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Sustainable Tourism: Contribution, Need, Ways and Impact with Special Reference to Jammu and Kashmir

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Abstract: ***Tourism is an important contributor to the economic development of a region. The quality of the environment, both natural and man-made, is essential to tourism. The uncontrollable tourism involves many activities that can have adverse environmental effects like loss of biodiversity, habitat loss, and risk to native species, bio security challenges, ecosystem alteration and pollution. The negative impacts of tourism development can gradually destroy environmental resources on which it depends. On the basis of cost benefit analysis we can assess that the present form of conventional mass tourism is not sustainable as cost involved in it exceeds the benefits to be derived from it in the long run. Tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation but not in the present form. This strategy of tourism to strike a balance between present and future, where it meets the needs of present generation of tourists and host regions while protecting and enhancing opportunities for future generations is sustainable tourism. It is pertinent to mention here that it is the type of tourism we need.***

The present state of sustainable tourism is not very encouraging in Jammu and Kashmir. The state has immense scope for the development of sustainable tourism with ample resources of clean energy like sun and water, great extent of biodiversity, good amount of forest cover, rare flora and variety of tourist spots. But still not much has been done for sustainable tourism in j&k.this paper is an attempt to make the authorities, tourists and all other major actors in tourism sector to make shift towards to sustainable tourism with the required actions as discussed in the paper. Jammu and Kashmir is a tourist destination from the times immemorial; we need to redefine our policies once again to provide a nature-based, environmental education experience for visitors and to manage this in a sustainable fashion. In long run, sustainable tourism is the best solution.

The paper is based on available literature and secondary data. This paper aims at discussing the emerging trend of sustainable tourism in the tourism sector. The first part of paper explains the contribution of tourism in development. The second part of paper explains the factors that led to emergence of sustainable tourism using cost benefit analysis technique and with special mention of tourism related environmental problems. This is followed by the third section with a discussion of tourism in state of Jammu and Kashmir and potential for sustainability. The last section leads to possible ways to achieve sustainability in tourism which may be relevant for India. It summarises the discussion and ends with way forward.

Keyword: Sustainable Tourism, Biodiversity, Cost Benefit Analysis, Environment Performance Index, Foreign Direct Investment, Bio Security,

I. OBJECTIVES OF STUDY

A. To study the contribution of tourism sector and its negative impact on environment.
B. To study and examine the need of sustainable tourism.
C. To examine the sustainable tourism in Jammu and Kashmir with specific indicators.
D. To recommend and suggest ways which can promote sustainable tourism.

II. RESEARCH METHODOLOGY

The paper mainly involves data from secondary sources which includes data from various organisations like ministry of tourism (GOI), JK tourism ministry, Jammu and Kashmir tourism Development Corporation, world travel and tourism council, directorate of tourism, Jk economic survey. In addition the data has been obtained from reliable sources like leading newspapers, journals, research papers and other online sources. The nature of this research is collective and analytical.

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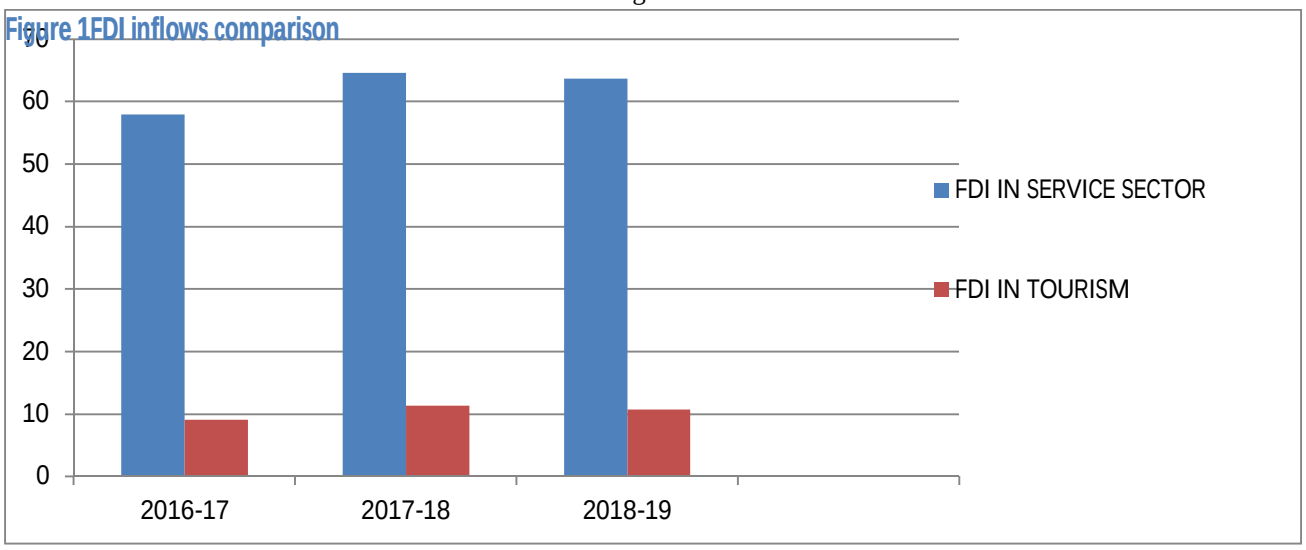
III. INTRODUCTION: AN OVERVIEW OF TOURISM IN INDIA

