

# PalArch's Journal of Archaeology of Egypt / Egyptology

## Sustainability Issues at Tourism Destinations in Kashmir Valley

<sup>1</sup> *Gowhar Ahmad Wani*

<sup>1</sup> Ph.D. Research Scholar, School of Economics, Department of Economics  
Central University of Kerala

**Gowhar Ahmad Wani: Sustainability Issues at Tourism Destinations in Kashmir Valley--  
Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(9). ISSN 1567-214x**

**Keywords: Behavior, Social Society, Surfing Sports**

### ABSTRACT

This paper examined sustainability issues happening at tourism destinations in Kashmir Valley. Conclusions are drawn and remedies provided on the basis of concerned issues. Practices, models and strategies adopted by Himalayan and Non- Himalayan states are presented and explained their relevance for the rectification and endorsement of sustainable tourism at destinations. In Kashmir Valley most of the products are gifted by nature and demands vital care and supervision. Due to poor management, deficient facilities and services problems like contamination (water and air), solid waste, open dumping of garbage, emissions, chlorofluorocarbons and green house gases, illegal constructions and degradation of forests highly noticeable at renowned places like Srinagar, Pahalgam and Gulmarg. In this context, strong policies, strategic framework, sustainable tourism practices and adequate facilities and services are treated as imperative.

### 1. Introduction

Over the period, progress of tourism industry offered numerous benefits to people living at tourism potential destinations. High tourist influx brought dollars to their accounts and boosted their economies. Nevertheless, lack of consideration and overcrowding negatively exaggerated the tourism resources like water bodies, aquatic resources and critical environment (Neto, 2003). Longstanding existence of destinations need proper supervision and at the same time control of emissions, disposal of wastes, and maintenance of hygiene treated as vital. Otherwise, all these sustainability issues may lead to further

exploitation and degradation of tourism destinations (European Parliament, 2016). Tourism related issues emerge incessantly and therefore posing a stern risk to the continuity and original profile of tourism resources.

Conservation of tourism resources stipulate adequate facilities and mostly depend on the type of products available at the destinations. Kashmir valley, one of the pioneer tourism destinations in the state of Jammu and Kashmir contains natural tourism products like gardens, lakes, springs, meadows, green lushing forests and others. Tourism products are deeply rooted to the environment and wholly depend on its quality and management. Over the years, tourist inflow has increased but lack of adequate management and required facilities led to the emergence of environmental issues like water pollution, air pollution, plastic menace, and littering, forest degradation and encroachment at various destinations.

Srinagar, Pahalgam and Gulmarg, world renowned tourism destinations are facing the issues of weighty generation of wastes, littering from hotels, restaurants and houseboats and therefore mislaid the cleanliness. Open dumping of garbage, emissions, illegal constructions etc is treated as severe threats. Unplanned tourism resulted in unfavorable impact and problems like pollution, insanitary conditions, siltation of water bodies, and poor drainage are major concerns (State Action Plan on Climate Change: JK, p. 225; Darzi, 2016). Yet, sustainable tourism remained a dream and a challenge, as the valley demands huge amount of environmental infrastructure and standardization of services which the valley unfortunately lacks.

Lack of infrastructure and irregularity of waste carrying vehicles motivated travelers to dump wastes at tourism spots. Whatever is generated is not properly managed and recycled and otherwise loaded and transported to open surroundings. Such kind of ill treatment and irresponsible management of wastes are accountable for misuse of tourism resources, pollution of water bodies, and degradation of tourism resources (Bashir and Goswami, 2016). So, needs the approach of better supervision and contemplation of authorities to end such an imbalanced character continuously through the means of conservation of destinations, water and sanitation, waste management, certification and pollution etc. With this backdrop, the present study examined sustainability issues happening at tourism destinations and the need of possible remedies and precautionary measures to be taken that could assist adoption of sustainable tourism at destinations in Kashmir Valley.

### **1.1.1. Area profile of Famous Destinations in Kashmir Valley**

The Union Territory of Jammu and Kashmir is situated in the North of India and sharing borders with the states of Punjab and Himachal Pradesh in the South, China in the North East, Pakistan in West and Afghanistan in the North West. In terms of geography, it is divided into two regions Jammu and Kashmir. Being rich in natural resources, it is famous for pilgrimage, natural and adventure tourism both at the national and international levels (Economic Survey JK, 2014-15).

Among the two regions the province of Kashmir is highly popular for its natural beauty and valleys like heaven. Snow capped mountains, conspicuous springs, greenery, and chunky forests attract tourists from the entire world. In addition, the valley of Kashmir gains reputation because of mother of fruits like apple, saffron, medicinal herbs, minerals, precious stones, shawls, carpets and other rich items. For tourism, it remains active for both the seasons of summer and winter. In summer tourists can get delighted from the beautiful outlook and foliage of nature. However in chilly season hiking on snow spiky mountains are really amazing (Raina, 2002).

In diverse seasons it offers destinations suited to environmental conditions. In summers, tourists can get pleasure from the cool climate of Pahalgam and in winters the snow capped mountains of Gulmarg are highly favored. Districts like Srinagar, Anantnag and Baramullah are highly famous for their tourism potentials and tourism destinations like, Srinagar, Pahalgam and Gulmarg are highly famous among tourists (JK Travel Guide, p. 2; (Ministry of Tourism, 2012, p. 240).). Location, geographical atmosphere and potentials of tourism contained in aforementioned destinations are discussed as below:

#### **1.1.2. Srinagar**

Srinagar is the foremost destination for travelers to visit Kashmir valley. It is the summer capital of the state of Jammu and Kashmir. The city is main hub of lakes and rivers, gardens, houseboats and shikara ridings. Dal Lake in the middle of Srinagar adds to the charm of the city and captivating attractions. Tourists feel relaxed to spend much time in waterborne houseboats and to enjoy sweet-scented Kashmiri gastronomy. Mughal Gardens, on the banks of Dal Lake looking like heavens add more to the fascination of Srinagar city. (Official Website of Jammu & Kashmir Tourism).

#### **1.1.3. Pahalgam**

The destination is perched at an elevation of 2,740 meters above sea level and is at a distance of 96.5 kilometers from the summer capital Srinagar. It is renowned all over the India for pilgrimage tourism of Amarnath Yatra. Weather conditions in the town are highly feasible in summers. In winters the tourism destination of Pahalgam experiences heavy snowfall and cold. So the best season for visiting the place and relaxing here is from April onwards and to the end of mid November. Places like Baisaran, Tulian Lake, Chandanwari, Panchtarni, Hajan, Betaab Valley, Sheshnag Lake, AruValley, Mamaleshwar Temple, Lidderwat, Aishmuqam, Sun Temple, Shikargah, Tarsar Lake, and Mattan are highly famous (Department of Tourism, JK; Raina .A. N, 2002: 16).

