

THE PLACE WITH THE WORLD'S HIGHEST RAINFALL AS A TOURIST ATTRACTION IN A PERIPHERAL AREA OF NORTHEAST INDIA

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Abstract

This study illustrates the temporal dynamics of tourism development in a peripheral region of Northeast India (Cherrapunjee area) with an extreme rainfall. The analysis indicates that tourism development has accelerated in the last two decades as a result of the administrative opening of Meghalaya State and the dynamic development of tourism throughout India. Peripheral locations with curious environmental features may be potentially attractive tourism localities, with a common focal point for development of marketing opportunities and narratives about the location. A local leader in a strong position pointing the way additionally plays an important role in creating a tourism space.

Keywords: *Peripheral area; Extreme monsoonal rainfall; Tourism development; Cherrapunjee; Meghalaya; India*

Introduction

Peripheries have significant potential as tourist attractions and appeal to tourists in many ways because of the quality of their natural, geopolitical, historical, or symbolic characteristics [1, 2]. National peripheries are often home to dramatic natural areas with scenic landscapes and rich cultural heritage. However, peripherality alone is not sufficient to attract tourists and develop tourism, but many peripheral areas offer important tourism opportunities. Tourism in marginal regions can be a place-making instrument and a driver of economic and social development in areas that are often neglected by central governments, planning agencies, and tourism stakeholders.

Research on overcoming peripherality is not only of great academic importance but also is of great significance in applied geography. However, little is known about how local conditions, such as extremality, influence tourism development in peripheral areas. From a supply perspective, curiosities and natural anomalies are interesting attractions everywhere. Both can play central roles in tourism development, planning, and marketing. This study was therefore conducted to examine the role of one unique physiographical feature - the highest rainfall in the world (and the unique environment it creates) - on tourism development where this occurs in India. The main aim of this study is to characterise the temporal dynamics of tourism development in the peripheral Northeast region of India, using as an example the area

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of Cherrapunjee in Meghalaya State, which receives the world's highest rainfall (Fig. 1). The following two additional research questions were addressed:

a) In peripheral areas, how is strong geographical specificity, which in the case of Northeast India is the area with the highest rainfall in the world, of particular importance in a tourism context?

b) Do places with extreme rainfall and its seasonality create barriers to, or opportunities for, tourism development in areas with monsoonal climates?

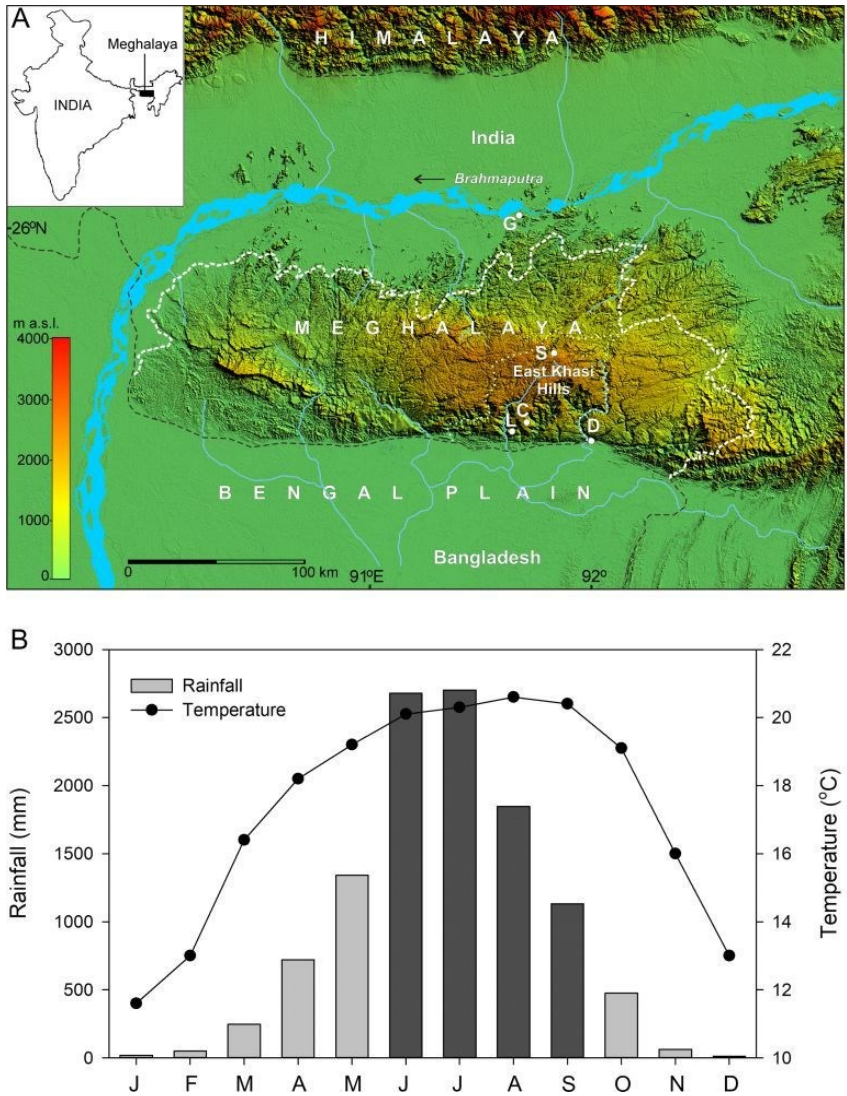


Fig. 1. Study area of Cherrapunjee in Meghalaya State:
A – Location of Meghalaya State and the East Khasi Hills District with Cherrapunjee (S – Shillong – capital of Meghalaya State, C – Cherrapunjee, L – Laitkynsew, G – Guwahati – capital of Assam State, D – Dawki – Meghalaya's only border crossing with Bangladesh);
B – Monthly average rainfall and temperatures in Cherrapunjee.
The months with the highest rainfall (summer monsoon) are marked in dark grey

Using nature extremes for tourism development in peripheries

Peripheries and tourism

The role of peripheries in tourism has been a subject of debate for many years [1-3]. In the context of tourism, peripheries have traditionally been described as barriers to access, destinations in themselves, creators or modifiers of tourism landscapes, and forgotten spaces on the edge of the state with little economic or socio-political value. Peripheries are frequently defined as being located in less accessible places or on the physical margins of countries. During the past few decades, socio-economic processes in many parts of the world have ushered in many changes and enhanced the potential for peripheral resources and environments to be used for tourism.

