analysis of its environmental components (for example, water resources quantity and availability, limits for air pollutants concentrations) and through the analysis of the facilities required by both tourists and residents: saturation limits for existing facilities (for example, sewage treatment plants, waste treatment plants) and limits for new facilities construction. So it is the maximum number of visitors that the area is actually able to support or contain.

¹ Carrying Capacity of tourism system: An assessment of environmental and management constraints towards sustainability. 2012. Valentina Castellani and Serenella Sala.

- *Economic carrying capacity* is the threshold limit beyond which tourism growth becomes economically unacceptable; this situation may rise from two conditions: a) when tourism interferes with other economic activities obstructing their development, b) when the presence of a great number of tourists makes the destination no more comfortable and attractive and causes a contraction in tourism demand. Examples are souvenir shops taking the place of shops selling essential items to the local people. Also increased revenues brought through tourism development are overtaken by the inflation caused by tourism.
- *Social carrying capacity* is the threshold beyond which social aspects of the host community are badly influenced and damaged by tourism activities and life's quality of residents is no more granted; this situation can also lead to conflicts between tourists and resident population, generating social tensions. Reduced visitors enjoyment and increased crime are also indicators of when the social carrying capacity has been exceeded².

Taking the lead from the international research and to apply it to Bhutan where the cultural heritage is at the helm of tourism development an additional parameter for cultural carrying capacity will be adopted.

3.3 Limitations of Tourism Carrying Capacity

Considering that Carrying capacity is multidimensional and the series of factors influencing carrying capacity of a destination it is difficult, if not impossible, to calculate its exact value. Carrying Capacity has its limitations and should be used with other tools to make it more realistic. For example, Limits of acceptable change (LAC) is also another tool that can be used for managing impacts. Carrying capacity is aimed at deciding *how many people/visits* a resource can sustain, while LAC tries to define *how much change* is acceptable as a result of those visits and how to address it. Likewise there are also other relevant tools like Visitor Use Management framework³, and the Destination criteria developed by Global sustainable

² Methodological framework for evaluation of TCC of eco sensitive region. Shweta Y Kurhade. 2013.

³ Developed by the US national parks. <https://visitorusemanagement.nps.gov/>

Tourism Council (GSTC) that can be applied in combination to address the issues related to carrying capacity of sites and destinations.

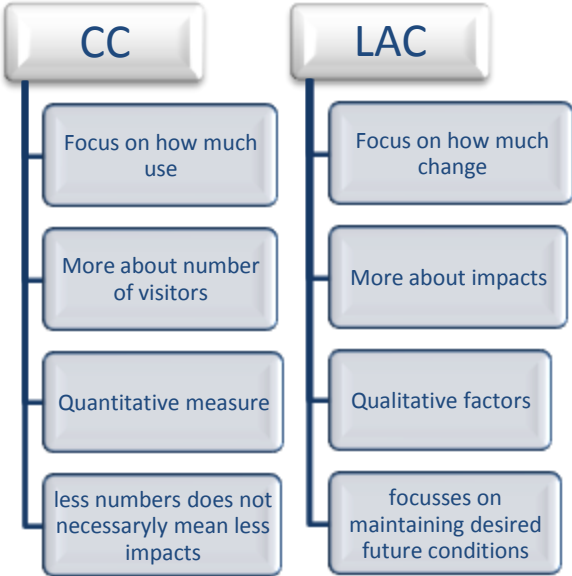
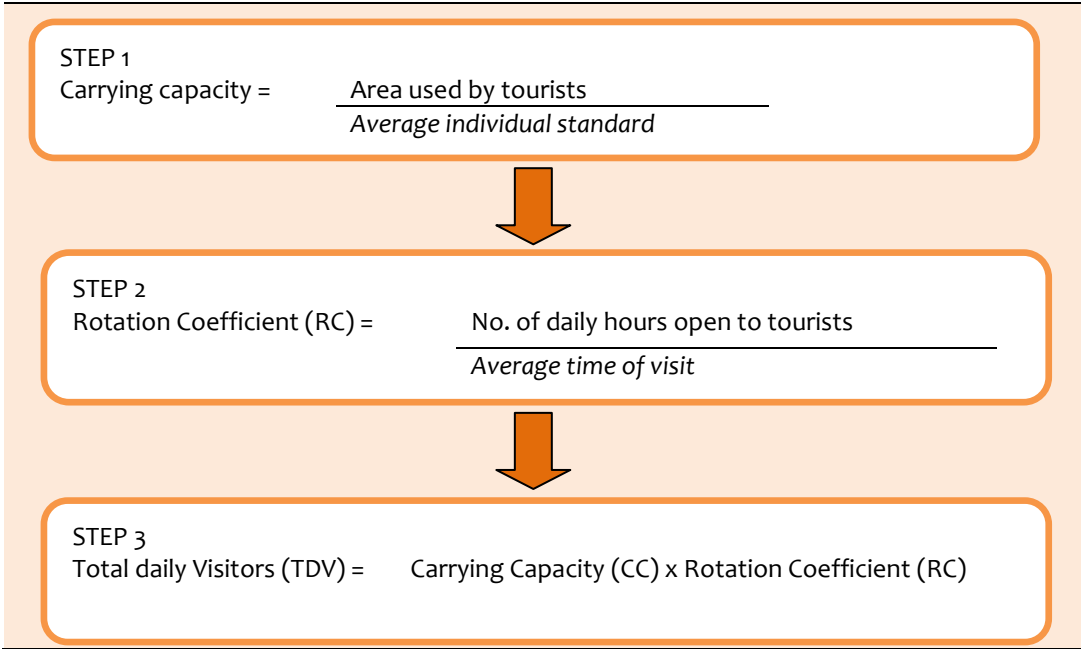


Figure 5: Carrying Capacity (CC) vis-à-vis Limits of Acceptable Change (LAC)

3.4 Estimating carrying capacity for specific sites

Quantifying carrying capacity is difficult as it will vary for each site depending on several environmental and social conditions. However, the most common way to estimate numbers is by using the formula developed by Boullon (1985). This is based on the following 3 steps.



4. The Assessment – approach and methodology

Although carrying capacity has its limitations the government is still keen to deploy its application to get an estimate in numbers of total arrivals that Bhutan as a destination can accommodate at any given time. The assessment will be approached by focusing on three dzongkhags – Paro, Thimphu, and Punakha.

4.1 Methodology

The following methods have been suggested for undertaking the Tourism Carrying capacity in the country. Although several methods have been described only a few have been used owing to the short study duration and other limitations influenced by the COVID 19 pandemic.

4.1.a. Assessment framework: Based on review of international literature and the definition of carrying capacity a framework has been developed as shown under Table 4 to suit the needs for Bhutan. This framework will incorporate all the essential elements within the carrying capacity parameters along with the sustainability indicators. The sustainability indicators can help in monitoring to identify the impacts that are in contravention of the carrying capacity and accordingly appropriate check and balances can be put in place. This framework is not exhaustive and other criterias and relevant information can be added in the process of using it.

Table 4: Framework for assessing Tourism Carrying Capacity⁴

1. Physical Carrying Capacity			
i. Natural Environment		ii. Built Environment	
Criteria	Sustainability Indicators	Criteria	Sustainability Indicators
Forest and Biodiversity	loss of habitat - disturbance and loss to flora and fauna - visual degradation of forest	Tourism Infrastructure development	Accommodation (types and no. of bed) - Parking - shops - amenities and services - character (architectural style) of structures - extension and encroachment of structures

⁴ Modified from the following references: 1). Defining, measuring and evaluating carrying capacity in European tourism destinations, University of the Aegean, Athens, 2002. 2). Methodological framework for evaluation of TCC of ecosensitive region, Sheweta Y. Kurhade, 2013. 3). GSTC Destination criteria.