A. Contribution in Development

Tourism is one of the largest and fastest growing sectors in the recent days. Tourism contributes immensely to the economic development. India ranks 15th in the world in terms of international tourism receipts, with a share of 1.62% (economic survey of India, 2018). India has witnessed an upward trend in Foreign Tourist Arrivals which has increased to 8.8 million and foreign exchange earnings from tourism to 27.7 billion us$ in 2017. (Economic survey: 2017-18) .this is primarily a service industry because it does not produce goods but extends services to various classes of people. In state of Jammu and Kashmir, it is the engine of growth. The government at all levels is focussing on the policies and plans to make tourism more profitable. According to the world travel and tourism council in 2016 this sector in India contributed 9.6% of GDP creating 40.343 million jobs and 9.3% of total employment. India aims to create 100 million jobs through tourism and attract 40 million foreign tourists annually in the next five years (union minister k j alphorns on 23 October 2017). As per the travel & tourism competitiveness index 2015 of the world economic forum (WEF), India's rank climbed up to 13 places to 52 in 2015 from 65 in 2013. This shows the future potential for tourism in India.

Figure 1



Source: economic survey of India 2018-19

The figure 1 clearly shows that tourism has been one of the major contributors towards tertiary sector. In the year 2016-17, FDI in service sector was 57.9 us$ million of which tourism contributed 9.16 us$ million, in 2017-18 showed an upward trend for the contribution of tourism sector. However, marginal fall in both FDI in service and tourism was visible in 2018-19.the overall contribution of tourism has remained between 10-20% of total FDI in services sector .Tourism remains top FDI attracting sector.

B. Need of Sustainable Tourism

Indiscriminate tourism in the current scenario has caused environmental degradation. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts strain on water resources, and it can force local populations to compete for the use of critical resources. India is one of the 12 mega diversity countries in the world. Some examples of tourism effecting ecosystem are discussed below.

In dry and hot regions like the Mediterranean, the issue of water scarcity is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 litres a day. This is almost double what the inhabitants of an average Spanish city use (UNEP, 1999).

One study estimated that a single transatlantic return flight emits almost half the co2 emissions produced by all other sources (lighting, heating, car use, etc.) consumed by an average person per year (ICAO, 2001).

In the Philippines and the Maldives, dynamiting and mining of coral for resort building materials has damaged fragile coral reefs and depleted the fisheries (hall, 2001).

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1) *Environmental Impacts of Tourism*

a) *Loss of Biological Diversity*

Following are discussed major tourism effects on loss of biodiversity:

i) It threatens our food supplies, opportunities for recreation and tourism, and sources of wood, medicines and energy.

ii) It interferes with essential ecological functions such as species balance, soil formation and greenhouse gas absorption.

iii) It reduces productivity of ecosystems.

iv) It destabilizes ecosystems and weakens their ability to deal with natural disasters such as floods, droughts, and hurricanes, and with human-caused stresses, such as pollution and climate change.

v) Tourism is closely linked to biodiversity and the attractions created by a rich and varied environment. It can also cause loss of biodiversity when land and resources are strained by excessive use. This loss of biodiversity in fact means loss of tourism potential.

vi) The increasing mobility of humans, particularly through air transportation, has allowed diverse and isolated ecosystems to become connected and has there by accelerated biological invasions with an accompanying loss of biodiversity (jay et al. 2003).

b) *Habitat or Ecosystem Alteration and Fragmentation:* Ecosystems and natural habitat can be damaged by tourist infrastructure, tourist activities, recreational boating and the cruise industry. Sometimes the loss of habitat is in instalments such that the habitat is divided into small and scattered patches, a phenomenon known as Habitat fragmentation. Due to habitat fragmentation many species of plants and animals are vanishing. Recreational boats and cruise vessels can damage aquatic vegetation by cutting it with their propellers or otherwise damaging it when running aground. Wetlands have been destroyed in order to build tourist-related infrastructure, such as airports, roads, and marinas (Andereck, 1993, p. 29). For example, in Jamaica over 700 acres of wetlands have been destroyed since the 1960s for tourism development (bacon, 1987, pp.105-6).when snorkelling and hiking, tourists can damage ecosystems by littering, and trampling coral and vegetation. This type of damage is cumulative in nature. One or two tourists may not cause visible harm, but hundreds over time can do substantial damage.