A socio-economic and political peripheral location usually enhances physical peripherality and is usually associated with low accessibility and underdevelopment [4]. Peripheral areas, as the term indicates, are located at the distant or remote edges of regions and countries. Peripherality in relation to centrality is characterized by a significant distance from cities, centres of development, and state decision-makers and thus from most tourist markets (i.e., potential customers). However, many peripheral areas were for many decades scarcely accessible to tourists and were thus largely neglected as destinations. This reinforces the *periphery as distance* approach in traditional regional studies [5]. In many locations around the world, especially in Central Europe, South America, and Asia, borderlands are rather peripheral from a socio-economic perspective. Many tourism case studies illustrate the important role of untouched nature and inaccess in the development of tourism in peripheral areas, which in fact amplify their appeal for tourism [6-8].

Definitions of tourism in peripheral areas must also include political, social, and economic dimensions [5, 9]. Tourism is a frequent alternative to declining traditional industries and extractive activities in peripheral areas. Peripheries are also characterized by the dominance of small and medium enterprises [10], because many large corporations do not see them as being worthy of large-scale investments. This has led to most commercial enterprises being locally owned and operated by community entrepreneurs.

The most attractive peripheries, including scenic landscapes and curiosities, play a significant role in tourism. Peripheral regions often retain high aesthetic amenity value because they are relatively underdeveloped and are more rural and remote, often with high scenic value. Peripheries that can offer excitement, wilderness, natural diversity, and sometimes even a certain degree of difficulty in access have a competitive advantage and have the potential to attract tourists' attention [11].

Visiting peripheral areas may be both a serious pursuit for a small niche market and a casual attraction that people decide on the spot might be of interest or enough of a curiosity to stop by to take photographs. Peripheral areas are mainly venues for adventure tourism and outdoor recreation, but they are also gaining importance as venues for educational and cultural tourism.

Peripheries experience greater development difficulties than more accessible and centralized areas. According to the theory of polarization, peripheries tend to block the diffusion of growth and development because they are difficult to access. Overcoming this leads to the creation of local growth poles [12]. The transition process involves breaking down barriers and helping to overcome the negative aspects of a peripheral location. Cooperation around the local growth pole, which may also arise from the development of tourism, enables the spread of economic innovation and the penetration of sociocultural influences and is considered one of the spatial factors of regional and local development. Curiosities and natural anomalies that can be capitalized on can contribute to place-making by tourism and be creators of local or regional centres of growth.

Curiosity and peripheries

Public fascination with certain unique locations has been acknowledged by the tourism industry, and many specific localities have been transformed into tourist attractions, achieving significance as national and international destinations [13-15]. Many aspects of peripheral areas, including their physical characteristics and the adventures associated with them, prove attractive to certain tourists. Several studies have recognized the significance of peripheries and anomalies as resources and attractions for local and regional tourism development [6, 14, 16]. These include such places as invisible geodetic lines (e.g., the Arctic Circle, the Equator, the Prime Meridian, the Tropic of Capricorn), and various superlative localities, including geographical extremes (e.g., the easternmost, northernmost, precise centre, highest point, lowest elevation, furthest spot), which are examples that have received considerable travel media attention and are heavily promoted in their respective regions [6, 14, 16-20]. Other types of curiosities function as attractions in terms of being thresholds to other places. Many localities have symbolic significance and have been transformed into tourist attractions. Extreme points, or extreme geographies, are often located in borderlands and are frequently manifested with commemorative markers, interpretive signs, and trails to enhance the extremity itself and its uniqueness and touristic value [16, 17, 21]. In Nuorgam, Finland, for example, a stone monument marks the northernmost point of the European Union and serves as a tourist attraction on the extreme EU periphery. The highest or lowest points of a country, region, or mountain range are other examples of extreme geographical phenomena. Extreme geographic points such as these are important symbolic places on the tourist map of the world. These locations tend to represent geographical anomalies and therefore prove interesting to curiosity-seekers [16]. Extremities in peripheries can exude a strong appeal for tourists and provide opportunities to create tourism spaces and strengthen market positions in marginal areas. Similar situations characterise many mountainous areas (e.g., the Himalayas, the Andes), polar areas (e.g., northern Scandinavia, Greenland), and desert areas (e.g., in Africa), especially when certain spots may be categorized superlatively, such as the hottest or driest place on Earth.

Study area and subject

Tourism is a growing sector of the economy in India and an important factor influencing the development of that country [22-25]. In 2018, India was 22nd in the world in terms of international tourist arrivals and received 1.24% of the world's international arrivals [26]. These figures reflect considerable increases since 2000, when 2.6 million foreigners visited India, whereas in 2018, there were 10.6 million [27, 28]. The growing numbers of tourist visits, which are increasing year by year, show that India's tourism potential is not yet fully realized and that the tourism industry is still developing. Among the main factors influencing the intensive development of tourism in India are the country's diverse natural and cultural assets [29].

One of the regions in India where the tourism sector is still in its infancy is the Northeastern Region, where tourism only began to develop in the late 1930s [30]. This development was interrupted by the Second World War and later political instability. The next 30 years was a period of stagnation, and it was only at the end of the 1990s that tourism in the region began to develop again. The development of tourism has been hindered by low per capita income, a poor rate of capital generation, excessive dependence on agriculture, poor air and road connectivity, limited tourist mobility through government restrictions on travel to the Indigenous regions of the Northeast with requirements for Inner Line and Restricted Area Permits, and inadequate facilities at tourist sites in terms of accommodation, local transport, banking, safe drinking water, sanitation, and health care [31-34]. Local governments are taking steps to improve the tourism sector, but it is still in a nascent stage of development.