Land use	- soil erosion - land use changes		
Water sources	- consumption levels - quality - supply	Transportation	- traffic and congestion - Road and trail condition
Air Quality	Air pollution - Noise pollution - CO2 emission levels	Solid waste	- amount of waste produced - type of waste - landfills and management
Landscape	- visual degradation	Sewage	- collection and treatment
Climate	- strategies and actions for climate change adaptation	Energy	- types of energy used
Natural heritage	- attractions for tourism - management plans	Noise and light pollution	

2. Economic Carrying Capacity		3. Cultural Carrying Capacity	
Criteria	<i>Sustainability Indicators</i>	Criteria	<i>Sustainability Indicators</i>
Economic Impacts	- inflation and rising costs - increased dependence on imports - increase in living cost for local residents - Black market and bad practices - dependence on tourism	Cultural Heritage	- Inventory of cultural sites, activities, and monuments open to tourism - protection of cultural assets - laws for sale of artefacts and promotion of local arts and crafts - impacts on the sites
Employment	- types of employment - new jobs created - fair wage	Overcrowding	- disturbance
Distribution of benefits	Uneven distribution	Visitor management	- system in place (zoning) - effectiveness of the system - Facilities and amenities
Tourism Earnings	- supporting local entrepreneurs and fair trade - increase in income	Site interpretation	- accuracy of appropriateness of information - means of interpretation
Policy and development	- Tourists arrivals (bed nights and day visitors) - types and nationality		

4. Social Carrying Capacity	
Criteria	<i>Sustainability Indicators</i>
Demography	- Local population (youth and elderly) - percentage of population actively engaged in tourism
Social Behavior	- Demonstration effect (Residents emulate tourists) - Abandonment of traditional activities
Social well being and impacts	- support for community – health safety and security - prevention of exploitation and discrimination - emergencies and medical cases - Crime levels - increase in accidents
Psychological	- satisfaction level of tourists - satisfaction level of locals

4.1.b. Destination information: relevant tourism information and data needs to be collected from each of the dzongkhags. This information will help in understanding the situation and scope of tourism development in the respective dzongkhags. A guide to collecting such information is given below. This too is not an exhaustive list and can be improved to add other relevant information.

- I. Identify and list all the tourist attraction sites in the Dzongkhag. Conduct assessment of each site based on the assessment framework. Estimate the TCC of each site.
- II. Assess the present available infrastructure including accommodation facilities), services, and accessibility conditions in the dzongkhag. potential for further development of products and services.
- III. Analysis of tourism development in the dzongkhag and its opportunities, threats and challenges. Including an analysis of the total beds and arrival numbers.
- IV. Demographic and socio-economic situation.
- V. Climatic and physical conditions and vulnerability to natural disasters.

4.1.c. Focus group: a focus group consisting of experts representing the key stakeholders was formed. They represented the Department of Culture, Department of Forests and Parks, HRAB, ABTO, TCB, and BSTS. The role of the group members was to provide expert advice and guidance for the study.

4.1.d. Questionnaire survey: A questionnaire survey was designed to seek feedback from tour operators and guides considering that they are at the forefront of managing the tours. They are best placed to understand the challenges of meeting visitor needs and site management. As such an online questionnaire has been prepared to seek their views on visitor experience and concerns on site management.

4.1.e. Field visits to focus dzongkhags: Field visits to the three dzongkhags of Paro, Punakha and Thimphu selected as focus dzongkhags was undertaken. Observations and consultations were conducted to see the state of tourism development, its impact, products and services. In addition one attraction site from the list of the attractions and sites as shown under table 5 was assessed. The selected sites within the three dzongkhags were Taktshang (tigers nest) for Paro, Buddha Dordenma statue for Thimphu, and Punakha dzong for Punakha. The assessment of the site included physical measurement of visitation sites, observation of spaces and facilities, informal interviews with caretakers and security personnel of the sites, and conducting discussions with relevant authorities including prominent dzongkhag administration and local government representatives.

Table 5: list of popular attractions/sites in Paro, Thimphu, Punakha

PARO	THIMPHU	PUNAKHA
Cultural		
<ul style="list-style-type: none"> i. Tigers nest ii. National museum iii. Paro Dzong iv. Kichu lhakhang v. Duntse lhakhang vi. Drugyel Dzong vii. Tachog lhakhang viii. Paro Tsechu 	<ul style="list-style-type: none"> i. Buddha Dordenma statue ii. Changangkha Lhakhang iii. Memorial Chorten iv. Tashichodzung v. Tangu Cheri monastery vi. Traditional paper making factory vii. National Institute of Traditional Medicine viii. Royal Textile Academy ix. National Emporium x. Semtokha Dzong xi. Thimphu Domchoe/Tsechu 	<ul style="list-style-type: none"> i. Punakha Dzong ii. Chimmi Lhakhang iii. Khamsung Yuelly Namgyel Chorten iv. Sangchen Dorji Lhuendrup nunnery v. Punakha Domchoe/Tsechu
Nature		
<ul style="list-style-type: none"> ix. Chelela pass x. Bumdra trek 	<ul style="list-style-type: none"> xii. Takin Preserve xiii. Dochula pass xiv. Druk path trek xv. BBS tower trail to Wangditse 	<ul style="list-style-type: none"> vi. Rafting

5. Results and findings

Field assessments for the three dzongkhags of Paro, Thimphu, and Punakha were conducted. Data from the questionnaire survey too analyzed. The findings are presented below.

5.a Paro Dzongkhag

The only International airport being located in Paro and with many prominent iconic cultural sites like the taktshang (tigers nest) makes Paro the most popular dzongkhag for tourists. Paro enjoys the maximum arrivals for both the International and regional visitors. Besides the arrivals it also has the highest bed nights. In 2019 Paro accounted for 33% of the total bed nights from International visitors. Using accommodation facilities as one of the means to estimate the carrying capacity, Paro has (as of 2020, TCB) 37 three star and above hotels, and 23 Village home stays. The total of these 60 accommodation facilities accounts for an average of 1915 beds. Considering an average stay of 2 nights the carrying capacity of Paro based on the current accommodation availability is estimated at approximately **350,000** tourists in a year. This estimate does not include several budget hotels available in the dzongkhag.

5.a.i Assessment of Taktshang (Tigers nest).

Taktshang monastery is the most venerated cultural icon of Bhutan. Its significance dates back to the 8th century when it is believed that Guru Rimpoche came flying on a tiger and landed here. Thus the name taktshang which translates as tigers nest. Since the advent of Guru Rimpoche the entire cliff is blessed by him and considered the holiest of the holy. Apart from being the cultural hotspot for pilgrims it is also the most attractive and 'must see' site for tourists. Over the years taktshang has gained global fame and has in fact become tantamount to introducing Bhutan. It is located 10 kilometers to the north of Paro town. The monastery sits on a precarious cliff at 3,120 meters above 900 meters from the valley. The trail from the base is about 4 kilometers and takes about 2 hours hiking one way. As the most revered sacred site and popular tourist destination it draws the maximum number of arrivals. Eight of the ten lhakhangs (temples) in the monastery are open for visitation.

Upon physical verification and inspection of Taktshang the assessment provided the following estimates. The spaces available for visitors were 45 sq. m (15m length x 3 m width)

at the entry point, 202.5 sq. m (135 m length x 1.5 m average width) of total walking passage, and 221 sq. m total for the eight lhakhangs as shown below.