c) *Impacts on wildlife and man-wildlife Conflicts:* Wildlife can be adversely affected by the construction and maintenance of tourist infrastructure, and by tourist activities. Impacts from tourist infrastructure can be direct, such as when development in lower elevations of mountain resorts restricts the migratory range of certain wildlife, or indirect, such as when marine turtles are disoriented by automobile headlights and resort illumination (Gartner, 1996, p.125). Human encroachment into the forest areas raises a conflict between man and the wildlife. The two primary ways in which tourist activities disturb wildlife are by altering their eating habits and feeding patterns, and by altering their habitat. Feeding patterns are altered directly by tourists feeding animals, and indirectly by littering, which encourages wildlife to scrounge for food (Matheson & wall, 1982, p.109).wildlife habitat is altered by tourists trampling and by the use of off-road vehicles (ORVS).

d) *Impact on Gateway Communities outside National Parks and Other host Communities:* Tourism affects the natural landscape and character of "gateway communities," which are adjacent to national parks, and other significant tourist destinations. Development related to tourist activity can be detrimental to cultural and aesthetic aspects of these communities, if undertaken in an indiscriminate or scattered manner.

e) *Introduction of alien Species (risk to Native Species):* Tourists and suppliers can bring in introduction of exotic species like insects, pests, cultivated plants and diseases that are not native to the local environment can cause enormous disruption and even destruction of ecosystems (WWF, 1992) Feral dogs have emerged as a menace in Ladakh, preying on wildlife species. These dogs are threatening the region's exotic wildlife species, hurting their growth. Most notable among the threatened species is the black-necked crane, J&K'S state bird. They are now taking on much larger animals such as the Tibetan wild ass, known as 'kiang' in local language and snow leopard. (Source: times of India).

f) *Climate Change:* Tourism not only contributes to climate change, but is affected by it as well. Climate change is likely to increase the severity and frequency of storms and severe weather events, which can have disastrous effects on tourism in the affected regions. Some of the other impacts that the world risks as a result of global warming are drought, diseases and heat waves. Seasonality is a major factor governing the tourism sector and is dictated by weather patterns as in case of Kashmir. These negative impacts can keep tourists away from the holiday destinations. Global warming may cause less snowfall at ski resorts, meaning shorter skiing seasons in the alpine region. In already hot areas like Asia and the Mediterranean, tourists will stay away because of intense heat, and out of fear of diseases and water shortage. According to the findings of a research conducted by national institute of hydrology, Roorkee Ladakh, Zaskar and greater Himalayan ranges of J&K have witnessed a

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decrease in the glacier volume ranging between 3.6% and 97% in the past three decades, with most of glaciers degrading by 17% -25%.

g) *Harm to Vulnerable Ecosystems:* Tourism has caused immense damage to vulnerable ecosystems such as rainforests and coral reefs because human tourist activities has caused rise in temperature and pollution activities. A major risk to coral reefs is bleaching, which occurs when coral is stressed by temperature increases, high or low levels of salinity, lower water quality, and an increase in suspended sediments. These conditions cause the Zooxanthallae (the single-celled algae which forms the colours within the coral) to leave the coral. Without the algae, the coral looks white or "bleached" and rapidly dies (hall, 2001).

h) *Tourists as Vectors of Unwanted Organisms:* Tourism is a key component of any economy but carries with it the inherent risk of the unintentional introduction of invasive alien species. Paradoxically, while sustainability is seen as key to the future of the industry, the invasive species could threaten its viability. International air travel can provide a pathway for the spread of insects. For example: footwear carried in luggage has been shown to vector a range of organisms, including micro-organisms, seeds and nematodes, which could potentially be introduced to natural ecosystems or primary industry environments in association with tourist activities. Research undertaken at airports has found pathogenic fungi on clothing and baggage of passengers (Sheridan 1989), which could be a source of invasive microbes. With increasing trade and travel there is an understanding that, in general, these activities provide a pathway for the introduction of ias that threatens productive sectors and natural ecosystems.

i) *Increased Risk of Natural Disasters:* Huge portions of fragile mountainous areas are cut or destroyed by dynamite and thrown into adjacent valleys and streams for making tourist induced infrastructures like roads, hotels, resorts, guest houses etc. These land masses weaken the already fragile mountain slopes and lead to landslides. They also increase the turbidity of various nearby streams thereby, reducing their productivity. One of the major reasons for the Uttarakhand natural disaster was unplanned tourist construction which blocked streams and natural course of rivers.

2) *Cost Benefit Analysis:* To understand and make a better analysis we can make **cost benefit analysis** of current mass tourism in long run. Cost benefit analysis (CBA) is a systematic process that may be used to calculate and compare costs and benefits of a policy, project, or decision, generally from the perspective of society as a whole

Costs involved	Benefits derived
a) Environmental pollution	1.employment generation
b) Deforestation	2. Tourism induced infrastructure
c) Energy pressures	3. More revenue generation
d) Water shortage	4.Discovering of virgin tourist places
e) Sewage	
f) Climatic change	
g) Encroachments	
h) Increased risk of natural disasters	
i) Traffic congestions	
j) Replacement of traditional buildings	
k) More carbon imprints	
l) Noise pollution	
m) Fall in tourist satisfaction	

Clearly we can state that the estimated expected costs involved in unsustainable tourism exceeds the benefits derived from this form of tourism in the long run .Considering , the above costs involved and benefits derived it is not judicious to let tourism grow like uncontrolled weed. Tourism can be considered as a double-edged sword that on one hand contributes to the overall development of a place but at the same time inflicts damages to the environment. Development has to be visualized in a holistic manner, where it brings benefits to all, not only for the present generation, but also for the future generations. The best solution to above discussed conditions is sustainable tourism.