Meghalaya, referred to as the "Scotland of the East" by the British during the colonial era and as the "abode of clouds" by Indians after independence, was formed from part of Assam in 1972 [35, 36]. It covers a hilly plateau at elevations up to 2,000 m above sea level, and its southern border is dissected by canyons into several spurs. Located on one these spurs,

Cherrapunjee was well known as one of the famous hill stations for the British in the summer seasons, especially during the early 19th century. Cherrapunjee is well suited as a study site for this research for the following two main reasons. First, before 2000, there was very little tourism in the Cherrapunjee area. The withdrawal of restrictions imposed on foreign nationals (permits) for entry into Meghalaya in 1995 and the construction of an accommodation base in the form of the Cherrapunjee Holiday Resort (CHR) in the village of Laitkynsew (Figs 1 and 2) initiated a noticeable increase in the flow of tourists to the Cherrapunjee area. This change invites an examination of the development of local tourism from an early stage over the last two decades. Secondly, an important issue in the context of tourism development in Northeast India is that the region is influenced by monsoons and receives the highest rainfall in the world. The monsoonal climate of Cherrapunji, with warm and wet summers but cool and dry winters characterise the mean annual air temperature of 18°C and the mean annual rainfall that reaches 11,000 mm (in 2000-2020) [37]. Cherrapunjee holds the world's record for annual rainfall with 26,461 mm recorded between August 1860 and July 1861.

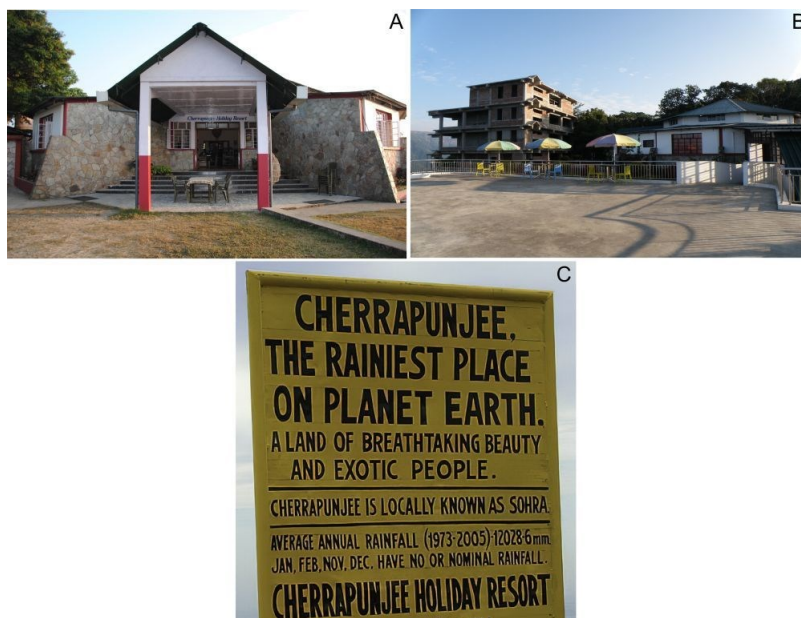


Fig. 2. Cherrapunjee Holiday Resort:
A – in 2005; B – in 2019; C – resort advertising board

The spur area where the town of Cherrapunjee (11,722 inhabitants) is located was selected for detailed study [38]. The area is inhabited by the Khasi, an Austro-Asiatic ethnic group that migrated anciently from Southeast Asia [39]. Traditionally, they are involved in agriculture and mineral extraction (iron, coal, limestone) and processing [40]. Previous human activities led to deforestation under extreme monsoonal rainfall conditions and soil degradation [41]. Because of the land degradation, most of the population of the Cherrapunjee region is employed outside the agricultural sector, mainly in mineral extraction, trade, and a rapidly growing tourism sector.

High rainfall, wide variations in topography, and human activities have contributed to a great diversity of landscapes around Cherrapunjee (Fig. 3), [36]. Apart from canyons and numerous waterfalls, the tourist attractions include karst phenomena, with the longest and deepest caves, as well as the highest cave passage density in India. The state is an important forest region in India and is one of the world's biodiversity hotspots [42]. Near Cherrapunjee,

rich forest resources have survived in the form of sacred groves—small patches protected for centuries for religious and cultural reasons [43]. Equally interesting are the products of human activity, including unique living root bridges built by the local population and located on the rivers that cut across the Meghalaya Plateau [44]. The central part of the plateau was also known in the 19th century to have one of the highest densities of megaliths in the world [45], although most of these were damaged by an earthquake in the late 19th century, the erection of megaliths still plays a cultural role.



Fig. 3. Tourist attractions in the Cherrapunjee region:

A – waterfalls; B – canyons; C – streams and water pools;
D – megaliths and sacred forests; E – caves; F – living root bridges

Extreme rainfall has motivated the local population to use Cherrapunjee's status as the wettest place in the world as an advertising slogan and tourism brand, with the aforementioned attractions for tourism development (Fig. 2). The village of Laitkynsew, located several kilometres west of Cherrapunjee, became one of 41 tourist destinations in the East Khasi Hills District and one of 95 in the state of Meghalaya [46] after the first hotel, Cherrapunjee Holiday Resort (CHR), in the region was opened in 2000. The new tourist facility began to operate at a time when there were no roads, electricity, or telephone communication in the hard-to-reach area of the village. The earliest local transport infrastructure coincided with the opening of the hotel.

Materials and methods

In the literature, discussions about the development of tourism typically focus on explaining the causes of tourism development [47], but another important issue has been identifying the stages of tourism development in a given area. For this purpose, one of the most commonly used models is the so-called tourist area life cycle model (TALC) [48]. This model is one of the most pervasive conceptual frameworks used in research on the development of tourist destinations and how they change over time and in relation to the changing tourism industry. The application of the model is more descriptive than prescriptive and largely based upon historical information from various case studies that gauge where certain destinations are on the life cycle curve [49]. In this study, to demonstrate the dependencies involved and resulting TALC empirically, an analysis consisting of three components was performed:

- a) statistical data analysis (official and non-official);
- b) planning and strategy documents [50-52];
- c) interviews with hotel owners and local authorities.

The information on tourist traffic in Meghalaya used in this study came from information published by the Indian Ministry of Tourism [26-28], as well as from the state government of Meghalaya [53-55]. Archival data on tourist stays at CHR recorded in the hotel registration book from 2000 to 2013 was provided by the owner of the facility. This database also contained information about each tourist's place of origin (from a given state of India or other country). These data were supplemented with information on the numbers of domestic and foreign tourists to CHR between 2014 and 2020 obtained from a database made available by the Meghalaya Department of Tourism [56]. Data on the development of accommodation facilities and tourists' visits were obtained from the same source and broken down with respect to the numbers of domestic and foreign tourists in the Cherrapunjee region in 2013–2020.