Lhakhang	Total space for visitors (in meters)		Total (sq.m)	People
	Altar room	Waiting room		
Lhakhang 1 (Guru Rimpochey Drubkhag)	2.5 x 3 = 7.5	3 x 1 = 3	10.5	5.25
Lhakhang 2 (Guru Sung-Jyen)	8.5 x 3 = 25.5	2 x 3.5 = 7	32.5	16.25
Lhakhang 3 (Guru tsengye lhakhang)	9 x 7 = 63	-	63	31.5
Lhakhang 4 (Guru Dorji Dorloed Lhakhang)	10 x 2.5 = 25	-	25	12.5
Lhakhang 5 (Namsey Lhakhang)	3.5 x 2 = 7	-	7	3.5
Lhakhang 6 (Tshepagmed Lhakhang)	3 x 2 = 6	4 x 3.5 = 14	20	10
Lhakhang 7 (Kuenra Lhakhang)	4.5 x 6 = 27	-	27	13.5
Lhakhang 8 (Langchen Pelseng gi Lhakhang)	6 x 4 = 24	3 x 4 = 12	36	18
	185	36	221	110.5

To avoid overcrowding and ensure ample space for visitors the carrying capacity estimate did not take into account the passage and entry spaces. The estimate is based only of the eight lhakhangs. Considering an average individual standard of 2 meters the carrying capacity comes to 110.5 visitors.

$$\text{Carrying capacity} = \frac{221 \text{ sq.m (Area used by tourists)}}{2 \text{ sq.m (Average individual standard)}} = 110.5 \text{ visitors}$$

The visitation time is daily from 8am to 4 pm with no lunch break. The initial one hour lunch break has been removed since it was causing congestion due to accumulation of visitors. Considering an average visit time of 45 minutes the rotation coefficient comes to 10.66.

$$\text{Rotation Coefficient (RC)} = \frac{8 \text{ Hours (No. of daily hours open to tourists)}}{0.75 \text{ hours (Average time of visit)}} = 10.66$$

Based on the carrying capacity and rotation coefficient the total daily visitors are 1178.

$$\text{Total daily Visitors (TDV)} = 110.5 \text{ (CC)} \times 10.66 \text{ (RC)} = 1178$$

If we were to consider 20% (i.e. 235) of the TDV for domestic visitors that would leave 942 for tourists and other visitors. The monthly and annual quota for external visitors works out to

be **28,260** and **339,120** respectively. Considering the fragility, risk and safety issues the estimate is modest and does not include the spaces of the walking passage and entry point where more numbers can be accommodated. The estimate of visitors along the trail can be more since there would be visitors who come only till the view point at the cafeteria. Visitor numbers can be controlled through pricing, timing and zoning. Peak visitor timing is between 11 am to 2 pm. A strategy to avoid congestion at this time could be by charging a higher entry fee between these times. Likewise visitors who wish to spend longer durations at the temples can be charged more.

5.b. Thimphu Dzongkhag

Thimphu being the capital of Bhutan is the largest city. Its proximity to Paro international airport and Phuentsholing has generated high arrivals of tourists. In 2019 Thimphu obtained 25% of the total bed nights from international visitors. Although this is behind Paro it is likely that Thimphu as the capital and business centre generates much more arrivals from regional tourists and visitors for business and conferences. This has led to a surge in the construction of hotels. Presently Thimphu has a total of 47 tourist hotels, 4 village home stays and 178 budget hotels. The approved tourists accommodation (tourist hotels and VHS) accounts for approximately 3065 beds. Considering an average stay of 2 nights for each tourist the carrying capacity of Thimphu comes to **560,000** tourists a year. This does not include the beds of the 178 budget hotels.

5.b.i Assessment of Buddha Dordenma Statue, Kuenselphodrang

The giant Buddha statue known as the Buddha Dordenma is located in Kueselphodrang recreational park overlooking the Thimphu city. Its construction began in 2006 and was completed in 2015. The statue is one of the largest with a height of 169 feet (52 m). Its impressive structure located within the spacious area offering a great view of the city has made it a popular visitation site for many tourists and visitors. Although the statue has five floors presently only one floor, the second floor (Kuenga rawa lhakhang) is open for visitors. Works are still ongoing in the other floors which are Neydrung Chudru (1st floor), Melam

Lhakhang (3rd floor), Kukung phusung (4th floor the circumambulation floor), and the Chuku lhakhang (5th floor).

The present spaces available for visitors were measured and gave an estimate of 1308 sq m. The details are shown below.

Area	Size in Sq.m	Total visitors at 2.5 meters/individual
Kuenga rawa Lhakhang (2 nd floor)	440	176
Outside at the two sides of statue	450	180
Space at the front of the statue	418	167
Total	1308	523

Based on the above estimated figures the carrying capacity is estimated as follows:

$$\text{Carrying capacity} = \frac{1308 \text{ sq.m (Area used by tourists)}}{2.5 \text{ sq.m (Average individual standard)}} = 523 \text{ visitors}$$

The visitor timings for the lhakhang is from 9 am to 5 pm (8 hrs) during summer and 9 am to 4 pm (7 hrs) during winter with a one hour lunch break. Considering one hour as an average visit time the rotation coefficient is 7 hrs.

$$\text{Rotation Coefficient (RC)} = \frac{7 \text{ Hours (No. of daily hours open to tourists)}}{1 \text{ hour hour (Average time of visit)}} = 7$$

$$\text{The Total daily Visitors (TDV)} = 523 \text{ (CC)} \times 7 \text{ (RC)} = 3661$$

Considering 30 days a year for religious gatherings the remaining 335 will generate a carrying capacity of 1,226,435 visitors annually. From this keeping aside 10% as locals the figure for outside visitors would be approximately 1,103,791 tourists annually.

5.c. Punakha Dzongkhag

Punakha like Paro has high arrivals of tourists due to its proximity from the International airport and road connectivity from the border town of Phuentsholing. In 2019 Punakha obtained 18% of the total bed nights from the International tourists arrivals. Presently

Punakha has 20 tourist hotels and 17 village home stays accounting for approximately 990 beds. Considering an average night halt of 2 nights the carrying capacity of Punakha based on the accommodation facilities is estimated at **180,675** tourist a year.

5.c.i Assessment of Punakha Dzong.

Punakha dzong (also known as Pungthang Dewachenpoi Phodrang) scenically positioned between the two rivers of pochu and mochu is the most popular tourist attraction in Punakha. Built in 1637 by Zhabdrung Ngawang Namgyel the dzong is the first stronghold where Bhutan’s administrative system was formed bearing significance for the country’s culture and socio-political development. The dzong is also considered as a masterpiece for showcasing the traditional architecture. It also bears special significance to the Royal family and the monk body. Due to its popularity, visitors to the dzong have been increasing leading to overcrowding and management challenges. The dzong area was inspected to calculate the carrying capacity.

The measurement of available spaces for visitors are given below.

Area	Size in Sq.m	Total visitors at 2.5 meters/individual
Main courtyard inside the dzong	600	240
Lhakhang	204	82
Courtyard outside the lhakhang (only front included the side court yrad has been excluded)	240	96
Total	1044	418

Based on the space the carrying capacity is 418 as shown below.

$$\text{Carrying capacity} = \frac{1044 \text{ sq.m (Area used by tourists)}}{2.5 \text{ sq.m (Average individual standard)}} = 418 \text{ visitors}$$

The visitor timings are from 11 am to 1 pm and 3 to 5 pm giving a total of 4 hours of visit time in a day. With this the RC works out to be 4.