3) *Concept of Sustainable Tourism:* Sustainable tourism is the tourism that takes full account of current and future economical, social and environmental impacts ,addressing the needs of visitors ,the industry the environment and the host community. It is not special form of tourism but all forms of tourism may strive to be more sustainable. ("Making tourism more sustainable" guidelines by wto and UNEP 2005). Sustainable tourism refers to a level of tourism activity that can be maintained over the long term because it results in a net benefit for the social, economic, cultural and natural environments of the area in which it takes place. (Source: ICOMOS)

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Sustainable tourism that is economically, socioculturally and environmentally sustainable. With sustainable tourism, sociocultural and environmental impacts are neither permanent nor irreversible. (Source: john beach and Simon Chadwick).

The United Nations world tourism organisation defines sustainable tourism as tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future. Rather than being a type of product, it is an ethos that underpins all tourism activities. As such, it is integral to all aspects of tourism development and management rather than being add on component. The objective of sustainable tourism is to retain the economic and social advantages of tourism development while reducing or mitigating any undesirable impacts on natural, historic, cultural and social environment. This is achieved by balancing the needs of tourists with those of destination. (Source: WTO) Sustainable tourism will not help save environment but also increase the economic benefits. For example: the mountain gorillas in Rwanda are fetching $ 4 million annually from tourism.

In brief, we can say that sustainable tourism is that form of tourism which encompasses the principles of sustainable development in the field of tourism. It is where the visiting tourist makes no adverse impact on the environment, society and economy. The consensus has been made that tourism should be sustainable. McCool and Braithwaite (1992) believe that "attractiveness and expertise are key features of increasing credibility." But to make the concept of sustainable tourism attractive and efficient more research needs to be done .however, the way to reach sustainable tourism is still debatable.

IV. SUSTAINABLE TRENDS IN THE STATE OF JAMMU AND KASHMIR

A. Tourist Arrivals in Jammu and Kashmir and its Significance

Strategically located Jammu and Kashmir state constitutes the northern most extremity of India. With towering peaks, beautiful meadows, snow fed glaciers, abundant flora and fauna Jammu and Kashmir has something to offer every sort of tourist the state of j & k has three distinct regions, viz. Jammu, Kashmir and Ladakh and all three have immense potential for tourism from both domestic as well as international tourists. There is number of locations which are untapped and can be developed as major tourist destinations, having the entire natural as well as the cultural resources for attracting tourists. Seasonality is a major factor governing the tourism sector in the state and is dictated by weather patterns. Kashmir valley has continued to be an internationally commended tourist destination. Every year a huge number of tourists from all parts of the world visit the tourist spots of J&K. Tourism sector contributes about 6.98% to the state gross domestic product. Apart from mass tourism, annually we receive lakhs of tourists linked to religion tourism that visit shri Mata Devi shrine, Shri Amar Nath and many other small and big shrines spread all over the state. In one day, more than 50,000 pilgrims visiting Vaishno Devi during navratra (peak season).

Ladakh is a classic example of how tourism has grown even in the remotest and highest areas of Jammu and Kashmir, Ladakh was opened for tourism in 1974; 527 tourists arrived that year, 27 of them Indian. It increased gradually to 55,685 Indians in 2010, according to data obtained from the district's tourism department. In 2011, the number shot up to 1.42 lakhs people.

due to location of these shrines in pristine and critically fragile ecosystems, this type of tourism, if not given proper direction and becomes ecologically unruly, is likely to threaten the chastity of our environs as accumulation of huge non-degradable trash and tremendous pressure on our environment and natural resources is going to rule the roost.

B. Map of Jammu and Kashmir

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Some of the key attributes of the tourism industry in J&K are as follows

1) Virgin areas,
2) Different geographical locations,
3) climate,
4) landscape,
5) Architecture,
6) Pilgrimage,
7) Culture,
8) Handicrafts,
9) Hospitality,
10) Historical heritage, etc

Figure 2

Mean of five years tourist arrivals: 11616180 Median of five year tourist arrivals: 12505924
Source: (tourism ministry, Jammu and Kashmir)

C. Performance of Jammu and Kashmir in Environment Performance Index 017-18

Parameter	Air pollution	Water pollution	Waste management	Climate change	Forest cover	Total
Score	.857	.6785	.4161	.2139	.5783	.5483
Rank	20	11	28	26	13	22
Performance	Low	Average	Low	Low	Average	Low

Source :(planning commission of India)

The EPI index shows that the state performance is dismal which is below the median values. Air pollution control needs urgent attention of the state government.