In addition, information on the development of tourism in the Cherrapunjee region was collected during the authors' research trips there between 1997 and 2018, during which the development of tourism infrastructure was observed from the 'initial' stage. Regular in-depth interviews were conducted with CHR's owners since its establishment in 2000. The authors were involved in identifying some of the region's tourist attractions and tourism potential, and personally visited all of the tourist spots mentioned in this paper. Informal talks were conducted with the owners of the hotels where overnight stays were made during the field work.

The annual variation of the number of domestic and foreign tourists visits in Meghalaya State and in the Cherrapunji region in 1974-2000 and 2000-2022 respectively was analysed. These are the oldest available data for both regions. Regression analysis was applied to estimate the relationships between the number of domestic and foreign tourists and the average monthly rainfall in Cherrapunjee in 2000-2020. The origins of domestic and foreign tourists visiting the Cherrapunjee Holiday Resort in 2000–2013 were investigated including the ten states and countries accounting for the highest proportions of tourists. The analysis was supplemented by monthly visits by domestic and foreign tourists from the three states and three countries accounting for the highest proportions of visits.

Results

Development of tourism in Meghalaya State

For the first dozen years of the existence of Meghalaya State, the number of tourists was relatively small (Fig. 4 and see Appendix). On average, between 1974 and 1983, the state had approximately 4,000 visitors per year, with foreign tourists accounting for up to 15%. The number of tourists increased only in the second half of the 1980s, when the state was visited by 100,000–200,000 people per year. The percentage of foreign tourists fluctuated between 0.2 and 0.4%. It should be noted, however, that since 1995, the number of foreign tourists has increased steadily, and the percentage of foreign tourists has doubled. In the following decade, the number of tourists in Meghalaya exceeded 500,000 and reached a peak of 1.3 million in 2019. The percentage of foreign tourist visits varied between 0.5 and 2.8% during this period. The effects of the COVID-19 pandemic will be discussed in a later section. Most domestic tourists come from Assam (19%), ahead of Meghalaya (16%) and West Bengal (11%). Among foreign tourists, the highest percentages of visitors to Meghalaya come from the USA (17%), Australia (15%), and Bangladesh (12%) (Ministry of Tourism, 2014). Domestic tourists identified friends and relatives as their primary source of information about tourist destinations in the area, whereas foreign visitors identified the Internet as their primary source. The rapid growth of domestic tourism in India has resulted in the proportion of foreign tourist visits declining in recent years compared to the early years of Meghalaya state. In 2020, the number of tourists in

Meghalaya decreased drastically to only 31,000, as a result of both national and global restrictions on tourist travel caused by the COVID-19 pandemic.

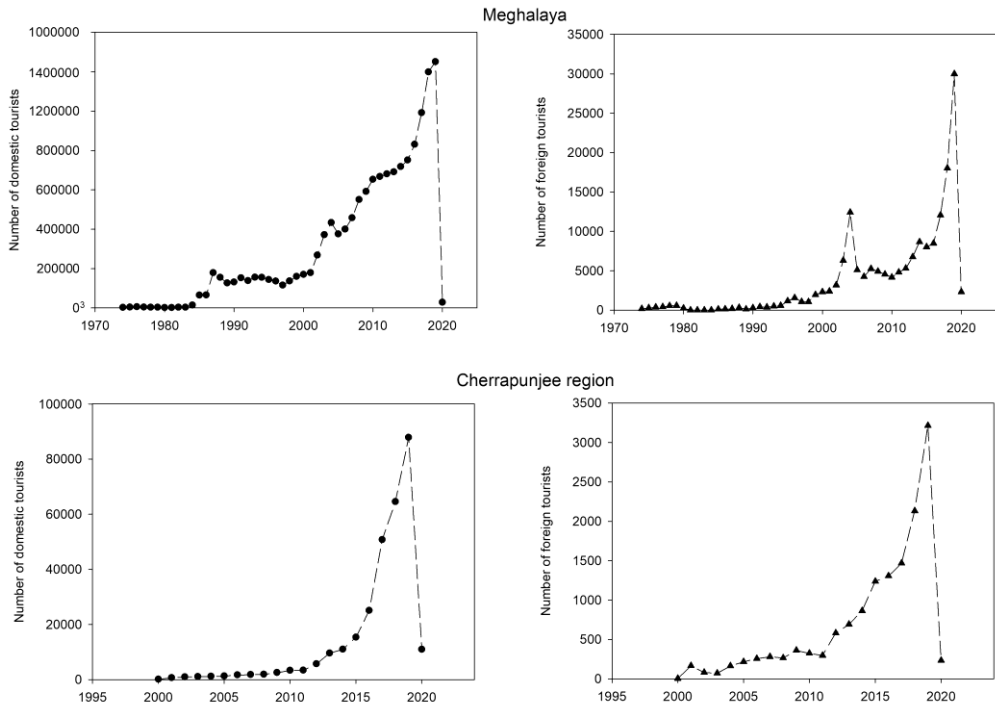


Fig. 4. Numbers of domestic and foreign tourists in Meghalaya State (1974–2020) (Government of Meghalaya 1978, 1989, 2000; Tourist Information System, 2021) and Cherrapunjee region (2000–2020) (registration book of CHR; Tourist Information System, 2021), (see Appendix)

Development of tourism and its seasonality in the Cherrapunjee region

The dynamic development of the tourist base in the Cherrapunjee region resulted from growing interest among both domestic and foreign tourists with the highest rainfall in the world. The year 2000 can be considered the beginning of large-scale tourism development in the Cherrapunjee region, when CHR was established with 26 beds in the village of Laitkynsew (Appendix). Before then, a few beds were offered in the region by two establishments that were not part of the commercial tourism industry. One was owned by the local authority, while the other was owned by a cement factory. Staying at either of these resorts was limited and only possible with special prior approval from the local authorities. For almost a decade, Cherrapunjee Holiday Resort was the only tourist accommodation in Cherrapunjee. Further development of tourism took place in 2009, when another hotel was opened. In 2019, the number of hotels in the Cherrapunjee region exceeded 80 and served more than 90,000 overnight guests in total. Tourism in Cherrapunjee has long been dominated by domestic tourists, who have accounted for more than 80% of arrivals. Between 2000 and 2019, their number grew by an average of more than 4,000 per year, while the number of foreign tourists grew by only 160 per year on average.