#### **1.1.4. Gulmarg**

Gulmarg, world famous tourism destination, is located at a distance of 46 kms from the Srinagar in north of Baramullah district of Kashmir Valley. It has an altitude of 2690 m above the sea level. Average temperature varies

from  $-4^{\circ}\text{C}$  in January to  $31^{\circ}\text{C}$  in July. It is an all weather tourism destination famous for emerald meadows, beautiful landscapes, flowering gardens, serene lakes and sports festivals like golfing, water skiing, trekking, mountain biking, horse riding and fishing. Gondola trip in Gulmarg is the world's highest cable car takes tourists to a height of 4390m. In Kashmir it is the only tourism place specified new dimensions to adventure tourism by introducing sports activities like snow baseball, snow cycling and snow rugby (Kuchay and Bhat 2013: 3, Tourism Deptt JK).

### **1.1.5. Reviewed literatures**

Tourism contributes positively to state Gross domestic product and has an indispensable role to promote employment of the state of Jammu and Kashmir. Over the years, tourist inflow increased and as a result the requirement of basic facilities also demands an increasing trend. However, the infrastructure and services not available to the extent it should be (Hussain, Bhat and Aadil, 2016; Bhat and Yadav, 2018; Ease of Living Index, 2018; Ramjit, 2015; Report of Task Force, JK, 2006). Numerous subsectors of tourism industry contribute in terms of growth, foreign exchange and employment and works as a swap of cultural values. Visitors of numerous states assemble here and mingle with the host community at the destinations. Consequently, cultural values and traditions are exchanged and enhanced (Sachdeva and Ganie, 2017).

Growth of tourism industry and economic benefits enhanced over the years. Nevertheless, the industry not contributed to the extent it should be as the state contains a lot of natural tourism potentials (Asif Iqbal Fazili, 2006). For the same, various causes are explicated and highlighted by studies and the foremost cause responsible for under exploitation of tourism potential is armed conflict happened continuously over the years. There is negative relationship between the armed conflict and growth of the state. Armed conflict restricts tourists from all over the world to enjoy the beauty and natural tourism products of the state of Jammu and Kashmir particularly the enlightened charming of Kashmir Valley (Ajaz ul Islam, 2014; Dar, 2015; Shah and Ambreen, 2013). From the years, the Kashmir valley shattered in clashes and negatively impacted the functioning of tourism destinations. To avoid insurgencies and clashes and to promote peace and progress in the valley, therefore, tourism has a major role to play. It has to promote peace process and development of the state through the means of an association between the tourists and native community (Chauhan and Khanna, 2009).

Apart from the issues of armed conflict and insurgencies, deficient infrastructure and poor quality of tourism services negatively impacts the environment and host community living closer to the destinations. As a result, the mismanagement of tourism industry is responsible for various pollutions like water, air and plastic wastes (Singh and Bahadur; 2018; Malik and Bhat; 2013). It is highly visible that the authorities must ensure preventive measures

and adequate management for better functioning and sustainable growth of tourism industry in the state of Jammu and Kashmir.

Evaluation of cited studies analysed contribution of tourism to SGDP, its role in diversification and exchange of cultural values, certain challenges and deficiencies of basic requirements and impact of armed conflict on tourism. Some studies discussed the environmental issues happening at the destinations. However, it exposed that there is no study avail related to the above mentioned grounds. Further, the existing studies covered limited areas with certain limitations. So the present study addressed research gap by taking into account the brief explication and exploration of sustainability issues happening at tourism destinations. Henceforth, the observations and findings gained will provide information about sustainability issues in tourism and clues for future tourism policy making in the Union Territory of Jammu and Kashmir.

### **2.1. Materials and Sources:**

Data and information required was gathered from secondary sources. To give brief introduction of study area, information was taken from Jammu and Kashmir Economic Survey (2014-15), past studies and websites of tourism information centers. However, to explicate the issues and challenges national and international reports, past studies, recent surveys, newspapers and direct observations are utilized. Information obtained from State Action Plan on Climate Change JK, Ease of Living Index – 2018, Logistics Performance Index-2018, Economic Survey JK, 2014-15, NITI Aayog- 2018, Ministry of Tourism India- 2012, Department of Ecology, Environment & Remote Sensing- Govt. of J& K (2013-14) and Task Force Report JK-2006 are also utilized as a support to explicate issues and other concerns in a detailed manner. For additional inscriptions, case studies, Surveys and numerous websites has been taken into consideration.

### **3.1. Need and Significance of Sustainable Tourism at destinations**

Sustainable tourism entails that the natural assets are not permanently dented. As part of sustainable development, it advocates that the tourism assets be passed to future generations without severe depletion and to prevent irreversible changes to environment at the destinations. It needs comprehensive approach to preserve the social, economic, cultural and environmental dimensions of local community. The key focus is to protect the destinations and effectively to provide benefits to host community.

In brief, it prefers that the tourists visiting destination should leave positive impacts rather than the negative one. A mark of respect is needed to protect the natural and cultural assets of communities living in and outside of destinations. It also means minimal footprints on the fragile surroundings and lending a hand to improve circumstances. Sustainable tourism consists of various dimensions and is understood accordingly. At the local level, it means support of local

economy and of local tourism initiatives. But at the national level it is diversified and linked to various dimensions of an economy. It has vast relations with economic, social, cultural, aesthetic and environmental benefits.

Environment is pedestal of tourism for both inert and participatory tourism activities. It infers that Tourism depends on environment and the environment may be severely affected by tourism activities. A severe pressure of tourism can have adverse impact not only on destinations but also on other places as well if not uphold effectively. Tourism activities give birth to various superfluous by- products which are purposely or accidentally disposed off in surroundings. Severe negative impacts harshly hits the environmental assets and dangerous for the people near to destinations.

Kashmir Valley has plentiful of environmental assets. Natural fervor and fragrance acts as a base for the endorsement and progress of tourism industry. Sustainable tourism can be used as a promotional tool to attract visitors. However, ensuring sustainable tourism needs to set up new ways and means in terms of better infrastructure and services to avoid negative externalities. Specifically environmental infrastructure will lend a hand to reinforce the affirmative externalities of tourism. Henceforth, sustainable practices must be adopted to make a contribution to the back-up of sustainable tourism. Obviously, it will ensure long term benefits and protection of natural assets and critical biodiversity at the destinations.

#### **4.1. Sustainability Issues and Challenges: Destinations**

This part of the study briefly explained the sustainability issues happening at destinations and the challenges allied to it. Three popular destinations of Kashmir Valley are selected namely Srinagar, Pahalgam and Gulmarg based on their popularity and burgeoning issues. Negative externalities and other concerns related to tourism are highlighted and briefly examined by destination wise separately. So that remedial measures could be provided accordingly and will be helpful for policy making as well.