D. Renewable Energy Potential in Jammu and Kashmir

The state is geographically such situated that it has abundant sources of clean energy like running streams, sunshine and geothermal. Only effort for harnessing these resources and channelizing in tourism is needed.
Some of the major initiatives taken in this regard are discussed.
The solar rooftop projects aggregating 450Mw will be installed in the state by 2022 has been approved by the state cabinet of Jammu & Kashmir as per the solar rooftop policy 2016 to be followed for a 10-year period implemented in accordance with the provisions of Jammu & Kashmir electricity regulatory commission (grid interactive rooftop photovoltaic systems based on net metering) regulations, 2015. 11,283 mw of hydro power can be produced on river Chenab, followed by 3,084 mw on river Jhelum and 1,608 mw on Indus river. A total of 3,263.46 mw has been harnessed on three western rivers from Jhelum, Chenab and Indus through state, central and public private partnership mode of execution.

E. Forest Cover

Forest area loss in states is a matter of concern as most tourist/pilgrim sites are located within or near to forest lands like Shri amaranth shrine, shiv khori shrine, Buddha Amarnath, Vaishnodevi, and Shadra-sheriff in Rajouri etc. Inappropriate forms of tourism development may add to deforestation. For instance, tourism in Uttarakhand has the highest contribution to its state GDP but conversely, the state lost 268 sq.km of forest in a span of two years while positive changes have been reported from J&K (450 sq.km .this is a positive factor which supplements sustainability .

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Table 1
State of forest cover in selected Himalayan states of India (2017)

State	Total area	Total forest in the year 2013 (sq.km	Total forest in the year 2015 (sq.km)	Change (sq.km)
Jammu and Kashmir	222,236	22,538	22,988	(+1.99%)
Sikkim	7,096	3,358	3,357	(-0.02%)
Meghalaya	22,429	17,288	17,217	(-0.41%)
Himachal Pradesh	55,673	14,683	14,696	(+0.08%)
Uttarakhand	53,483	24,508	24,240	(-1.09%)

Source :(Indian forest report 2017)

F. Biodiversity in Jammu and Kashmir

The biodiversity rich area of Kashmir happens to be one of the 26 hotspots in India where there are high rates of deforestation and endemicity (Khoshoo, 1991). About 45% of the mammalian diversity of the state is listed as globally threatened in IUCN red data list and 34 percent is included in schedule 1 of the wildlife protection act, 1972. This gives a clear cut indication of the status of animals found in the state and the conservation value of the region. There are many species facing similar threats but do not find mention in either list. The Kashmir Himalaya alone contributes nearly 2,000 (20%) of the plant species within just 2.15% (15,948 sq km) of the total land area (Dar et al. 2002).

1) Rare Flora

a) The rare mammals of the region include the Kashmir stag or hangul (cervus elephus hanglu), the musk deer (machos moschiferus), the tibetan antelope or chiru (panthelops hodgsoni), the tibetan gazelle (procapra picticaudata), the serow (capricorms sumatraensis), the markhor (capra alconeri), the amon, the wild yak (bos grunniens), the tibetan wild ass, the snow leopard (panthera uncia) and the brown bear (ursus arctos), ibex (capra siberica) to name a few. During the year 2002 the number of hangul in dachigam national park has 448.

b) Migratory water birds include duck, geese and swans. The most common water birds which visit the state during winter months are mallard (anas platyrhynchos), common teal (anas crecca), pintail (anos acuta), red crested pochard (netta rufina), greylag goose (anser), wigeon (anas penelope), shoveller (a. Clypeata), garganay (a. Guerguedula), coot (fulica atra) and gadwall (anas ctripera). Peak population of migratory birds during the year 2002 in hakoora has been reported as 3.82 lakhs.

c) Ome of the rare and threatened birds found in the area include exotic species like the himalayan golden eagle (aquila chrysatos), the bearded vulture (gypaetus barbatus), the monal pheasant (lophopherus impejanus), the koklas (pucrasia macrolopha), the western tragopan (trogopan malanocephalus), the black necked crane (grus nigricollis), the himalayan snow cock (tetrogallus himalayensis.) And the bar-headed goose (anser indicus).

2) Conclusion: The present state of sustainable tourism is not very encouraging in Jammu and Kashmir. The state has immense scope for the development of sustainable tourism with ample resources of clean energy like sun and water, great extent of biodiversity, good amount of forest cover, rare flora and variety of tourist spots. But still not much has been done for sustainable tourism in j&k.this paper is an attempt to make the authorities, tourists and all other major actors in tourism sector to make shift towards to sustainable tourism with the required actions as discussed in the paper. Jammu and Kashmir state is a tourist destination from the times immemorial; we need to redefine our policies once again to provide a nature-based, environmental education experience for visitors and to manage this in a sustainable fashion. In long run, sustainable tourism is the best solution.

V. WAYS FORWARD FOR SUSTAINABLE TOURISM

It is “behaviour, lifestyles and people’s aspirations” that make an environment sustainable. (Dempsey and Jenks, 2005). There is an urgent need to inter-link the social aspects with development and environment. Tourism needs to be planned, administered and taken in an environmentally sustainable, socially favourable and economically feasible way to shun its destructive impacts. Some steps to move towards sustainability in tourist are suggested below. The list is not exhaustive but evolving.