The highest number of tourist visits to the Cherrapunjee region typically occurs during the monsoon season, peaking in July (Fig. 5). The second highest number of tourist arrivals typically occurs in October. The lowest number of tourists visits typically occurs in the winter season (January–March), with the least in February.

There is a strong relationship (regression coefficient 0.58) between the monthly rainfall amount and the total number of tourists (foreign and domestic) per month. A similarly strong relationship (regression coefficient 0.59) exists between the monthly rainfall amount and the number of domestic tourists, because tourists to the area are predominantly domestic. The smallest number of foreign tourist arrivals occurs during the summer monsoon season—in the months with the highest rainfall, and the highest number of visits occurs in the autumn and winter months (October–March). Thus, there is no clear relationship between the monthly rainfall amount and foreign tourist arrivals.

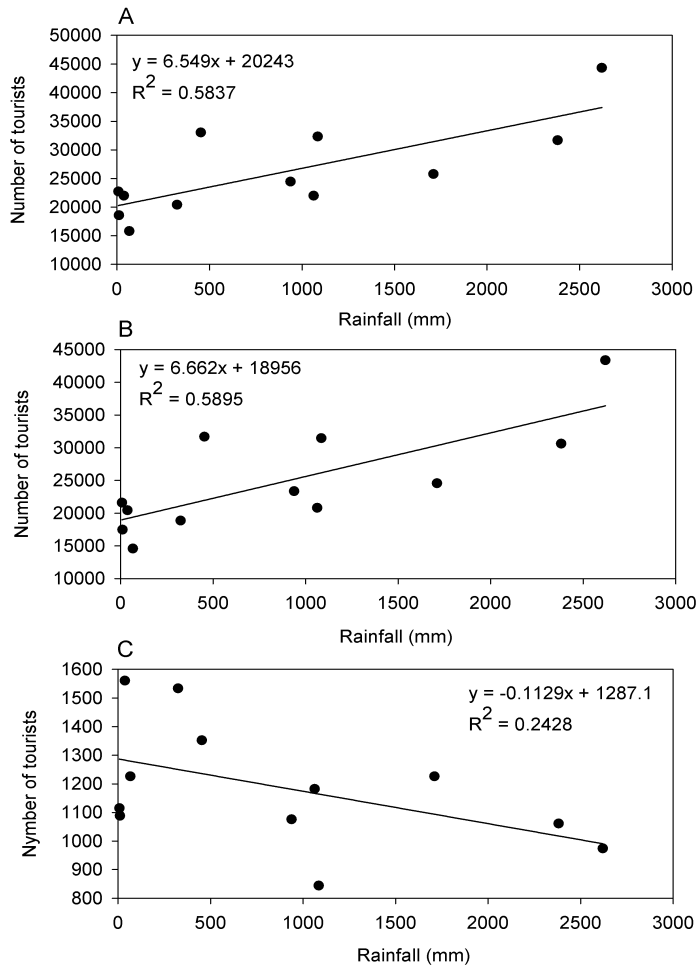


Fig. 5. Relationship between the number of tourists and the average monthly rainfall in Cherrapunjee region in 2000-2020:
A – all tourists; B – domestic tourists; C – foreign tourists

During the two decades of CHR's operation, the number of guests increased at a rate of approximately 250 persons per year and reached approximately 5,000 persons in 2019 (see Appendix). In common with the state of Meghalaya, the East Khasi Hills District, and the Cherrapunjee region, most of CHR's guests were from India. Domestic tourists came mainly from the neighbouring Assam state, followed by West Bengal and Meghalaya (Fig. 6 and see Appendix). Domestic tourists were predominantly from locations well connected by air and rail, particularly states in central and southern India. Among foreigners who stayed at CHR,

Bangladeshis predominated, followed by tourists from the UK and USA. Tourists from other European countries, as well as Australia, Canada, and Japan, also made up relatively large proportions of the total.

An analysis of the distribution of tourists at CHR from different countries for particular months of the year shows that Cherrapunjee is fairly equally attractive for Bangladeshis in all months of the year (Fig. 7).

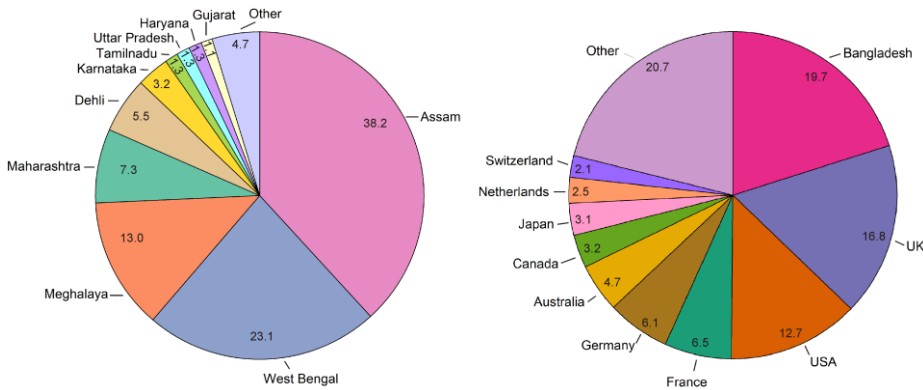


Fig. 6. Origins of domestic and foreign tourists visiting the Cherrapunjee Holiday Resort in 2000–2013. The charts detail the ten states and countries accounting for the highest proportions of tourists to the Cherrapunjee region