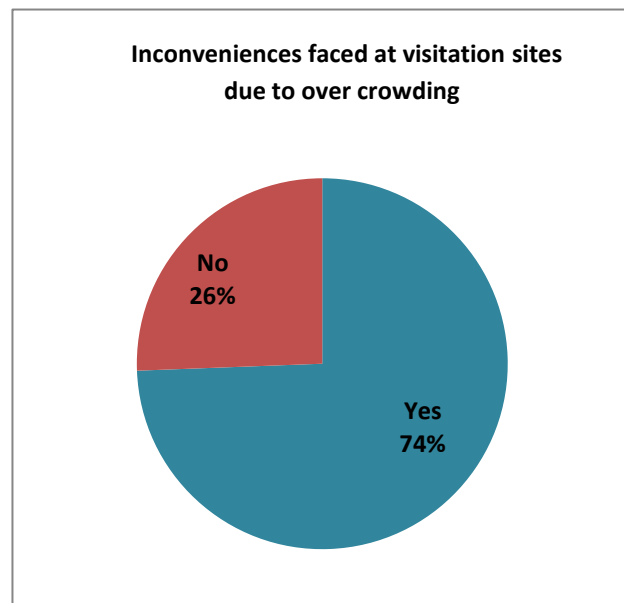
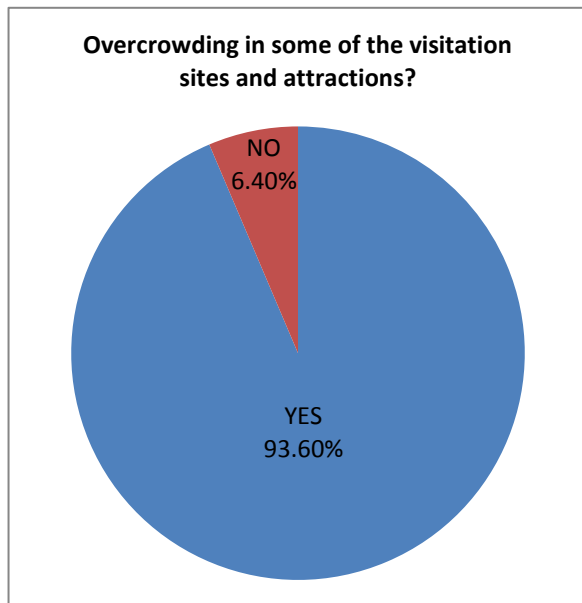
$$\text{Rotation Coefficient (RC)} = \frac{4 \text{ Hours (No. of daily hours are is open to tourists)}}{1 \text{ hour (Average time of visit)}} = 4$$

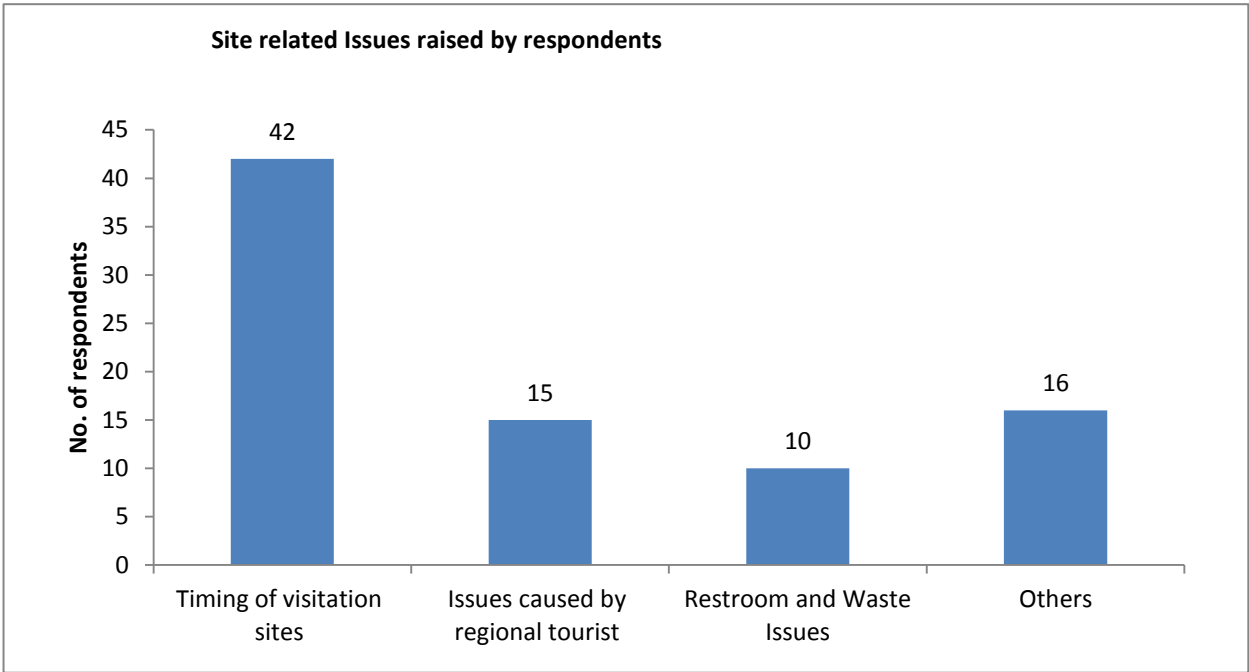
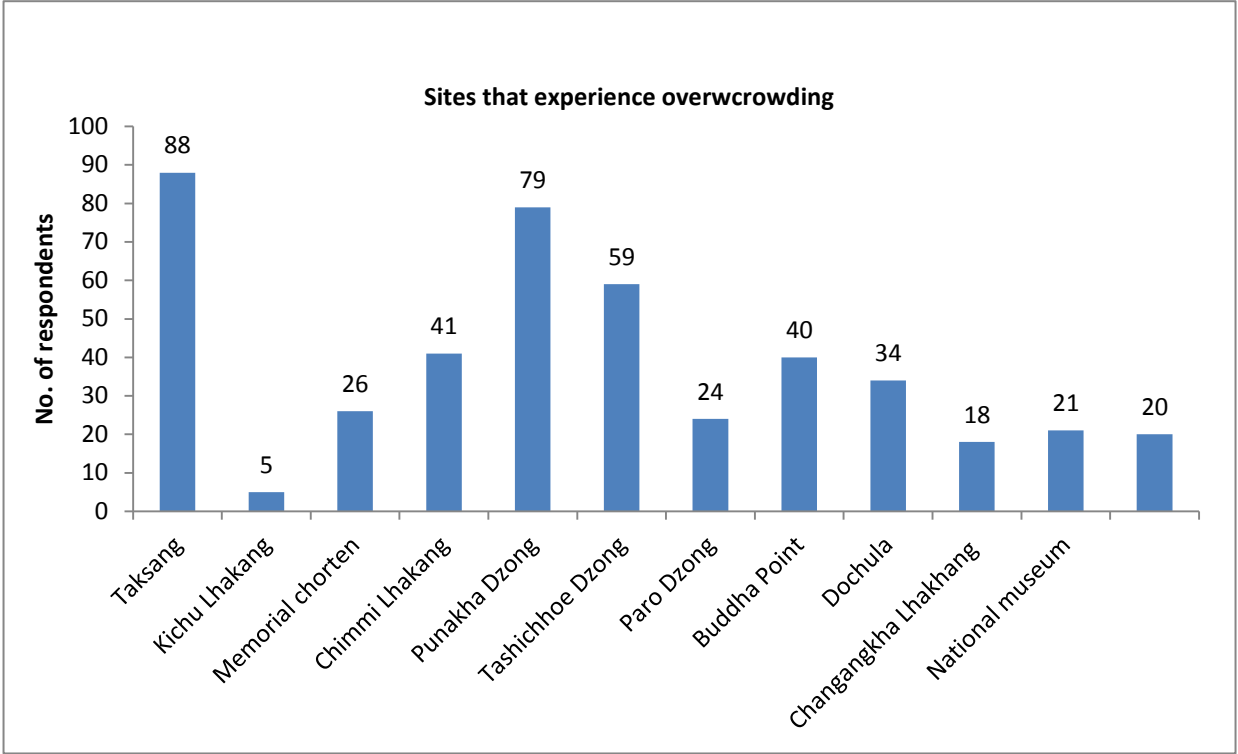
The Total daily Visitors (TDV) = 418 (CC) x 4 (RC) = 1672 visitors per day.

This allows for 50,160 visitors per month. Considering 10% as domestic visitors and also 30 days as restricted time due to religious rituals etc. the carrying capacity number for tourists will be **496,584** annually.

5. d Results from the questionnaire survey.

The questionnaire survey was targeted at the guides and local tour operators considering that they are at the forefront of dealing with visitors and are in the best position to understand the problems experienced at the visitation sites. There were a total of 125 respondents. A copy of the questionnaire survey is given under annexure 4. As presented in the charts below 93.60% agreed that overcrowding was taking place at the attraction sites. Maximum crowding is experienced at Taktshang, Punakha dzong, and Thimphu dzong respectively. 74% of the respondents agreed that inconveniences were faced at the visitation sites due to overcrowding. Problems associated with the sites were visitor timings, behavior of regional tourists and lack of amenities and facilities. Although overcrowding is witnessed in several sites in terms of overall number of arrivals in the country majority of the respondents (81%) agreed that there should be higher volume of tourists visiting the country.