A. Economic Viability

To ensure the viability and competitiveness of tourism destinations and enterprises, so that they are able to sustain prosperity and deliver benefits in the long term.

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Actions

1) Understand and project the markets of future and readiness of to match these including for cross border circuits, religious circuits, and adventure circuits.
2) Invest in sustaining the quality and attractiveness of mountain destinations. E.g. Jobs maintained and even increased on inclusive basis (growth of green infrastructure should be maintained).
3) Ensure that plan outlay of tourism sector is timely and fully invested as business plan.
4) The above business plans must have quality **"carrying capacity"** and **"cost-benefit analysis"** included to show that SDGS are addressed (e.g. 8, 12, and 15) and corrective actions are proposed.
5) Ensure the prime destinations have a back-up plan to monitor and maintain these as best practices.
6) 'Polluter pays' principle must be enforced.

B. Local Prosperity

To maximize the contribution of tourism to the economic prosperity of the host destination, including the proportion of visitor spending that is retained locally.

Actions

1) Reducing leakages and make community interfaces transparent and equitable benefit sharing basis.
2) Strengthening links between businesses to converge financial investments mitigating sustainability concerns.
3) Influencing levels of visitor spending and its outreach to destination communities.
4) Incubation funding for the initial few months/years for new and innovative. The initial losses need to be sustained to stay the course and states must support.
5) Local control and diversity: this would need to be ensured through tourism enterprise development. Governance which would also ensure the quality of employment for local population especially involvement of under-represented sectors of society.
6) Engage and empower local communities (e.g. Indigenous and traditional communities) in planning and decision making about the management and future development of tourism (linked to their livelihoods and culture) in their area, in consultation with other stakeholders.
7) A support system of networked volunteers and flexible consultants that are specifically mentored to ensure quality control (guest managers) or marketing support (social media champions). While some local enablers exist, they need to be given a boost by networking, branding/marketing inputs.
8) Operational integrity: a support system of experts like hospitality professionals, accountants and legal experts who ensure good operational protocol and processes

C. Tourist Satisfaction

To provide a safe, satisfying and fulfilling experience for visitors, available to all without discrimination by gender, disability or in other ways.

Actions

1) Improving in-advance destination information pertaining to responsible tourism responsibilities for future visitors, tour operators and other service sector actors.
2) Set the standards and monitor implementation of these standards for tour operation service providers toward clients and government norms on responsible tourism.
3) Initiate and use visitor feedback intensively and in organized way for improving tourism sector systemically (e.g. as open accessible database).
4) Create separate divisions within tourism departments to look after the key aspects of tourism and related information viz. Capacity building, marketing and promotion to cater to the needs of tourist exclusively.
5) Investments must be made for advancing databases and technology to provide "live statistics" as universal information system (e.g. Carrying capacity at the destination, hotel rooms, parking places road blocks, traffic jams). It must include all other emerging data sets onsite and state wide with the passage of time.

D. Community Wellbeing

To maintain and strengthen the quality of life in local communities, including social structures and access to resources, amenities and life support systems, avoiding any form of social degradation or exploitation.

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Actions

1) Build in the concept of "destination carrying capacity" for getting the balance right in the volume, timing and location of visits and for reducing congestion and ensuring socio-environment compliance.
2) Careful planning and management of tourism enterprises and infrastructure.
3) Bring in the concept eco-auditing in private as well public sector services and management across tourism sector. Forward thinking in the layout and design of tourist destinations and in the provision of services can make a significant difference to the impact on communities.
4) Planning the development of infrastructure, including transport, water and energy supplies, which should be designed to meet the combined needs of visitors and the community keeping the projections in view that give an idea what may change with climate and socio-demography planning the scale, design and sitting of new tourism development.
5) In the planning of sensitive road construction, the stakeholders should brainstorm on how to best preserve the authenticity and integrity of their local natural and cultural heritage, so that the losses to the tourism potential of the region are mitigated, while enjoying the positive outcomes of road access.
6) Vehicles operating in the tourist destination must compliance with environmental and pollution control acts. Heavy vehicular movement in eco sensitive destination should not be allowed and the number of total vehicle a destination can manage must be in place to keep the tourist traffic and parking space into account.
7) The organizations (hotels, business sector etc.) must be actively made to support initiatives for local infrastructure (e.g. Signage, hoardings) and community development. Examples of initiatives include education, training, health and sanitation, and projects which address the impacts of climate change and contribute to SDGS.

E. Cultural Richness, Integration and Mutual Understanding

To respect and enhance the historic heritage, authentic culture, traditions and distinctiveness of host communities. Respect for, and understanding of, cultural diversity between nations and peoples is a key principle of sustainable development.