Kashmir is sanctified with diversity of natural tourism products and obviously indicates its potential of development through the means of tourism progression. But at the same time provides a sense of sustainable tourism management as the destinations Like Srinagar, Pahalgam and Gulmarg contain pure natural tourism products. It is noticeable that the destinations are rich and capable of tourism development on sustainable basis; the sector yet not achieved any accomplishment in the same. Tourists are visiting and turning back, pumping thousands of rupees through the means of multiplier effect and other benefits. In the mean time pumping a huge amount of wastages, pollution, plastic menace and other negative externalities insists that the approach of growth of tourism must be taken care of. Otherwise, it gives a louder message that in the future the resources are going to expire and nobody will be enthusiastic to revisit.

Here the question arises, “What are the major issues and challenges imposing huge negative externalities and impeding the configuration of sustainable tourism at world renowned destinations like Srinagar, Pahalgam and Gulmarg in Kashmir Valley. In this context an attempt has been made to explore the sustainability issues happening at aforesaid destinations and their possible remedies briefly scrutinized as follows:

#### **4.1.1. Srinagar**

At the first level, capital city lacks proper drainage which results in unclean ambiance and other damages. Though the place is gorgeous and rich in tourism places, environmental infrastructure are not accessible lavishly and are not upto the standard. It scored only 22.71 points out of 100 in public utilities like water supply, cleanliness and delivery of environmental services. In solid waste management, it obtained 0.94 points out of five points (Ease of Living Index, 2018). So, lack of environmental infrastructure is solely responsible for insanitary situations at the tourism spots.

At Srinagar, issues related to the unplanned tourism comprised of multiplicity of wastages, siltation of water bodies and open dumping of garbage at destinations (State Action Plan on Climate Change: JK). Untreated sewage from hotels is directly flown to Dal Lake. As a result, the famous destination is experiencing huge generation of littering from hotels, restaurants and houseboats. It makes the lake a dumping yard of contamination and a severe threat for its quality and sustainability (Suresh and Bahadur, 2018). Untreated Sewage released from the hotels contains crude matters to give birth to organisms like algae which are responsible for degrading the quality of water and of the whole Lake as well.

Continous discard of wastes in Dal Lake and local interference shrunk its size from 75 Km in 1200 AD to 12 sq Km in 2015 and is still on declining trend. Large construction of illegal establishments at the banks drastically infringed the lake by means of addition of contamination and other toxic elements directly disposed off (Sakshi, 2020). Unplanned construction of infrastructure like hotels, restaurants, shops and other concerns are highly noticeable. As a result, quality of water and natural charm of Lake is on its last legs and asks for strict measures to maintain size, quality, fascination and sustainability.

Noise, air and water pollution are very regular in Srinagar city and traffic jams are seen frequently in peak tourist seasons. Traffic jam and heavy rush of vehicles in peak seasons create a panic and an irritation amongst locals and henceforth a mere cause of delinquency towards the entrance of tourists. The capital city is treated as a centre and enormous load is placed while visiting multiple spots and other adjacent areas. As a result, bad consequences of high tourist influx and other pessimistic externalities are extremely perceptible. Firstly, it has an unenthusiastic impact on the limited resources available for

host community and secondly, it makes an addition to the existing infectivity and other intimidation as well.

Carbon emissions, and chlorofluorocarbons', are the common intimidation and sulphur dioxide and green house gases are on the intensifying conditions (Aslam et. al., 2018). For the same, lack of air purifiers, outdated vehicles and lack of rules and regulations cited as major causes. This whole occurrence generates severe sustainability issues and posed a serious threat to tourism resources (Suresh and Bahadur, 2018). In this context, continuous increase of emissions should be strictly controlled and properly handled. Otherwise, the city will soon get a fame of polluted city in India and at the global level. As a consequence, tourism spots in the domain of city and adjoining areas will severely get affected and may lose their natural charm and enthusiasm.

Most of the states banned the use of polythene bags and plastic equipments at tourism spots. Similar procedure was chased by authorities in Srinagar city and directed for ban of plastics at tourism spots in entire Srinagar city. Nevertheless, the directions of administrative bodies are partially executed and use of plastics is highly visible. Every day a huge amount of polythene bags are used by tourists and are openly dumped at the spots. As per estimation, on an average each tourist dumps 1kg of plastics at tourism destinations and therefore highly calls for immediate remedial measures and precautions (Press Trust of Kashmir, June 15, 2019; Rising Kashmir, April 07, 2020; Rising Kashmir, June 05, 2018; Kashmir Monitor, March 8, 2018; Kashmir Reader, May 12, 2019). Otherwise, what is the matter when the birds climbing the fields.

Rising prices is a serious concern everywhere and sustainable arrival of tourists highly depends on price level and income of visitors. Rent charged by hotels, guest houses and touristic vehicles are high as compared to other destinations and restrict low income tourists to visit the multiple destinations located in and around Srinagar city. Prices charged for food and other items fluctuate frequently depends upon the volatile environment of Valley and therefore a cause of tourist annoyance. So, cheap and better availability of tourism products and facilitating services are highly required to lend a hand for enjoyment and attraction of visitors.

In health scenario, the city contains a number of hospitals both government and private. But the need of the hour is that the health services need to be improved as par with the competing states of India as well as other countries. All the major telecommunication companies are working in the city, however, demands upgradation in quality of internet and other services. No doubt, tourists are given the information through online and offline sources but the functioning of websites and other materials need to be improved a lot. Although sports grounds are available at various places in Srinagar, the availability and quality of sports equipments needed to be enhanced. Moreover, the destination contains fewer facilities for entertainment and widely demands



the facilities and centers for the same (Ministry of Tourism India, 2012; Logistics Performance Index, 2018; Digest of Statistics JK, 2015-16).

In brief, issues like unhygienic drainage, contamination of solid and liquid wastes, open dumping of garbage, emissions, chlorofluorocarbons and green house gases, illegal constructions, use of polythene bags and plastic contamination, dearth of medical facilities, higher charges and prices etc are highly noticeable at Srinagar as revealed by studies conducted by various researchers and research organisations.

#### **4.1.2. Pahalgam**

At the first level, tourism spots at Pahalgam lack proper drainage which ultimately results in unclean environment and gives birth to issues of sanitation. Most of the spots are incapable to captivate the visitors due to very low performance in cleanliness, healthcare and environmental factors like air quality, water quality, and pollution free surroundings. These issues are posing a serious threat to the adoption of sustainable tourism at the world renowned destination of Pahalgam (Nabina and Saima, 2017; Bashir and Goswami, 2016).