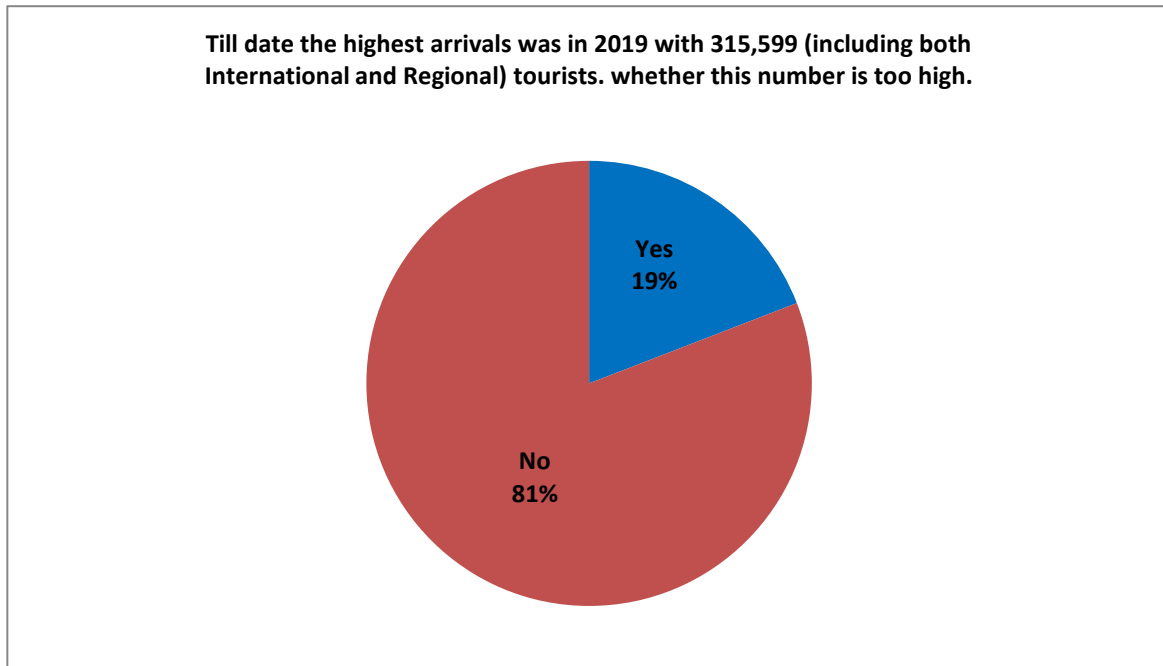


Figure 6: Responses from the questionnaire survey

Further a common issue raised in all the consultations was the need for better coordination among all stakeholders in tourism development especially in involving the respective Dzongkhag and local planners and the need for developing visitor/site management plans.

6. National Carrying capacity

The study has been able to generate carrying capacity figures for the three sites and also the three Dzongkhags. However, generating a figure is not so straight forward as there are several factors and parameters that need to be assessed. Likewise estimating a national carrying capacity is complicated and can be controversial. Nevertheless a hypothetical estimate is made using tourist category accommodation facilities. Accessibility capacity via Air and land could provide some estimates but these can be manipulated by increasing additional flights based on demand of travelers (This is as per sources from the airlines but contrary to this tour operators say that they lose out bookings of guests due to non-availability of seats).

Presently there are 309 hotels catering to tourists (TCB, BTM, 2019) consisting of hotels ranging from 3 star to 5 star category and certified Village Home stays. In total all these

accommodation facilities provide 4,844 rooms offering 8,795 beds. Considering an average duration of 7 nights spent by a tourist in the country the present accommodation can host a carrying capacity of 457,340 tourists annually. This figure shows that in 2019 approximately 69% of the carrying capacity was met. There are many hotels under construction within the tourists hotspots like Thimphu, Paro, Punakha, and Phobjikha. The escalation in hotel constructions is however taking a plunge due to the COVID 19 pandemic. Using 2019 as a benchmark and taking a hypothetical situation of 10 % increase in bed capacity every two years a projection of the carrying capacity is estimated till 2030 as shown under table 6.

Table 6: An estimate of the tourist carrying capacity for the country based on accommodation facilities.

Year	Total accommodation	Total beds	Annual Carrying capacity
2019	309	8795	457,340
2022	340	9675	503,100
2024	374	10642	553,384
2026	411	11706	608,712
2028	452	12877	669,604
2030	497	14165	736,580

The recent economic road map developed by a task group has projected an estimate of 815,212 tourists after conducting a carrying capacity assessment based on existing and upcoming hotels. Bearing in mind the complexities in calculating the carrying capacity it is likely that there will be differing figures leading to many hypothetical estimates.

7. Limitations of study

Due to the short duration of the study and COVID pandemic restricting travel it has hampered consultations. It was not possible to visit all the Dzongkhags and assess each and every tourist visitation site to estimate their carrying capacity. Therefore the study has been bias in only considering the accommodation facilities as the only means of estimating the carrying capacity.

8. Recommendations

Basically carrying capacity is looking at the tolerance level which if exceeded leads to negative effects. Considering the series of factors that influence the carrying capacity of a destination, it is difficult, if not impossible, to calculate its exact value. Rather than relying on this estimate the benefit of carrying capacity study is that it reveals the impacts on the systems of the destination that are driven by host and visitors. While some level of negative impacts will be inevitable in general impacts can be managed, mitigated and controlled so long as there is serious commitment from policy-makers, managers and users. Strategies and plans with a focus on introduction of control mechanisms are necessary. Tourism development like other forms of economic activity represents a set of tradeoffs. So the question is what sort of tradeoffs are those affected willing to make?⁵

The estimation of carrying capacity is not to be used as a target to be achieved but instead to be used as a means or instrument to steer the development of tourism to achieve sustainability in all aspects – economic, ecological, social, cultural, and local. Further carrying capacity is not fixed. It develops and changes with the growth of tourism and all its associated attributes. In pursuing the growth of sustainable tourism it is vital to accord priority to developing and implementing sustainable management plans promoting good practices that are designed collectively with all relevant stakeholders.

So now what next and how can the results and findings of this research be transformed into actions by the management⁶?

The following actions are recommended:

Action 1: Since the carrying capacity study has been triggered due to the overcrowding happening in some of the attraction sites it is important to focus on the proper management of these sites. Further studies to develop site management and visitor management plans for taktshang, Buddha Dordenma, and Punakha dzong

⁵ Tourism carrying capacity: tempting fantasy or useful reality? Stephen F. McCool & David W. Lime.
<http://dx.doi.org/10.1080/09669580108667409>

⁶ Management refers to the Tourism Council of Bhutan (TCB)

should be conducted at the earliest. Considering that the COVID 19 pandemic has put a pause to tourism it would be a perfect time to develop strategies for these sites so that it can be ready for implementation once tourism resumes. The guidelines and management plans developed for these sites can be replicated accordingly for use in all other visitor sites in the country.

Action 2: The study has stated that the overcrowding at sites is being triggered or influenced by several factors (refer to figure 2 shown in page 9) such as seasonality, accessibility, distribution, infrastructure, product diversity, and site management. The management needs to focus on these factors and work on strategies to address these issues. These are not new issues and it is likely that the management is already working on interventions. This study can provide more impetus and urgency towards this.

Action 3: The study has generated carrying capacity figures for the three sites/dzongkhags and a national estimate. However these hypothetical estimates and forecast are based on the assumption that the required pre-conditions are met. Like action 1 and 2 the management needs to work on a strategy to focus on these conditions. Using the draft assessment framework developed through this study the management can finalize the criteria under each of the parameters of physical, economic, social, and cultural along with its sustainability indicators.