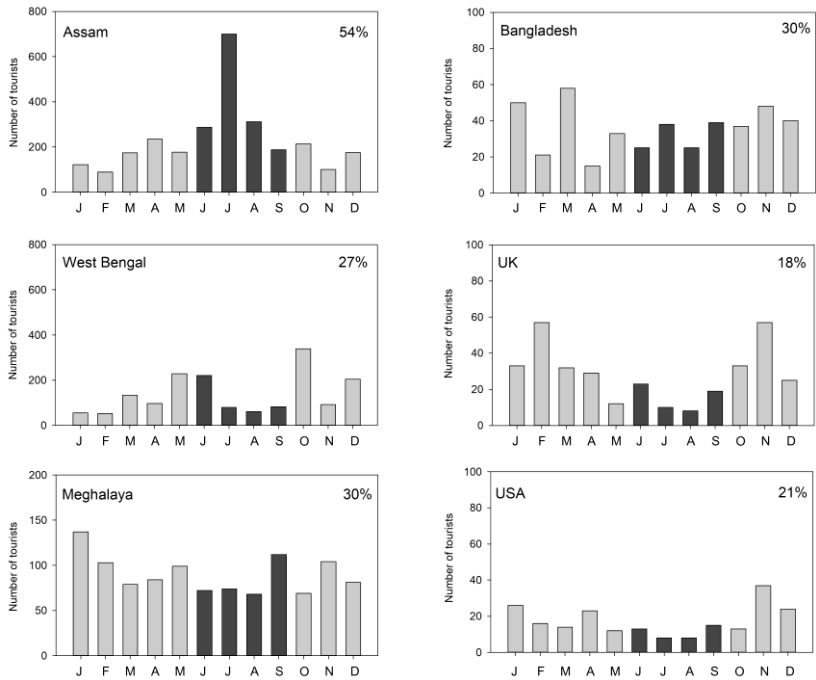


Fig. 7. Monthly distribution of visits by domestic and foreign tourists from the three states and three countries accounting for the highest proportions of visits in CHR in 2000–2013. In the upper right corner, the percentage of tourist visits in the months with the highest rainfall (summer monsoon) is indicated. The months with the highest rainfall (summer monsoon) are marked in dark grey

Visits by tourists from the USA and European countries are noticeably distributed differently by month, more so than visits by domestic and Bangladeshi tourists. Those from the USA and Europe come mainly during the dry season, which coincides with the cold winters in their countries. Foreign tourists are seemingly uninterested in observing high rainfall, although staying in a place with high rainfall holds some interest for them. Typically, either Meghalaya is their main destination or they combine a visit to Meghalaya with a visit to Assam, which is the state in the Northeast most visited by tourists, and many also visit the Himalayas in Sikkim.

Whereas the lower number of foreign tourists stay at the CHR during the monsoon season and the increase in foreign visits during the dry season can be explained by the climate, the marked inflow of domestic tourists during the peak rainfall season can be attributed to factors other than the weather and the desire to observe extreme rainfall. Among the most important factors is the distribution of holidays and festivals throughout the year in Meghalaya and its neighbouring states. Holidays in India occur nationwide, but individual states also have their own holidays, depending on the history and religious makeup of each state.

More than half of the visits from the state of Assam, which borders Meghalaya and accounts for the highest number of visits from all of the states, occur during the monsoon season (Fig. 7). In Assam, school and university summer vacations also take place during this season. For the next two states in producing the largest number of visitors, the monsoon period accounts for only 27–30% of visits. Most visits in October and November are associated with the festival of Durga Puja, which is one of the biggest festivals in Hinduism and is celebrated particularly actively in West Bengal. In addition, many local festivals are organized in Meghalaya in the autumn. An example is the Nongkrem festival, which is celebrated for approximately 5 days in October or November.

Development of tourism— How one holiday resort changed an area

The Cherrapunjee Holiday Resort was established as a family business by a former bank manager, originally from southern India, and his wife, originally from Laitkynsew, a village near Cherrapunjee. The construction of the hotel was facilitated by their own small capital, a bank loan, and the wife's ability to acquire ownership of the land for the resort (local laws prohibit any non-Khasi from buying land in Meghalaya). The main barriers to tourism development were the lack of a critical mass of similar facilities in the area, lack of identification of potential tourist attractions, poor transport accessibility, lack of telephone communication, and lack of Internet access. There was also no skilled labour force capable of providing hotel services. The owner of the resort recalls those times as follows:

"Lack of experience in construction activity and numerous problems arising out of the difficult hilly terrain caused the expenses to shoot up. It was the pre-mobile phone era and the telephone service in Cherrapunjee was out of order for most of the time. Two buses used to leave for Shillong from the village in the morning and return late in the evening. There used to be no transport available in between".

Concurrently with the construction of the hotel, the owner identified potential tourist spots: root bridges, caves, waterfalls, and mapped treks in the area that could be tapped as main tourist attractions. These formed the basis for later preparing several options for tour packages, from family trips to more demanding activities, including trekking, camping, caving, rock climbing, or water sports. The hotel owner cooperated with companies that could provide transport services for tourists, as well as with local musicians who could present regional music and folklore during the evening music program at the resort. With the construction of the hotel, it was also necessary to train and employ future hotel staff and guides to help on treks. According to the owner, *"We decided to take the people from the village and train and*

empower them to be good hosts and to be able to run the Resort, thereby generating local employment”.

The development of tourism also required increased promotional efforts. Colourful brochures and CD ROMs with presentations of the region were prepared and shown at travel and tourism fairs in Kolkata, Bengaluru, and Mumbai. The ‘living root bridges’ named and promoted by the resort became an international attraction when they were filmed by two Japanese TV stations in 2004 and the BBC in 2010. The resort has been spotlighted and recommended by travel guidebooks such as Lonely Planet, Rough Guides, Let’s Go, Footprints, and Outlook Traveller. Better coverage of the area by mobile phone networks and the Internet has allowed greater contact with the outside world. It has become possible to book accommodation at the resort directly and to interact with online travel companies and travel websites such as Trip Advisor, about the resort. The resort’s website features a daily weather service that reports rainfall amounts and temperature conditions and explains the reasons for record high rainfall in Cherrapunjee. Many young people working as guides promote the resort through social media.

The employment of residents and the payment of regular salaries has made local people hitherto living from agriculture or seasonal work realise that tourism can be a profitable venture. This has spurred the creation of many family-owned micro enterprises that rent rooms, serve meals, provide guiding services for guests, and sell tickets to local tourist attractions. As many as 75% of the lodging establishments in the region are small family businesses renting up to five rooms. In the last few years, however, the area has also attracted larger investors who have built new hotels (including a five-star hotel) around Cherrapunjee. The owner of CHR concludes:

“Whereas for many, many years on end I had seen Cherrapunjee and its surrounding villages remaining unchanged and people living the same way, now with our people embracing tourism with both hands, I can see changes happening at a very fast pace, every month”.