Further, emissions from heavy vehicles, burning of wood, 198 litres of liquid waste and 25 kg of solid waste per hotel/per day are daily issues. And the main cause revealed is deficiency of adequate environmental infrastructure and basic services (Malik and Altaf, 2017). Excess carrying capacity during the peak summers and the existing facilities not competent to absorb the visitors are highly perceived. As a result, high tourist influx and dearth in underlying structures put forth heavy pressure on tourism places (Bashir and Goswami, 2016, Malik and Altaf, 2017; Yousuf and Ali, 2018). Existing facilities are not competent to administer solid and liquid wastes and therefore sternly disturbing the natural tourism potentials. Deficiency in environmental infrastructure and inadequate management produce giant quantity of wastes and are thrown out in open places.

accessed door to door waste collection facilities. Of the total waste generated every day, only 69 per cent of the total wastes had been collected and remaining are dumped in open forests and on the banks of fresh waters which are highly degrading the quality of tourism resources (Bashir and Goswami, 2016, 84). It leads to the destruction of tourism resources and pollution of water bodies like River Lidder and adjoining streams. Provision of environmental infrastructure put limitations in the adoption of sustainability practices and at the same time still remained a challenge for the authorities (Ramjit, 2015).

Decline in fresh water sources are frequent and the concentration of carbon emissions, sulphur dioxide and green house gases are on the escalation. Insanitary conditions, contamination of water bodies and open dumping of

solid waste are the common tribulations. For the same, dearth of waste carrying vehicles, waste disposal system and recycling, sewage treatment plants and inappropriate management cited as main reasons. In addition, plastic menace, untreated littering and sewage from business establishments treated as the severe threats to perish tourism resources (Bashir and Goswami, 2016; Aslam et. al., 2018).

Use of polythene bags is a critical concern and needs proper vigilance and management everywhere. In Pahalgam, the menace of polythene wastes is very common. Every day a huge quantity of polythene is generated and dumped in open yards (Rising Kashmir, April 07, 2020; Rising Kashmir, June 05, 2018). In addition, polythene bags and allied wastes are directly discarded in fresh water bodies and has badly affected the purity and taste of water at the greater extent. Though, authorities and researchers from time to time advised for full ban of plastics in and around the tourism spots the order has been partially put into practice.

Religious places like Amarnath Cave possess' limited capacity and can absorb pilgrims' upto certain carrying capacity. However, it is revealed that the number of people visiting the cave is seven times more than the handling capacity and therefore posing a serious threat on its sustainability. It is obvious that there is heavy load on the pilgrimage site and its adjoining areas as well. Not only the pilgrims use to visit the site but also contain a lot of beggars and other armed personnel with them (Bhat, et. al., 2017). As a result, the pilgrimage site is facing severe issue of excess carrying capacity and other damages on critical natural environment of Pahalgam. So, it is felt that the government should play a vital role to maintain carrying capacity and make movement of the pilgrims safe for the environment.

Pahalgam contains multiple critical natural resources and tourism products highly popular around the globe. So, protection of natural capital and conservation of environment articulate grave apprehension over the increasing quantity of contagion and heavier discarding of polythene in forests. It is mentioned that the destination was very dense and rich in forest resources few years back and that wild animals were roaming in lanes especially in winters. Nevertheless, materialistic attitude of humans and excessive pressure put their life in danger and compelled multiple species for extinction and endangered. As an illustration, hangul is the best example which needs a proper care and protection for survival.

In Pahalgam, major sources of water are piped water, springs, streams and tube wells. Though water is supplied incessantly, it is incredibly a smaller amount and quality of the water is not maintained which is treated a cause for water borne diseases. Most of the areas don't have adequate drainage system and the performance is primarily episodic. Health care centers are inadequate and medical treatment typically afforded through confined medicates (Fayaz, 2017,

p.79). As a result, host community living in and outside of destination suffers a lot and unable to meet the adequate demands of tourists in a best possible manner. So, it is revealed that dearth of public utilities, medical treatment and other required items are highly responsible for annoyance of tourists at the destination.

Apart from above cited issues, market facilities are very limited as compared to Srinagar and the shops mostly selling the local products like pashmina, carpets, fruits and other items. As a result, prices are high as compared to places adequate and highly advanced in market structures. Dearth of required articles and lack of competition among shopkeepers motivate sellers for price discrimination and other unfair selling practices. Such kind of unfair practices are a reason for frustration of host community, tourists and service providers.

In short, issues like unhygienic conditions open waste disposal, air and water pollution, excess carrying capacity, untreated littering, decline of fresh water resources, Polythene and plastics, dearth of waste disposal systems and recycling, extinction of species, limited health care and quantity and quality of water, dearth of items and inflation etc are highly seen at Pahalgam. .

#### **4.1.3. Gulmarg**

Gulmarg is famous for climbers, trekkers and snow festivals all over the world. Tourism is treated as major source of income and development of the place. It has got the status of urban destination in 1961 due to its tourism potentials and world wide popularity. However, increasing tourist influx over the years created numerous issues due to the unplanned tourism growth and mismanagement of tourism resources. Unsustainable practices and unplanned land use for construction and other utilities demolished flora and fauna and has created chaos among the people of adjacent areas. Increasing trend of wastes, pollution, deforestation and degradation of tourism resources are highly noticeable (Bhat et al., 2007; Rashid and Romshoo, 2012; Malik et. al., 2013).

Unplanned construction of infrastructure in the eminent resorts of Gulmarg is posing a serious threat to jungles of Kashmir valley and is treated as destruction of pure natural wealth gifted by God. Concrete structures are on the rising trend and hotel proprietors trying their best to maximize the quantity of rooms. It is endorsed that the golden jungles are being turned into concrete establishments and towns. Authorities, yet not taken absolute measures to curb destruction and also failed to maintain scenic spots by not providing adequate solid disposal systems and liquid waste management (Athar Parvaiz, 18 May 2018; Bhat and Nabi, 2016). Environmentalists are of the opinion that the illegal construction of hotels must be prohibited and a systematic mechanism

required for waste management be further enhanced. Otherwise, the green forests of Gulmarg will perish and Kashmir as a whole will turn into a lost paradise.

Environmental violation is highly noticeable at famous tourism destination 'Gulmarg' where certain power projects have been built and secondly "Indian Air Force is planning to set-up a radar system in the protected wildlife sanctuary area, apart from constructing a helipad in the forest area, on around 14 hectares of land. Radar named Air Defence is proposed to be constructed in the protected area of Gulmarg wildlife sanctuary and for this, at least 1.18 hectare land is proposed to be notified from the protected area network and 12.35 hectare from the territorial forest division (Jhelum Valley division), of Baramulla district in northern Kashmir" (Greater Kashmir, April 7, 2020; Mohammad Ashraf, 2020; Bhat and Nabi, 2016). Massive construction of buildings inside the jungles and protected areas like sanctuaries is definitely a mere destruction of ecological resources and posing a serious threat to the sustainability of tourism resources in future.