Further, the Global Sustainable Tourism Council (GSTC) <https://www.gstcouncil.org/about/> has developed standards for promoting sustainable travel and tourism. It is the world's only sustainable tourism accreditation body. The standards promote good practices for destinations, tour operators and hotels. Considering that these standards perfectly match Bhutan's aspirations and commitment to achieving tourism sustainability it is recommended to use their standards as a guide for strengthening the growth of sustainable tourism in Bhutan.

Annexure 1: Site assessment of Taktshang and summary of discussions with representatives of Paro Dzongkhag.

A. Taktshang site visit.

Observations

- Access motor road to base parking narrow and in need of maintenance.
- Design of buildings and walls along the approach road does not look nice (village losing its traditional aesthetics due to development).
- Parking area small.
- Public toilet closed.
- Too many dogs.
- Need to restrict going off the trail (at the start) and damaging the wetland area.
- Trail in relatively good condition but needs improvement.
- Walking trail steps uncomfortable (too long for one step, too short for two steps).
- Trail is dusty during winter, and believed to be slippery and muddy in summer.
- Few new resting spots (benches) constructed. Some yet to be completed.
- Lack of directional signs. Horse trail and hiking trail confusing.
- Garbage not managed. Left scattered in few places.
- Café construction on-going.
- Donated bench at the entry of taktshang not presented properly (especially the inscription of the donors name).
- Entry registration room needs improvement. Many lockers with keys lost as visitors forget to return.
- Old unused lockers need to be removed from site likewise other unwanted stuffs also need to be removed from the lhakhang area as they make the place look untidy.
- Some of the guard railings need fixing to ensure safety for visitors.
- Guard railings covered by old CGI sheets looks ugly.
- Public toilet poorly maintained, presents a very poor image and badly constructed.
- Water leaking on the way to the toilet. Continuous leakage dangerous.
- Security entry point needs to be improved. Looks shabby. Space available at the side of the entry can be developed.
- The rocks on which Taktshang is perched could be undergoing changes due to the activities and water leakages. The split in the rocks need to be studied by geologists to understand and avoid any adverse implications and risk.

Interview with Lam (Head monk) of taktshang. General feedback and comments.

- Lam very much in favor of tourism and fine with increasing number of arrivals as long as few issues can be addressed.
- Visitation time daily 8am to 4 pm with no lunch break is fine and does not interfere with their daily routine rituals. No objection to the timing and also in favor of allowing visitors daily year round.
- Big groups especially the regional tourists are more disturbing and disrespectful. Need to limit the numbers of regional tourists.

- 5 guides on site to handle regional tourists which is quite challenging. High arrivals leads to congestion at the entrance with this system.
- Peak visitation time is between 12 to 2 pm.
- Public toilet a concern with bad sewage leading to foul smell desecrating the sanctity of the place.
- Need to avoid guide interpretation in the lhakhangs as it leads to congestion. Instead guests should be given briefing much before arriving. This could be done at the site across the monastery before start of the railings. Brochures could be given to explain each of the lhakhangs.
- Disappointed with the slow maintenance works being done. Almost a year and not much progress. Worried that the improvements and renovations may not be ready before tourism resumes.
- Garbage management a problem. The idea of managing one's own waste and removing bins is not proving effective as guests are throwing waste along the trail. Better to install garbage bins and coordinate cleaning routines among the monks, café staff, horse contractors.
- Experiences of guests sometimes coming very early before departure of flight. Such times should call lam so that such emergency visit can be arranged properly.
- Total 10 lhakhangs from which 8 open for visitation.
- Risks of items being lost from lhakhangs especially regional guests when they come in large groups.
- Chaotic at the entrance during peak visit hours with only two police on duty. Also insufficient lockers at the entry.
- Need better management protocol for visitors.

B. *Meeting with Dasho Dzungda and Culture Officer. Feedback and comments on tourism development in Paro Dzongkhag.*

- Tourists number is not a problem as long as we have proper management plan in place.
- Overcrowding happens only at certain sites during certain time like. For example, Paro Tsechu, Chelela Pass and Taktshang. However, during lean season most places the tourist numbers are low.
- Need to manage regional tourists.
- The most common issues with regional tourists are waste issues, noise, safety, and behavior. While less economic benefits.
- Need to diversify tourism products instead of focusing only on Taktshang.
- Important to keep Taktshang as natural as possible.
- Important to sell only authentic local handicrafts. Selling of fake handicraft products from neighboring countries damaging the image of the country.
- The need for better coordination among tourism stakeholders with better tourism planning and implementation.

- Once regional visitors pay the SDF they should be allowed to choose any hotel. Upgrading of all budget hotels to star-rated hotels could pose problems as lots of hotels might not be able to afford to upgrade.
- Paro is trying to come up with new urban plan where the traditional features like the wetland would not be disturbed for development purposes.
- Guides need to be trained properly so that they are well behaved and dressed. Some guides are seen in western clothing and without guide badges. Guides should promote our culture and tradition not emulate western culture.
- Village Home stays should promote traditional ways and not become western. For example, food should be served in bangchus and dapa, not modern plates and cups.

C. *Meeting with Thrizin (Chair local government) and local representatives. Feed back and comments.*

Thrizin has vast experience having worked in the tourism sector and now serving in the local government shared his perspectives on tourism.

- Quality of tourism more important than quantity.
- Tourism planners should know the ground reality of tourism before implementing tourism plans, so it is important to coordinate and get views from all the stakeholders like the Local people.
- Paro has experienced negative impact of tourism for example in the development of hotel industry. While it is good for hotels to be constructed several bad practices are prevalent. For example many hotels being controlled and financed by non-nationals so as good as fronting, exploitation of school and college girls by involving them in sex tourism, hotel competing in reducing rates which ultimately leads to reducing the quality of services.
- Selling fake handicrafts and competing for customers at Taktshang base by mimicking cheap street vendors.
- Horsemen at Taktshang base, competing for guests and rushing to them asking for tips constantly.
- Instances of local telling sad story to guests in order to ask them for money.
- Due to absence of guides, regional tourists are not getting good services while not acting in accordance to our cultural norms.
- Some rural households are selling everything to the tourists, even their personal belongings.
- The need for tourism amenities is critical but those amenities should be building in consultation with stakeholders like Local Government(LG) so it does not go to waste.
- If proper consultation is done with LG tourism plans could be implemented in a sustainable manner. Right now the LG and local people hardly know about the tourism plans taking around their locality.

- Better guide training is essential, the current trend of guides begging for money by telling sad life stories from guests is spoiling our image.
- If we can get quality tourists, one quality tourist can be worth 10 low quality tourists. For example, guests at Amman pay thousands of dollars per day, and yet they do not hesitate to spend. However, they want exclusivity and quality. For example, when the campsites at Bumdra was first set-up, lots of guest from Amman went there, but now with high volume the high paying guests do not want to go there.
- lack of products diversity impacting repeat visitors. Even though majority of tourists visit for Culture, we have other products, even culture can be diversified.
- Serious and strict monitoring important for guides. They should be monitored right from the way they dress to the way they keep their hair, behave, etc.
- Undercutting is common knowledge. When undercutting happens, it ultimately leads to cheap and low services, which spoils the image of our country.
- Important to support Village Home Stays, while mandating good service.
- When tourist's numbers were low, people have high regard to them and guests also enjoy. But when overcrowding happens, local resent guests and guests too do not enjoy and the image of the country gets spoilt.
- Too many horses and rushing for guests at Taktshang causes accidents as well.
- Importance of involving locals and LG (A horse trail was constructed by the government few years with a budget allocation of Nu. 600,000. But the horsemen refused to use it as it was not viable for horse to walk. Since no LG was involved that amount was simply wasted due to lack of consultation). lack of coordination is a serious concern.
- Due to lack of coordination and advocacy, lots of local people are not aware of tourism plans, impacts, benefits, etc., so it is important to involve them right from the inception of any tourism project.