Coronavirus and consequences for tourism

In 2020, tourism throughout Meghalaya State, including the Cherrapunjee region, was severely affected by the COVID-19 pandemic. In addition to tourist attractions and hotels closing, the state border with Assam and the international border with Bangladesh were completely closed between 21 March and 20 December 2020. This resulted in a drop of more than 90% in visits of both domestic and foreign tourists to Meghalaya state compared to the previous year. Cherrapunjee recorded a similar decline in tourist traffic. Of the 80 hotels in the region offering accommodation, 18 did not host any guests in 2020. Since December 20, 2020, travellers have been required to follow COVID-19 guidelines and health protocols to visit the region, including providing their tour itinerary, providing proof of confirmed bookings, and negative COVID-19 test results.

By March 2021, only half of the hotels that existed in the region in 2019 had hosted at least one guest. These were mainly large hotels and guesthouses with owners making their living solely from tourism. Another lockdown in late spring 2021 stopped tourist visits for the next several months. The impact of the pandemic on the decline in tourist numbers will therefore be evident for at least two years (2020–2021), although these numbers are not yet available. The pandemic began when the region was in the tourism development phase, and the region has not yet reached the consolidation phase as defined in the destination life cycle model [48]. Further tourism development in the Cherrapunjee region will depend on both overcoming the pandemic (i.e., restoration of freedom to travel) and the state government’s protective measures. It may also be important to convince local people, who have relatively recent

experience with tourism, that tourism can be a relatively stable source of income—even in light of the issues brought about by the pandemic.

Discussion

Peripheral locations are very often areas in an initial state of tourism development, with natural potential for increased tourism development [6, 20, 57]. From a development perspective, peripherality means that many areas located far from big cities, administrative centres, and industrial environments remain in their natural or original state, and with limited cultural assets, their 'extra elements' must create new tourism opportunities. For some people, the idea of being in a place with a world-record natural feature and posing there for a photo is rather appealing [58]. The anomaly itself is thus a resource [16], as well as a type of natural heritage monument [59, 60] that can provide a unique regional heritage narrative. Peripheral locations with curious features, such as the locality of the world's highest rainfall, may be potentially attractive tourist destinations, with a common focal point conducive to the development of marketing opportunities and narratives about the location.

The primary touristic appeal of peripheral areas is their natural beauty [1, 2]. However, extremities often add a degree of intrigue and may become a secondary attraction that benefits peripheral regions. Given the unique peripheral, political, and controversial positions and roles of peripheries, tourism requires local leaders, good management, government tolerance, and in many cases, sound networks and cooperation frameworks between entrepreneurs [9, 10]. In the case of Meghalaya, the Cherrapunjee Holiday Resort was established as a family business and has played the role of an important local leader. In terms of supply and demand, there is on the one hand tourists' curiosity (i.e., the desire to explore new places and have new experiences away from traditional destinations), and on the other hand efforts to develop niche tourism as a response to overtourism as an element of postmodernism. This is particularly true of people working to develop regional projects, who may mobilise tourism as a place-making instrument.

Issues related to development opportunities in tourism seem to be universal throughout the world. For example, peripheral areas are more difficult to capitalize on because they have to overcome weaknesses such as limited transport (poor accessibility) and little socio-economic development. In the case of Meghalaya, the main barriers to tourism development were the lack of tourism infrastructure facilities and the lack of identifiable potential tourist attractions, as well as the stringent permit requirements in the past. The difficulty of creating new tourist infrastructure is also a result of low capital and weak social capital, as well as lack of telephone service and lack of Internet access. A strong regional leader pointing the way is important in creating successful tourist spaces. Successful marketing is positioned on the basis of strong distinguishing regional features, or unique selling points. In the case of Meghalaya, a geophysical curiosity—the place with the highest rainfall in the world and the landscapes associated with this phenomenon—has become such an element, especially for domestic Indian tourists, but also for Bangladeshi visitors and other foreign tourists. It is important to note some limitations of this study, which has focused on a single geographical location. First, the study was conducted in a peripheral region with recent successful tourism development, and the decision was taken to rely upon one study to define success in a peripheral situation. Second, it is often quite difficult to generalise about proving the success of chosen processes from one study. Third, it can be difficult to prove which one element from among several is the most important in successful tourism development. Finally, it can be difficult to decide how to

overcome the limitations and challenges in a given location and how to use additional physical features for tourism and local development.

Conclusions

As the place with the highest rainfall levels in the world and its traditional physical and geopolitical isolation, Meghalaya, is one of the most interesting regions for tourism development in India. The peripheral region is mainly defined by elements of nature and wilderness and their aesthetic value, which are sometimes considered as a valuable curiosity. The following four main conclusions are drawn from the results of this study. First, Meghalaya is a peripheral region of Northeastern India where tourism development has accelerated in the last two decades as a result of the administrative opening of the state and the dynamic development of tourism throughout India. The year 2000 can be considered the beginning of large-scale tourism development in the Cherrapunjee region, which resulted from the growing interest of domestic and foreign tourists in the area with the highest rainfall in the world. In 2019, the number of hotels in Cherrapunjee exceeded 80 and served a total of over 90,000 people. Second, a factor that had a significant impact on the development of tourism in the Cherrapunjee region starting at the beginning of the 21st century was the establishment of the Cherrapunjee Holiday Resort hotel, which led to further development of the accommodation base in the region. As a family business, the hotel owner has also become a local leader in the development of tourism throughout the region.

Third, considering the dynamics of tourism development in Meghalaya up to 2019, it can be assumed that this development is on an upward trajectory. As elsewhere, the COVID-19 pandemic has destabilised the development of tourism in Meghalaya and has returned tourist visit numbers to the low levels seen during the initial stage of the region's tourism development. The consequences of the pandemic on the development of tourist traffic in this peripheral area in the coming years should be analysed separately and in greater depth, as major crises can exacerbate the effects of peripherality in regions that are often marginal to the socioeconomic concerns of the state.

Fourth, tourists visit the Cherrapunjee region all year round for various reasons. Domestic tourists visit the area mainly during the summer monsoon (peak in July). Paradoxically, the high rainfall and its effects on the landscape are among the main factors attracting tourists during this time. Foreign tourists visit the region mainly in the winter months (which have little rainfall), which has more favourable weather conditions and are generally more favourable to tourism.