Gulmarg is sensitive in nature and must be touched with utmost care and vigilance. Carrying capacity is almost over and is projected that it will cross limits upto 2020. If it happens, the idea of sustainable tourism is in severe threat and therefore needs to be protected and managed (Aslam et. al., 2018; Gadoo, Khan and Sofi, 2014; Kuchay and Bhat, 2013). So, the existing capacity should not be allowed to go beyond the limits and further superfluous constructions need to be prohibited and restricted.

Inappropriate waste supervision and discard in undo spaces (jungles) has posed serious questions on the future of tourism products. Lack of waste sinks and dustbins allow host community to dump toxic elements in and around the spots and green forests of Gulmarg, Pahalgam and Sonamarg. Shrinkage, sedimentation and pollution are the common practices and are highly dangerous if continued for further few years (Aijaz and Malik, 2014; Sing and Bahadur, 2018). It is endorsed that the illegal practices of waste contamination and degradation should be strictly prohibited and controlled and must be supported by required facilities and services. Otherwise, the continuous invasion of solid wastes and toxic materials will prove very disastrous for tourism resources.

Release of air pollutants and liquid wastes positively contribute to unpleasant climatic conditions of Gulmarg and merely responsible for infectivity. Sewage water is directly flown into rivers, streams and canals without purification and henceforth gives birth to several water born ailments among humans and animals. Deficient water treatment plants, water purifiers and inadequate executive mechanism are the chief causes (Aslam et. al., 2018, 1103; Suresh and Bahadur, 2018; Athar Parvaiz, 18 May 2018). On the other hand, outdated vehicles are still working in whole Kashmir valley and therefore at the tourism

destinations as well. Complete ban of such vehicles yet not completely done and are contributors' of toxic emissions and as a consequence posing a serious threat to hygiene of Gulmarg.

Discharge of lethal pollutants from transportation, cement and other establishments have dangerous consequences on the glaciers of entire Kashmir valley and more particularly the glaciers contained in hills of Gulmarg. It has been observed that the appearance of snow turned grayish and is found acidic from few years. Such kind of happenings revealed that these negative insurgencies might have origin in the emissions from cement establishments and tourism firms. As a consequence, Kashmir Himalaya (Gulmarg, Sonamarg, and Pahalgam etc) has high  $\text{Ca}^{2+}$  contents and neutral pH value which are responsible for fast melting of glaciers and high precipitation and therefore posing a threat of landslides, soil creeping, and floods in summers (Khan, et. al., 2010).

In Kashmir Valley, occurrence of landslides is a common experience and occurs due to heavy rainfall, earth quakes, snowfall and mining activities. In winter, the occurrence of such calamities blocks Jammu- Kashmir national highway and other roads connecting tourism destinations (State Action Plan on Climate Change: JAMMU & KASHMIR, p. 195). Gulmarg is located in valleys and is prone to heavy down slide movements, frisking and soil creeping. This all doesn't allow tourists to visit Gulmarg comfortably and to keep away from risky passage. It is evident that the safe journey could be possible by rail connections, cheap aerial services and construction of underground tunnels. However, the destination is not facilitated such services and yet tourists put their lives in risk to visit Gulmarg in winter and rainy seasons.

Aforementioned facts endorsed that the renowned tourism destination 'Gulmarg' is facing numerous sustainability issues like unplanned construction and its negatives on tourism resources, intensifying pollution and wastes, degradation and destruction, environment violation, threat on ecological resources, excess carrying capacity, discharge of lethal pollutants, dearth of required infrastructure for safe passage of tourists in winters and others.

### **5.1. Remedial Measures and Conclusions.**

This section of the study tries to provide conclusions and remedial measures adopted by Himalayan and Non- Himalayan states to sort out the sustainability issues concerning tourism at destinations. Practices and models adopted by above cited states are highlighted and their relevance to solve tourism related negatives and deficiencies at tourism spots. Further, pertinent recommendations are given for policy purposes so that problems could be sorted out in a feasible manner and will contribute positively for the establishment of sustainable tourism in Kashmir Valley.

Problems related to waste management are highly noticeable at each destination and it is necessary that the same needs to be remedied and rectified. In this respect, role of waste warriors, engineered landfill sites and investment

in waste to energy facilities, waste technology, waste policy and waste management skilled people are very much needed for mass cleaning exercises. Role of students, NGOS, community, Locals and executive bodies are highly required and appreciable. Few examples are Himalayan Clean-Up 2018 campaign, Waste Warriors Dehradun and Dharamshala, Waste Warriors Corbett clean up drive Uttarakhand, Bir hospital initiative in Nepal, executive measures by Arunachal Pradesh Government in Lower Dibang valley etc. As a result, reuse, recycling and biocomposting are very much needed (Kumar, et. al., 2017; <https://wastewarriors.org>., Lee Tan And Sharma, 2017; Kuniyal, 2005).

Insanitary conditions and menace of pollution (Air and water) is much noticeable and required positive measures for decline. Use of purifying technologies, pollution taxes, maintenance of Dal Lake and control of sewage, littering etc. are highly essential. Pollution taxes, strong regulatory measures and alternative technologies treated as highly fundamental and indispensable. Alike, maintenance of drainage, cleanliness, avoidance of open burning of wastes, direct flow of littering and wastes into Lakes and use of outdated vehicles should be prohibited and pollution mitigation policies needs to be enhanced (Zoë Lenkiewicz, May 17, 2017; Saikawa Arnico, 2019). Rising emissions, green house gases and chlorofluorocarbons is a common phenomenon and therefore requires Clean technologies, renewable energy, strong execution of National Clean Air Program, build a pan-India air quality monitoring network, use of less toxic raw fuels and less polluting industrial processes (United States Environmental Protection Agency, 2020; Economic Times, Mar 31, 2019; Bonasoni, et.al., 2012).

For proper management of water resources, “rejuvenation of hill springs and stream, establishing monitoring sites to assess water quality and ecological integrity of water bodies, high-altitude meteorological analysis, developing Decision Support System” (Ministry of Environment, Forest & Climate Change and National Institute of Himalayan Environment) and other measures like check of waste contamination in water should be brought into practical adoption (Manfredi, 2010). For maintenance of water supply (quantity and quality) role of private sector, public taps and open access water systems and planned approach of institutions are highly useful (Lessons from Mussoorie, Uttarakhand- Ojha, et.al., 2019). Models like “Participatory Groundwater Management” in Sirmour (Himachal), “Springs Revival through Para-hydrogeology” in Uttarakhand, “Mission Spring Revival” in Dehradun, and “Dhara Vikas and MGNREGS” in Sikkim, “Protection of a Critical Water Recharge Zone” in Nainital and other projects done by Kathmandu, west Bengal etc should be followed to take lessons for rejuvenation of springs and other water bodies (NITI, Aayog, 2018, p. 14).