D. Meeting with hotel representatives. Views and comments.

- Need higher number of guests.
- Regional tourists are cost conscious, so with the SDF numbers will likely decrease. If regional tourists are charged same 250-dollar tariff like international tourists, then it might drop to zero.
- Even the current number is too low for hoteliers as they receive tourists only during certain time and that also never at 100 % occupancy.
- For example, BTCL's Taktshang café visitors dropped by half, after the monument fee implementation. BTCL allows all the guest to use their toilet at Taktshang café. They had 3 toilets before, but now they are constructing 14 toilets.

- If we have growth in tourists, our hotel inventory might not be enough. People get shocked when they hear lots of hotels are being constructed, but all the hotels in Bhutan are small, so it does not add to much bed nights.
- Regional tourists are better than international tourists for hotels and they get more rate per room from the regional tourists as they pay directly. They are get payment in cash or in advance from regional tourists. From international tourists it is the opposite, Travel agents negotiate very low rate and take the rooms on credit. After that they do not even pay, most hotels have dues in millions from travel agents.
- Few self-serving individuals are trying to shift the tourism policy for self-benefit.
- Management is more important than trying to reduce tourist numbers. For example, even Chelela is not that crowded if properly managed. Currently it looks crowded as that place cannot even accommodate 10 cars.
- Important to boost tourism post COVID-19, not restrict.
- Government could make regional tourists use our guides and cars by having conditions like green tax, emission test, road permit, etc. The idea would be making it difficult, so that they will be forced to use Bhutanese car and guides.
- Guides should be compulsory for regional tourists.
- Use price mechanism to balance tourism (Giving offer to regional tourists during lean seasons).
- Hotels break even around 40 to 50 % occupancy.
- Many regional tourists stay in high-end hotels. However some stay in apartments and hoteliers are against those. TCB should look into illegal apartments hosting tourists.
- Undercutting is also spoiling service quality. Some travel agents, do not allow guest to see the hotel menu or bill because they pay low amount to the hotels.
- Travel agents are also not paying hotel bills in time and TCB is not helping with recovery of dues. Empower HRAB.
- TCB lack knowledge in hotel certification/classification need improvement.
- Need proper regulation like campsite regulation as some regional tourists camp instead of using hotels.
- Permit system for regional tourists needs to be made easier to obtain. Agents from Jaigoan easily manage getting permits while local agents find it more difficult.
- Including tourism permit with labor permit at immigration section looks bad.
- If TCB could hire more people to issue permit.
- Maybe liberalization of tourism tariff could help (government can charge SDF and VISA fee, rest leave it up to the tourists). Present system hotels at the mercy of travel agents.
- Guest pay more than USD 250, but do not get the money worth as very less comes to the service providers.

- If visa on arrival can be granted, and make tourist pay fees once they arrive in the country. Currently paying fees difficult as system accepts only wire transfers, not even credit cards.

Annexure 2: Site assessment of Punakha Dzong and summary of discussions with representatives of Punakha Dzongkhag.

Meeting with Dasho Dzongdag, Culture officer, and Planning officer.

Informal discussion with Khonyer (caretaker monk of dzong lhakhang)

Views/comments/feedback/observations

- Carrying capacity study seems to be good initiative.
- Dzong visit time are 11-1 and 3-5 pm.
- Need proper visitor management with which more visitors could be accommodated.
- Sometimes it gets crowded when all the tourists visit at the same time.
- Problems mainly are with regional tourists as they lack proper planning and itinerary.
- It also disturbs the monk body, rituals, meetings and offices as some tourists lack proper decorum and discipline.
- Crowding still happens after collection of monument fees due to poor management.
- Shortage of guides as one guide caters to a lot of tourists, so it TCB or relevant agencies could hire more guides would help.
- If number could be managed by sending groups at certain intervals.
- There is also certain restrictions around the Dzong which needs to be respected and understood by guests.
- There is also crowding and safety issues on the suspension bridge outside the dzong which is normally visited by guests. lots of visitors stand on the middle of the bridge playing including locals. This could cause accidents.
- Some regional tourists even cook their own meal in open areas. (for example, a group tried to cook at Thangzona and had to be told that it is not allowed).
- So proper regulations, Do's and don'ts for tourists is a must. With proper management plans, tourism could be easily managed.
- Tourism is very important for the Dzongkhag as well as the country, but we need proper management plans.
- Need of toilets outside the dzong.
- Inadequate parking space.
- Aim to keep all guests happy so that they would be keen to return.
- Lack of proper coordination and roles for TCB, LG , MoHCA and other agencies. If proper and clear roles and responsibilities could be developed, it could make things run efficiently and effectively.
- Most crowding problem could be solved with proper management in place(e.g. planning ahead, setting up different time slots for different visitors etc.).

- If explanation by the guides could be done before they enter the Dzong, it could reduce disturbance to other guests and lessen time spent inside the Dzong. (For example having an information center with model of the Dzong and information pamphlets).
- Rafting near the Dzong is not allowed as it is disrespectful to the sanctity of the Dzong.
- Suggestion to talk with Dzongtshang Lhentshog also to get their concurrence on issues related to Dzong visit.
- Punakha is different from Taktshang as it conducts daily kurims, harbors offices, meetings, daily local visits, etc. so it gets more crowded even without tourists sometimes.
- Punakha is historically, politically, religiously, culturally important.
- SDF is important mechanism to attract high end regional tourists while aiming to provide them better service.
- The main issue at the Lhakhang is some tourists taking picture with hidden cameras. It becomes difficult to monitor the guests when it gets too crowded.
- Suggestion to exit by using Door number 3 instead of exiting by the same entrance door could reduce congestion.

Meeting with Lotus adventures, rafting company, Yebisa Village

Feedback and comments.

- Tourists visit Punakha mainly to visit dzong and not much to do. So it is important to develop products to retain them longer at Punakha. Rafting is one means to engage them and retain them for longer stay.
- It is important to introduce more tourism product/activities to make guests spend more time in the Dzongkhag.
- One main issue is not allowing rafting past the Dzong area. That is the Unique Selling Point of rafting in Bhutan. The photo of rafting near the Dzong also serves as promotional material for Bhutan abroad. It is restricted because of tourists causing disturbance if this is so can make regulations to ensure they maintain silence. If tourists are permitted to visit the dzong and be inside see no issue why rafting cannot be done silently outside.
- TCB is lacking proper monitoring and regulation for rafting companies. There should be proper and timely monitoring and regulation of safety, risks management, qualified and well trained guides, rafting even in dark, etc.
- Individuals breaking rules is one of the biggest issue.
- Companies not cooperating and under cutting the set rates, this leads to decline in services.
- News about charging regional tourists MDPR concerning. As long as govt. charges SDF to regional tourists, it should be enough.

- Could have done lots of things to improve tourism during COVID-19, but now time passed without doing anything.
- Use monument fees to improve tourism services in the monuments.
- Bureaucratic process hampering development of tourism.

Meeting with local hoteliers

14 hotel representatives joined the meeting

Comments and Feedback

- Around 36 hotels in Punakha (including under construction hotels- around 17-20 hotel rooms on average).
- If regional tourists are also made to pay MDPR, it could seriously hamper the tourism industry.
- Tourists number is quite low in Bhutan compared to lot of other similar countries. The carrying capacity can be much more than the maximum numbers experienced so far.
- Hotel is an opportunity to create a lot of employment.
- Need better implementation of policies.
- Punakha has enough rooms to cater to more tourists.
- Important for TCB to monitor Tour Operators as most seems to be undercutting on MDPR and then negotiating cheap hotel rates which ultimately impacts service delivery.
- Another main issue with Tour Operators is not clearing their payments in time. TCB should help hotels recover the hotels dues. This has also been brought to TCB's attention many times, but so far TCB has not done anything to address this issue.
- TCB should also have system in place to pay service providers like hotels before releasing tour payments or paying hotels some amount in advance.
- Issue of tour operators choosing their hotel in the TCB tashel system for visa but using a completely different hotel or even budget hotels when the guests arrive. If TCB should conduct monitoring or system that informs the hotel, when TOs select their hotel during visa process. This issue has been brought to TCB numerous times without any action from TCB.
- MDPR is made useless due to undercutting issues and Hotels are at the mercy of Tour operators, even though hotels make the most investments while tour operators make minimal investments.
- However even within hotels, they lack cooperation as one hotel tries to offer cheaper rates compared to other hotels.
- TCB conducts many studies and ask for their comments, but then no follows-up to improve.
- Payment system needs to change so that service providers get paid their dues.