Actions

1) Policies in this area should focus on conserving historic and cultural heritage features by involving local communities/tourism actors and by planning annual investments at local/state levels.
2) Effective visitor management. This can include a range of techniques such as spreading and deflecting demand, physical site management, etc.
3) Securing more money from visitors for conservation through eco-cess and heritage cess.
4) Integrate mandatory traditional architectural design, materials, and skills into the construction of tourism related buildings.
5) Introduce vocational trainings at school level and offer advance courses post high school.
6) Seeking value chains. This can in turn help towards conservation as well as improving local livelihoods/job sector to benefit local communities living close to heritage sites through local value addition.

F. Resource Efficiency

To minimize the use of scarce and non-renewable resources in the development and operation of tourism facilities and services.

Actions

1) Taking account of resource supply in the planning of tourism development, and vice versa. An integrated planning approach is required to ensure that an equitable balance between the needs of local communities and the growing tourism industry can be maintained. Growth of tourism in mountains may be seriously limited by the availability of land, water, energy or other resources. Equally, predicted growth in demand from the tourism sector must be taken into account when planning provision of water and energy supplies in key destinations and enroute stations.
2) Minimizing water consumption by the tourism sector. Fresh water is a vital resource and consumption of water by the tourism sector is high. Much tourism demand occurs in places and at times when water is very scarce. In many tourist destinations new sources of water would be difficult to establish, costly and bring their own environmental problems.
3) Minimizing consumption of energy from non-renewable resources. Policies on energy use should seek to influence both sources of supply and consumption.
4) Ensuring the efficient use of land and raw materials in tourism development. In some destinations land may be in short supply. It is therefore important to select sites for tourism development.
5) Subsidy on the recycled products should be promoted.

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G. Environmental Purity

To minimize the pollution of air, water and land and the generation of waste by tourism enterprises and visitors.

Actions

1) Promoting the use of more sustainable transport (by road and by plane).
2) Promoting a reduce, reuse, recycle mentality and behaviour. In general, tourism enterprises should be encouraged to be efficient in all their use of materials. This is equally true for their use of resources and generation of waste.
3) Resource efficiency: solutions and services in action to ensure energy conservation, pollution control, natural resource and ecology management simple "plug-and-play" solutions need to be available for them to be used by the multitude.
4) Avoiding the discharge of sewage to forests, farms, river, lake (and aquifer) environments. 5. Minimizing waste or design a waste management plan (at national and local level) influencing the development of new eco-tourism facilities.
5) Active bio security management: to raise awareness and change behaviour prior to departure is seen as a cost effective tactic to reduce the arrival rates of at-risk items.
6) Laws or policies to mitigate climate change need to be reviewed at state level and innovative technologies and inclusive awareness programmes.
7) .nature has provided us with all the resources for leading a beautiful life and she nourishes us like a mother, we should respect her and nurture her, this is an earth-centric thinking. This should be encouraged.

H. Sustainable Tourism Education

To make the general public including all stakeholders aware about the concept, so that each one can contribute towards it.

Actions

1) A "guidebook" should be published showing an efficient and well planned roadmap to harness the natural beauty of all the tourist destinations and indicating the ways to maintain the clean image of these destinations.
2) It should describe various fines and penalties implemented by the authorities for damaging the fragile ecology of the state.
3) Environmental education should be made a compulsory part of the curriculum in primary, secondary and higher education.
4) Raising awareness about bio security issues requires the use of a number of different mediums that are carefully targeted to ensure the audience responds to the information.

I. Environmental Friendly Construction

To undertake all the construction activities in an environmental friendly way with focus on pollution free construction.

Actions

1) The material used be such that it causes minimum loss to environment .focus should be on use of biodegradable materials like wood, mud, iron etc.
2) The government of India has envisaged an ECBC building code 2017 which is lees energy consumption. The plan must be made mandatory.
3) The infrastructure like roads, resorts, hotels etc in tourist zones must be made in a way minimum forest are cut. There should be minimum interference in the ecological balance of environment.
4) Environmental auditing of tourism service providers based on environment efficiency and carbon generation and certification can enhance application of environmental safeguards in the tourism industry.

J. Controlled and Planned Tourism

To make planned and controlled movement of tourist in environmentally fragile ecosystem.

Actions

1) Implementation of TCC (tourist carrying capacity): TCC tourist carrying capacity is the maximum number of people that may visit a tourist destination at the same time without causing any physical, economic, sociocultural destruction and an unacceptable decrease in visitor satisfaction. There should be a TCC centric tourism policy.
2) Explore/promote/update integrated sustainable tourism policies in states.
3) Destination planning to avoid rushes, congestions, overbooked hotels, non-availability of parking places, and local water and energy crisis.

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4) Investments must be made for advancing databases and technology to provide "live statistics" as universal information system (e.g. Carrying capacity at the destination, hotel rooms, parking places, road blocks, traffic jams). It must include all other emerging data sets onsite.

K. Standardisation Of Tourist Activities

All tourist activities must be standardised with an attempt to bring uniformity and quality.

Actions

1) Professionally certified trainings of all travel trade industry service providers must be introduced on mandatory basis for every group of service providers such as hotels, tourist guides, porters, cooks, and drivers. Certified training programmes need to be offered by selected recognized institutions (occupational standards). Any non-compliance must be responded to with non-renewal of permissions needed for operational procedures and future investments.