Use of plastics and polythene bags is a serious problem ubiquitously and must be tackled in a judicious fashion. Ban of polythene bags completely at tourism spots is highly appreciated and favorable. At the same time, restriction of plastic materials and toxic elements are highly required. Firstly, authorities, NGOs, and students can play a better role to make local people,

tourists and business community aware regarding the ill effects of polythene and plastics and their negative impact on the sustainability of tourism resources. Secondly, it is the duty of executive bodies to enforce strong rules and regulations for the use of plastics. Apart from that, reuse, recycling, proper collection and disposal are very requisite (Pradhan, 2008; Manfredi, 2010).

Models adopted by Himachal Pradesh is an eye opener and guides government how to deal with non-biodegradable waste through the ban of polythene and plastics, its use for construction of roads, reuse and recycling, community awareness and campaigns for cleaning wastes etc (Social Sector Service Delivery: Good Practices Resource Book HP, 2014). Plastic refinement and recycling plant established by Kerala Government in Chembilodu Panchayat helped the respective area to use wastes for constructions, equipments and goods. The same project generates revenue and provided employment to women and other people for collection and refinement of wastes (Scaria, 2013).

Deficient infrastructure and services, unplanned construction and demolition of tourism resources are obvious. As a result, sufficient infrastructure should be guaranteed and consequently unplanned construction must be shunned. The Scheme “Gramin Paryatan Uthan Yojana” adopted by Uttarakhand focussed upon planned infrastructure and sustainable services of locals (FICCI and Yes Bank, 2018) and in Naukuchiatal (Uttarakhand) provision of local accommodation, vital services and Public Private Partnership in hotel services helped the area in tourism growth (Akihito, 2017). However, Public-Private Partnership must rely on “consultation; coordination and information, exchange; capacity building, evaluation and monitoring; and transparency” for enhanced execution (Plagiarized from Batta, 2016, p. 27). Programmes like ‘Maharashtra Unlimited’, Kerala Model, Goa model, and SKIL Infrastructure (Himachal Pradesh) are highly appreciating and could be used for the development of tourism infrastructure (Kiran Nanda, Feb. 2017; Economic Times, 7 Feb. 2006).

Unintended construction is a mere destruction of natural assets and a severe threat on sustainability of natural tourism assets. Protection of jungles, preservation of endangered species and eco-tourism is need of the hour. So, Environmental Impact Assessment should be made compulsory for construction of projects and establishments. Secondly, preservation of endangered flora and fauna should be ensured through regulatory measures, policies and practices, sanctuaries and biosphere hubs. Thirdly, positive role of local community towards safeguard of jungles, illegal cutting and hunting of animals are highly demanded. In this context, adoption of eco-tourism is vital to protect natural beauty, wildlife, forests and endangered species in particular.

Eco-tourism Models adopted by Himachal Pradesh [Himachal Pradesh Ecotourism Society, Pine Hill Eco-Tourism Resorts, PPP model of Eco-Tourism (Sanawar Nature Camp etc.)], Sikkim (Community Based Ecotourism, Fambonglho wildlife sanctuary (FWLS), Pastanga-Khedi eco-trail etc.) and Kerala (Thekkady Tiger Trail Project and Eco-Tourism in Parambikulam, Kumarakom, Rhodo Valley and Aralam etc.) could be brought

into practice to ensure conservation of ecology and growth (Batta, 2006; Joshi, 2015; Thamp, 2005; Rajakumar, 2018; TERI, 2017; Govt. of Sikkim; Dahal, 2015). In order to bring into practice projects, programmes and strategies for the adoption of Eco-tourism, research, institutional efficiency, strong execution and balanced approach are highly essential.

Public utilities like healthcare, cleanliness, roads and transportation and delivery of environmental services are much needed. Otherwise, dearth of utilities put all the stakeholders in difficulties and lends a hand to insurgence of negative externalities highly noticeable at destinations like Srinagar, Pahalgam and Gulmarg. Ample amount is vital and continuation of excellence is much required. As a result, upgradation of healthcare and water supply, continuance of cleanliness, rail links, and economical air tickets chiefly in winters and regular transportation services offered for long hours are very requisite. In case of medical facilities kerala model is the best which provides high quality medical treatment at low price. Apart from this, Kerala is also famous for the development of other facilities as well. Similarly, other states like Maharashtra, Tamil Nadu and Goa could be used as role models for further improvement in basic facilities at destinations.

Market facilities and tourism satisfaction are positively correlated. Dearth of required items is a cause for dissatisfaction and annoyance and in future demotivates visitors to visit again. In Pahalgam, market facilities are not upto the standard and shortage of items whether necessities or comfortable highly noticeable. Most of the items are sold by street vendors and small shops at high prices and wholesale rates are rarely available. Similarly, Gulmarg is also facing such issues of dearth of items and high prices as compared to Srinagar. As a result, establishment of wholesale shops and better availability of required touristic items are highly vital. In this context, Public Private Enterprises are needed to establish markets whole sale in nature, good in quality and reasonable prices. At the same juncture, the authorities must have to play a role in better availability, quality and regulation of prices at destinations.

In brief, aforementioned facts endorsed that the tourism spots like Srinagar, Pahalgam and Gulmarg facing numerous sustainability issues. Due to these issues the valley may lose natural popularity and fragrance in the future if not controlled and administered suitably. Consequently, demands ample accessibility of indispensable arrangements. Further, it is obligatory that negative externalities need to be strictly reduced through precautionary measures, authoritative mechanism and avoidance of unsustainable practices.

## References

- Akihito, N. (2017). Development of Tourism and the Tourist Industry in India: A Case Study of Uttarakhand. *Journal of Urban and Regional Studies on Contemporary India*, 3(2), 1–12.
- Aslam, J., Kumar, S. and Rouf, A. (2018). Tourism in Kashmir Valley: Growth, Environmental Impacts and Sustainability. *International Journal of Pure and Applied Bioscience*, 6 (6), 1095-1106.