- HRAB should be there to support Hoteliers and help resolve their problems but unfortunately HRAB is not functioning effectively so the hoteliers in Punakha have decided to work closely among themselves informally to support each other.
- There were also issues during past SDF waiver for the Eastern Bhutan, where TOs book hotel in the East while keeping their guests in the west to avail SDF waiver.
- Confusing message from media and other sources regarding tourism reopening and the new policy. If proper and reliable information could be disseminated.
- Opening with quarantine requirement will never work and no one will waste few weeks in quarantine.
- If possible, if SDF on regional tourists could be done away with till tourism recovers.
- Lots of behavioral and attitude issues with guides and drivers. Some of them act as though they are entitled for free accommodation and lack proper discipline.
- Hotel industry also faces a lot of turnover so owners are reluctant to train their staff and they leave as soon as they are trained.
- Hoteliers looking forward to TCB and governments support since they have made huge investments and face problems with collecting dues.

Annexure 3: Site assessment of Buddha Dordenma, Kuenselphodrang, Thimphu and summary of discussions with representatives of Dratshang.

Meeting with Chairperson of Kuenselphodrang project (Laytshog Drungchen), Lam Tshering and Lam Nima, Pema department of Culture, and Dorji (Kuenselphodrang Staff).

Views and comments.

- Tourism related activities can be established around the kuenselphodrang compound.
- It is very important to involve the Zhung Dratshang in anything religious or monastery related projects.
- Dratshang and its inhabitants are living culture of Bhutan.
- Even simple things like naming places, different places can be named different, instead of naming everything as Lhaxhang or temple.
- It is important to give incentives to people taking care of things so that they care for it.
- Coordination and working together from the initial project is very important as it results in successful implementation of projects.
- Just building an infrastructure is not enough without proper management plan in place. More than 90 % of the project fail due to bad or missing management plan.
- Lack of funding is another issue to maintain the properties.

- Kuenselphodrang needs better security, manpower (cleaners, security guards) CCTV, etc. so that it can cater to ever increasing visitors.
- Currently they are understaffed and the existing staff are not paid well despite doing a lot of work.
- Kuenselphodrang needs staff that can multi task as one staff needs to be able to all kinds of tasks like fixing water, cleaning toilet, security, etc. The water source itself is located at 3 hours walking distance so fixing it during problems is a huge task.
- If needed for TCB can establish an office on their compound and they are ready to give land if TCB wants to set up an office to cater to visitors.
- They also need improvement works at the gate, beautification as the current sight is all concrete, so they want to plant flowers and plants in some areas near the statue.
- Currently the area is open, so when it shines or rains, there is no place to take proper shelter. Since most elderly local as well as tourists come to visit the place, they need proper resting areas for such visitors. So they have plans to build canopy resting areas around the statue, but they are lacking funds.
- There is also need for storage and locker areas, if guests have to leave their cameras and valuables at before entering the Lhakhang inside.
- Problems with tourists is mainly related to guides. Some guides leave the tourists alone and tourists gets lost or do not follow proper etiquette and manners. Some guides leave for smoking.
- If possible, a management committee with all relevant stakeholders should be set up.
- Idea of introducing entry fee would be good as it could benefit the country at large, while some funds could be used for sustaining the project in the future.
- As a general thought, constructing road approach to any monument is not a good idea. If possible, it is good to leave some distance to walk till the monument.
- It is important for different monument, Lhakhangs to have unique features, so that visitors do not feel like they are visiting the same place.
- Future plans could include not letting guests drive all the way up, but leaving their vehicle at some point from where the project could set up golf cart like vehicles with a small fee for visitors or they could walk till the statue.
- However for any project to be successful it is the important factor is to incentivize the stakeholders while also having proper coordination.
- It is also important for implementers to always know the ground reality before undertaking a project. Otherwise projects are bound to fail.
- Currently constructing a toilet with TCB's support.
- Amenities are very important for the site.
- Lots of structures are still incomplete.
- They have also plans for coming up with a cafeteria and other amenities after consulting with TCB.
- They want visitors to take fond memories from visiting kuenselphodrang.
- The steps to the statue needs railing to give support to elderly visitors.

- If need be, chair and Lams of Kuenselphodrang are always available for meeting to improve the site. Not only at kuenselphodrang, but even in other monasteries, there are issues of guides and caretakers quarrelling because some guides discourage guests from offering high amount in Nyendhars.
- Some guides even ask for share of Nyendhars from caretakers.
- For any monuments and cultural sites, Tourism is secondary, the primary focus should be wellbeing of the monks and the site preservation.

Request made to TCB are:

- Support for staff at the site as any management plan should include sufficient staff. Kuenselphodrang is in need of 15 staff (security, cleaners,etc.). For security staff should be people who can do multitask beyond regular security duties.
- CCTV cameras for security purposes.
- Can provide land for TCB office, if TCB wants to set up an office.
- Regular Training and advocacy for the monks, lams and staff of kuenselphodrang on topics related to visitor management, how to deal with tourists , etc.
- Since some guests are looking for education, meditation, etc. If TCB could support establishment and support for turning one room in the guest house area for such activities.
- If TCB desires Dratshang is willing to sign MoU with TCB for any Dratshang owned properties for successful and proper visitor management.

Annexure 4 : Questionnaire for Carrying Capacity Assessment

Participants – Tour Operators and Guides

Background

Tourists arrivals have been rapidly growing over the recent years (with the exception of 2020 due to the global COVID19 pandemic) resulting in overcrowding in some of the popular visitation sites especially during the peak tourist months. Concerned that this situation could aggravate adverse impacts and contradict our tourism policy a study is being fielded with the objective to conduct a tourism carrying capacity of Bhutan (country level) with focus on Thimphu, Paro, and Punakha Dzongkhags. To undertake this study the Tourism Council has hired an independent local consultant. Through the findings of the study we are hopeful that it will help us in developing and implementing appropriate management interventions to continue enjoying the benefits of tourists' arrivals while ensuring that tourism sustainability is maintained at all times. Therefore, as an invaluable stakeholder your participation and support in this study is requested. Please kindly spare about 5 minutes to respond to the following questions.

Questions:

1. Would you agree that there is overcrowding in some of the visitation sites and attractions.

Tick – YES or NO.

If Yes, kindly list the attractions/sites where this is happening.

2. Do you face any inconveniences at the visitation sites when accompanying your guests?

YES – NO. If yes, kindly mention them and suggest how it could be addressed/improved.

3. Do you think it is possible for these sites to continue getting higher number of tourists without compromising visitor experience and damaging the resources?

Tick - YES or NO. Please substantiate your response.

4. Can you suggest mechanisms or strategies to reduce overcrowding in the sites/attractions?

5. Seasonality and Geographical concentration of arrivals seems to be the major causes for overcrowding in some areas. Can you suggest strategies for equitable distribution of tourists to other dzongkhags so that they too can enjoy the benefits of tourism.

6. In your opinion which type (Nationality) of tourists are easy and difficult to manage? Why?

Easy to manage and reason:

Difficult to manage and reason:

7. 2019 recorded the highest visitor arrivals with 315,599 (including both International and Regional). Do you think the number is too high and we should be concerned to reduce the numbers or we should aim to get higher numbers – if so can you suggest a target.

8. Would you like to share any other thoughts/concerns on overall tourism development in Bhutan.