2) Document best practices on sustainable tourism especially from the aspects of sustained entrepreneurship, skill development and social security to develop or strengthen tourism circuits that focus on adventure sports, heritage, wildlife, religious/spiritual, wellness/ yoga/ aroma therapy/naturopathy, handicrafts and handloom, and cultural festivals.

3) All key services providers must be made to follow international and national good practices and locally agreed guidance for the management and promotion of visits to indigenous communities and culturally or historically sensitive sites in order to minimize adverse impacts and maximize local benefits and visitor fulfilment.

VI. CONCLUSION

The recent past, tourism industry has witnessed a tremendous surge worldwide and has become an integral part of human leisure and expedition, thus contributing to the growing global economy. The aim of tourism development cannot be only to create jobs and increase economic output,

But also to do it sustainably and not to destroy the natural resource base on which the tourism depends to a large extent. Perpetuation of environmental problems is due to over exploitation and poor management policies. All the stakeholders should strive a change in proper management of tourism in the region, so that the sustainability of natural resources is ensured. It is the need of hour we channelize our resources for promotion of sustainable tourism. The journey towards sustainable tourism is long and requires co-ordination at all levels.

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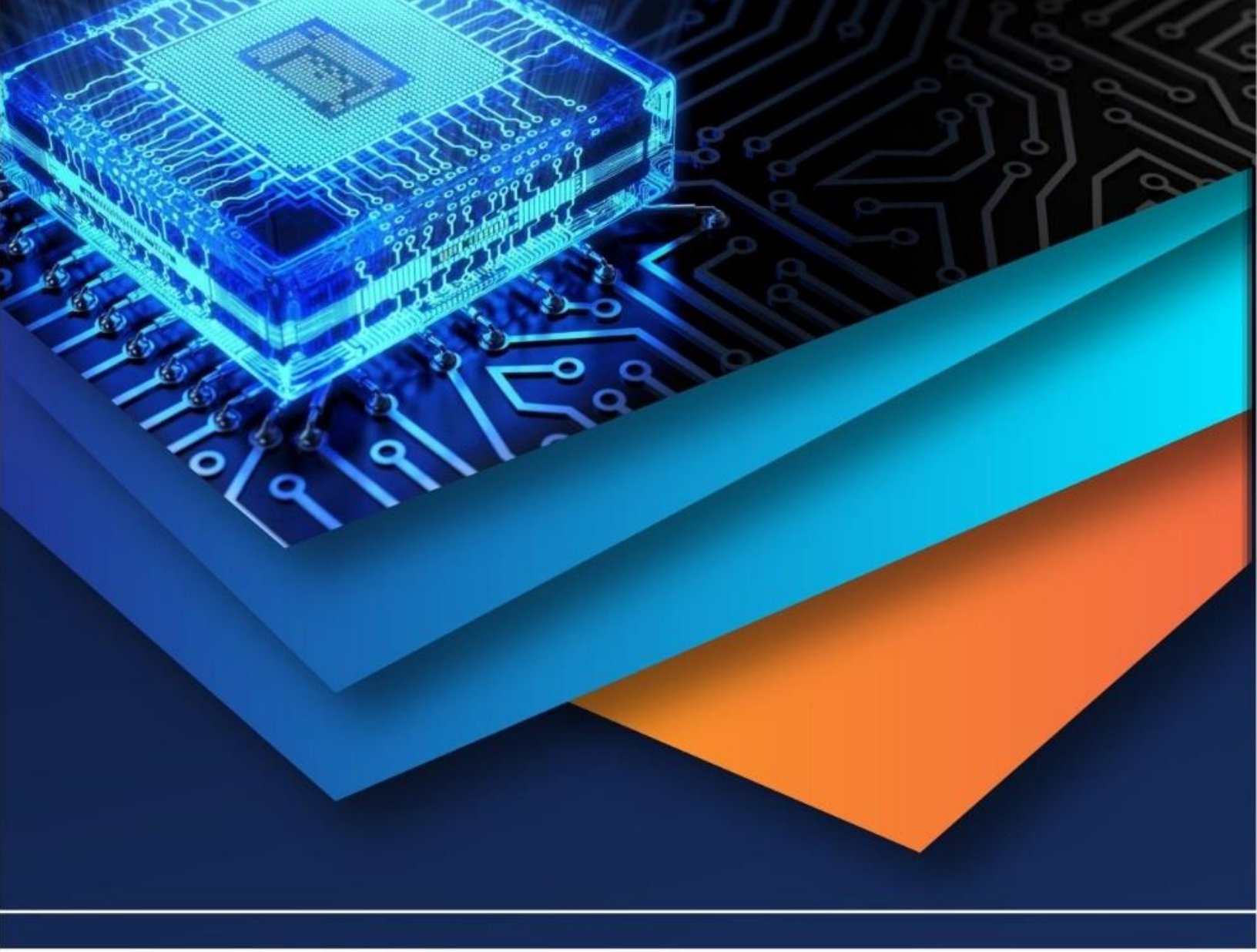

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