- Bashir, S. and Goswami, S. (2016). Tourism Induced Challenges in Municipal Solid Waste Management in Hill Towns: Case of Pahalgam. *Procedia Environmental Sciences*, (35), 77 – 89.
- Battaa, N. R. (2006). Evaluating Ecotourism in Mountain Areas: A Study of Three Himalayan Destinations. *International Review for Environmental Strategies*, 6(1), 41-62.
- Batta, N. R. (2016). SMEs and Sustainable Tourism: The Case of an Indian Himalayan Destination. *International Journal of Environment and Sustainability*, 5(1), 18-34.
- Bhat, A.B., Anees, S., Naseem, Z.G., and Fareed, A. R. (2017). A Study on Geography of Pilgrimage Tourism and Environment: A Case Study of Kashmir Valley. *International Journal of Engineering and Management Research*, 7(4), 162-69.
- Bhat, N.I. and Nabi, F. (2016). Visitor impact assessment and management of Gulmarg tourist area. *Asian J. Environ. Sci.*, 11(1), 72-77.
- Bhat, A.R., Rumisa, N., Samia A., and Bandh, A.S. (2014). Municipal solid waste generation rates and its management at Yusmarg forest ecosystem, a tourist resort in Kashmir. *Waste Management & Research*, 32(2), 165–169.
- Bhat, M.H., and Yadav, M.S. (2018). Impact of Tourism on the Economy of Jammu and Kashmir. *International Journal of Research and Analytical Reviews*, 5 (3), 874-879.
- Chauhan, V. and Khanna, S. (2009). Tourism: A Tool for Crafting Peace Process in Kashmir, J&K, India. *Tourismos: An International Multidisciplinary Journal of Tourism*, 4(2), 69-89.
- Dahal, R. D. (2015). Pastanga-Khedi, a Potential Ecotourism Destination in Taksom Valley, East Sikkim, India: Scope for promoting nature adventure. *ENVIS Centre Sikkim on Eco- Tourism*, 13(1), 1-8.
- Dar, S. (2015). Impact of Insurgency on Tourism Industry of Jammu and Kashmir State. *Asian Resonance*, 1 (1), 194-98.
- Economic Survey. (2014-15). Directorate of Economics & Statistics, J&K, (1): 1. Retrieved- 07 Feb 2019 from [www.ecostatjk.nic.in](http://www.ecostatjk.nic.in).
- European Parliament. (2016). Research For Tran-Committee - From Responsible Best Practices to Sustainable tourism Development. Structural and Cohesion Policies transport And Tourism, Piero Soave Policy Department for Structural and Cohesion Policies European ParliamentB-1047 Brussels, 1-118.
- Fayaz, O.K. (2017). Healing in the Lap of Nature-exploring Medical Tourism Potential of Kashmir. *International Journal of Advance Research, Ideas and Innovations in Technology*, 2(12), 76-80.
- Fazili, A. I. (2006). Study of Marketing Strategy of Potential Tourism Products in Jammu and Kashmir. Thesis Submitted for the Award of The Degree of Doctor of philosophy in Commerce, Department Of Commerce Aligarh Muslim University Aligarh (India) 2006.

- FICCI and Yes Bank. (2018). Indian Tourism Infrastructure: Investment Opportunities & Challenges. Ministry of Tourism Government of India, 10-71.
- Gadoo, R. M., Khan, F. A. and Sofi, M. R. (2014). Measuring the Sustainability of Tourism Development in Kashmir. *European Academic Research*, 2(3), 3495-3512.
- Govt. of India. (2006). Development of Jammu and Kashmir Growth Generating Initiatives. Report of the Task Force on Development of Jammu and Kashmir, New Delhi: India.
- Govt. of J& K. (2013-14). Department of Ecology, Environment & Remote Sensing. Emission Inventory of CO<sub>2</sub> in Jammu and Kashmir: A Sectoral Analysis. Retrieved 21-11-2019 from <http://www.knowledgeportal-nmshe.in>.
- Hussain, A., Bhat. G., and Aadil, K. (2016). Economic impact of Tourism in Jammu and Kashmir. *Indian Journal of Economics and Development*, 4 (3), 1-5.
- Jammu and Kashmir Travel Guide. Retrieved 17-02-2019 from <https://www.ixigo.com>, p. 1-3.
- Joshi, P. (2015). Charting Success Stories in Sustainable Tourism (Sikkim and Himachal). *ENVIS Newsletter on Himalayan Ecology*, 12(3), 3-5.
- Khan, M. A., Qureshi, N., Kirmani, N. A., Sidiquee, S.H. and Shah, R. A. (2010). Environmental chemistry of a rare muddy snowfall occurrence on Alpine zone glaciers of Gulmarg, Kashmir Himalaya, India. *Curr World Environ* 2010, 5(2), 271-278.
- Kuchay, A.N. and Bhat, S.M. (2013). Tourist Flow and Tourism Potential Regions of Gulmarg in Kashmir Himalayas. *Global Journal of Human Social Science Geography, Geo-Sciences, Environmental Disaster Management*, 13(4), 28-35.
- Kumar, S., Stephen, R. S., Geoff, F. and Velis, C. (2017). Challenges and opportunities associated with waste management in India. *Royal Society Open Science* 4(3), 1-11.
- Kuniyal, c. J. (2005). Solid Waste Management in the Himalayan Trails and Expedition Summits. *Journal of Sustainable Tourism*, 391-410.
- Logistics Performance Index. (2018). Department of Commerce, Ministry of Commerce and Industry, Government of India. Prepared by Deloitte Touche Tohmatsu India LLP, Member of Deloitte Touche Tohmatsu Limited, 1-121.
- Malik, I. and Altaf, H. (2017). Population-environment interface in the Kashmir Himalayan catchment of Lidder River. *JK Knowledge Initiative*, 1(2), 31-44.
- Malik, R. A. and Bhat, A.H. (2013). Impact of Tourism on Environmental Conditions of Jammu and Kashmir. *International Journal of Advanced Research*, 1(1), 36-44.
- Manfredi, C. E. (2010). Solid Waste and Water Quality Management Models for Sagarmatha National Park and Buffer Zone, Nepal. *Mountain Research and Development (MRD)*, 30(2), 127-142.

- Ministry of Tourism India. (2012). 20 Year Perspective Plan for Sustainable Development of Tourism in the State of Jammu and Kashmir, Santek Consultants Pvt. Ltd, New Delhi, 1-428.
- Nabina, Q. and Saima, M. (2017). A Comparative Study of Domestic and Foreign Tourists' Service Experience in Kashmir. *International Journal of Business and Management Invention* 6 (7), 12-20.
- Nanda, K. (2017). Tourism Infrastructure in Maharashtra on course but distant from realizing its true potential. *Maharashtra Economic Development Council, Monthly Economic Digest*, 9-13.
- Neto, F. (2003). A new approach to sustainable tourism development: Moving beyond environmental protection. *Natural Resources Forum*, 27(3), 212 – 222.
- NITI Aayog. (2018). NITI Aayog launches five Thematic Reports on Sustainable Development in Indian Himalayan Region. Press Information Bureau Government of India.
- NITI, Aayog. (2018). Report of Working Group I Inventory and Revival of springs in the Himalayas for Water Security. NITI Aayog Sansad Marg, New Delhi, 110001.
- Ojha, H., Neupane, R.K., Pandey, L.C., et. al. (2019). Scarcity amidst Plenty: Lower Himalayan Cities Struggling for Water Security. *Water*, 1-22.
- Paolo Bonasoni, P., Paolo Cristofanelli, P., Angela, M. and Elisa, V. (2012). Atmospheric Pollution in the Hindu Kush–Himalaya Region. *Mountain Research and Development*, 32(4), 468-479.
- Pradhan, M.U. (2008). Sustainable Solid Waste Management in a Mountain Ecosystem: Darjeeling, West Bengal, India. A Thesis Submitted to the Faculty of Graduate Studies In Partial Fulfillment of the Requirements For the Degree of Master of Natural Resources Management Clayton H. Riddell Faculty of Environment Earth and Resources Natural Resources Institute University of Manitoba Winnipeg, Manitoba R3T 2N2, November, 2008.
- Press Information Bureau - Govt. of India. (2018). "Ease of Living Index - 2018" Government of India, Ministry of Housing and Urban Poverty Alleviation. Retrieved 08-01-2019 from [easeofliving.niua.org](http://easeofliving.niua.org).
- Raina, A.N. (2002). Geography of Jammu & Kashmir. Pictures from: J&K Tourism Pamphlets, Ed (1st), Aug 2002. Retrieved 11 Feb 2019 from <https://koausa.org>.
- Rajakumar, P. (2018). A Study on Destinations of Eco Tourism in Kerala. *Shanlax International Journal of Management*, 3(3), 14-20.
- Ramjit, M. (2015). Sustainable Regional Development through Rural Tourism in Jammu and Kashmir. *Africa Journal of Hospitality, Tourism and Leisure*, 4(2), 1-16.
- Rashid, I. and Romshoo, S.A., (2012). Impact of Anthropogenic Activities on Water Quality of Lidder River in Kashmir Himalayas. *Environmental Monitoring and Assessment*, 185, 4705-4719.