Peripheral regions have significant potential for tourism development, as the growing body of research on borderlands tourism illustrates. Despite having been somewhat neglected by the state and its agents for decades (or centuries in some cases), marginal regions can provide self-sustaining tourism enterprises where Indigenous knowledge and bottom-up planning lead local development efforts. From a tourism perspective, these regions have much to offer, including unique physical and cultural environments that may appeal to domestic and foreign tourists. This is especially so where some kind of superlative characteristics or extreme geophysical phenomena can be capitalized on for tourism development. Niche tourist markets consistently seek new and one-of-a-kind opportunities. India's Cherrapunjee region and other physically marginal regions may be just what off-the-beaten-path travel enthusiasts are seeking as they desire to experience the untouched and superlative characteristics of the world's peripheries.

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Appendix A.

Table A1. Numbers of domestic and foreign tourists to Meghalaya State in 1974–2020
(Government of Meghalaya, 1978, 1989, 2000)

Year	Domestic	Foreign	Total	Year	Domestic	Foreign	Total
1974	2983	185	3168	1998	136952	1055	138007
1975	4320	291	4611	1999	159730	1971	161701
1976	6295	391	6686	2000	169929	2327	172256
1977	4484	426	4910	2001	178697	2390	181087
1978	3534	566	4100	2002	268529	3191	271720
1979	3402	576	3978	2003	371953	6304	378257
1980	2324	252	2576	2004	433495	12407	445902
1981	2323	7	2330	2005	375911	5099	381010
1982	3689	8	3697	2006	400287	4259	404546
1983	3369	4	3373	2007	457685	5267	462952
1984	14338	19	14357	2008	549954	4919	554873
1985	65371	121	65492	2009	591398	4552	595950
1986	65767	142	65909	2010	652756	4177	656933
1987	178858	194	179052	2011	667504	4803	672307
1988	155474	328	155802	2012	680254	5313	685567
1989	126920	124	127044	2013	691269	6773	698042
1990	131189	277	131466	2014	717789	8664	726453
1991	152889	428	153317	2015	751165	8027	759192
1992	138932	380	139312	2016	830887	8476	839363
1993	156152	505	156657	2017	990856	12051	1002907
1994	154977	577	155554	2018	1198090	18022	1216112
1995	144529	1172	145701	2019	1250000	30000	1280000
1996	136183	1573	137756	2020	29187	2316	31503
1997	115563	1071	116634				

Table A2. Tourism development in the Cherrapunjee region between 1974 and 2020 (based on the authors' own surveys, data from the Government of Meghalaya, 1978, and data from the Tourist Information System, 2021).

Year	Hotels No.	Accommodation places	Domestic tourists	Foreign tourists	Total tourists
1974	2	8	-	-	-
2000	3	26	165	5	170
2001	3	26	716	167	883
2002	3	26	963	81	1044
2003	3	26	1082	72	1154
2004	3	26	1198	165	1363
2005	3	26	1331	219	1550
2006	3	26	1699	258	1957
2007	3	26	1821	281	2102
2008	3	26	1940	266	2206
2009	3	26	2558	363	2921
2010	4	50	3335	325	3660
2011	4	68	3426	298	3724
2012	7	163	5722	582	6304
2013	10	203	9598	693	10291
2014	12	222	11020	864	11884
2015	16	273	15394	1238	16632
2016	33	420	25102	1307	26409
2017	40	484	50766	1469	52235
2018	71	733	64513	2133	66646
2019	83	877	87864	3215	91079
2020	65	771	10948	234	11182

Table A3. Numbers of tourists at the Cherrapunjee Holiday Resort in 2000–2020.

Year	Domestic	Foregin	Total
2000	165	5	170
2001	716	167	883
2002	963	81	1044
2003	1082	72	1154
2004	1198	165	1363
2005	1331	219	1550
2006	1699	258	1957
2007	1821	281	2102
2008	1940	266	2206
2009	2558	363	2921
2010	3118	321	3439
2011	2668	291	2959
2012	3179	509	3688
2013	3517	431	3948
2014	3530	410	3940
2015	3742	484	4226
2016	3992	299	4291
2017	3916	283	4199
2018	4458	466	4924
2019	4495	490	4985
2020	260	38	298

Table A4. Origins of domestic and foreign tourists visiting the Cherrapunjee Holiday Resort

State	(%)	Country	(%)	Country	(%)
Assam	38.2	Bangladesh	19.7	South Africa	0.5
West Bengal	23.1	UK	16.8	Finland	0.4
Meghalaya	13.0	USA	12.7	Scotland	0.4
Maharashtra	7.3	France	6.5	Thailand	0.3
Delhi	5.5	Germany	6.1	Belarus	0.2
Karnataka	3.2	Australia	4.7	Hungary	0.2
Haryana	1.3	Canada	3.2	Indonesia	0.2
Tamilnadu	1.3	Japan	3.1	Russia	0.2
Uttar Pradesh	1.3	Netherlands	2.5	Malaysia	0.2
Gujarat	1.1	Switzerland	2.1	Mexico	0.2
Andhra Pradesh	1.0	Czech Republic	1.9	Nepal	0.2
Jharkhand	0.4	Spain	1.8	Arab Emirates	0.1
Kerela	0.4	Sweden	1.8	Chile	0.1
Odisha	0.4	Italy	1.5	Greece	0.1
Rajasthan	0.4	Israel	1.4	Hongkong	0.1
Arunachal Pradesh	0.3	Poland	1.3	Latvia	0.1
Madhya Pradesh	0.3	Slovenia	1.2	Lithuania	0.1
Manipur	0.3	Austria	1.0	Luxembourg	0.1
Bihar	0.2	Singapore	1.0	Myanmar	0.1
Himachal Pradesh	0.2	New Zealand	0.9	Turkey	0.1
Nagaland	0.2	Belgium	0.8	Philippines	0.1
Chattisgarh	0.1	China	0.8	Ukraine	0.1
Goa	0.1	Argentina	0.7		
Punjab	0.1	Denmark	0.7		
Sikkim	0.1	Ireland	0.7		
Tripura	0.1	Korea	0.5		
Uttarakhand	0.1	Norway	0.5		