- Sachdeva, S., and Ganai, I. A. (2017). An Evaluative study of tourism Industry in Jammu and Kashmir: A Northern state of India. *International Journal of Research in Social Sciences*, 7(8), 266-78.
- Saikawa Arnico, E., Ritesh, K.S., Gautam, E., and Zusman, Z. (2019). Air Pollution in the Hindu Kush Himalaya. *The Hindu Kush Himalaya Assessment*, 339-387.
- Scaria, R. (2013). Plastic Littering and Ecotourism in Kerala: The Challenges and Remedies. *GRA - Global Research Analysis*, 2(1), 40-44.
- Singh, S. and Bahadur, R. (2018). Environmental Impacts of Tourism: A Case Study of Jammu and Kashmir. *Int J for Res in App Sci & Eng Tech*, 45(98), 860-75.
- Shah, F. and Ambreen, W. (2013). Impact of Armed Conflict on Kashmir Tourism and Socio- economic Profile of the People of Jammu and Kashmir. *International Journal of Multi- disciplinary Management Studies*, 3(7), 34-44.
- State Action Plan on Climate Change: JAMMU & KASHMIR-195.
- Social Sector Service Delivery: Good Practices Resource Book 2014. Sustainable Plastic Waste Management Plan: Defending the fragile ecosystem of Himachal Pradesh. Retrieved 14 April 2020 FROM <https://www.niti.gov.in>
- Sunil Kumar, K., Smith, R.S., Geoff, F., Costas, V., Kumar, J. et. al. (2017). Challenges and opportunities associated with waste management in India. Royal Society under the terms of the Creative Commons Attribution License. Retrieved 25 April 2020 from <http://creativecommons.org>.
- Suresh, S. and Bahadur, R. (2018). Environmental Impacts of Tourism- A Case Study of Jammu and Kashmir. *International Journal for Research in Applied Science & Engineering Technology*, 6 (II), 860-875.
- TERI. (2017). Facilitating Ecotourism in Himachal Pradesh by Tapping the Vast Potential. *TERRAGREEN*, 10(2), 24-28.
- Thamp, P.S. (2005). Ecotourism in Kerala, India: Lessons from the Eco-Development Project in Periyar Tiger Reserve. *ECOCLUB.com E-Paper Series*, Nr. 13, 1-10.
- Yousf, T. and Ali, M. (2018). Tourist Satisfaction, Environmental Concerns and Tourism Beyond Dal Lake, Kashmir. *Journal of Tourism and Hospitality*, 7(2), 1-7.

### **Websites and Newspapers**

- Adil Lateef. Gulmarg produces 150 tons garbage every month, sans landfills. Retrieved 25 Dec 2019 from <https://www.dailyexcelsior.com>.
- Ananda Lee Tan and Pratibha Sharma. Image module Nepal: Waste and Transformation in the Himalayas. Retrieved 17 April 2020 from <https://zerowasteurope.eu>.

- Athar Parvaiz, 18 May 2018. Paradise lost? The decline of Kashmir's mountain resorts. MONGABAY-news and inspiration from the nature's Frontline I India. Retrieved 06 April 2020 from <https://india.mongabay.com>.
- GREATER KASMIR Tuesday, April 7, 2020. Retrieved 7 April 2020 from <https://www.greaterkashmir.com>.
- India's pollution control policies unlikely to improve air quality: Study <https://economictimes.indiatimes.com>.
- JK Tourism Department. Official Website of Jammu & Kashmir Tourism. Retrieved 17 Feb 2019 from <http://www.jktourism.org>.
- Kashmir Monitor, March 8, 2018. Polythene ban blatantly flouted on ground. Retrieved 23 April Nov 2020 <https://www.thekashmirmonitor.net>.
- Mohammad Ashraf, 2020. Destruction of Kashmir's Environment (A Public-Private Sector Joint Venture). Retrieved 9 April 2020 from <https://www.kashmirfirst.com>.
- NAZIMA SIDIQ on 12/05/2019. Ban of polythene defied by shopkeepers in Srinagar. Kashmir Reader, May 12, 2019. <https://Kashmirreader.Com>.
- Press Trust of Kashmir, June 15, 2019. SMC fails to curb polythene menace in Srinagar city. Retrieved 9 April 2020 from <https://www.presstrustofkashmir.com>
- Rising Kashmir (5 June 2018). JK struggles to dump tonnes of plastic waste: Retrieved 23 April Nov 2020 from <http://risingkashmir.com>.
- Rising Kashmir (April7, 2020). Polythene Menace. Retrieved 23 April 2020 from <http://www.risingkashmir.com>.
- Sakshi, In J&K, Scant Inclination to Develop Sustainable Tourism with Environmental Conservation. Retrieved 23 march 2020 from <https://thewire.in/environment/jammu-and-kashmir-environment-conservation-tourism>.
- Tourism Department of JK. Official website of Department of Tourism Govt of JK. Retrieved 18 Feb 2020 from <http://www.jktourism.jk.gov.in>.
- United States Environmental Protection Agency. Managing Air Quality - Control Strategies to Achieve Air Pollution Reduction. Retrieved 11 April 2020 from <https://www.epa.gov>. Waste Warriors. Retrieved 21 April 2020 from <https://wastewarriors.org>.
- ZK, Ali. 2020. Influence of Tourism on Ecology and Environment in Jammu and Kashmir. <http://www.yourarticlelibrary.com>.
- Zoë Lenkiewicz, 2017. Managing waste in the Himalayas. Retrieved 14 April 2020 from <https://wasteaid.org>.