

SCOPE OF ASTROTOURISM AS AN EMERGING NICHE IN THE LEISURE TOURISM SECTOR IN INDIA

Mahadevan P*

Chief Operating Officer, Sustainable Tourism & Hospitality Innovation, Research & Accreditation (SUSTHIRA), Mumbai, India

Nikhil Das

Research Scholar, VISTAS, Chennai & Assistant Manager, Kerala

Binosh Kunjappan

Secretary, District Tourism Promotion Council, Malappuram, Kerala

Received 02 March 2021; Revised 07 March 2021; Accepted 09 March 2021

ABSTRACT

Astronomy tourism or Astrotourism has emerged as a novel niche tourism sector globally. Lot of travellers are exploring new and off the bat locations across the globe where they can watch out clear skies and various astronomical phenomena. The concept has gained more importance in the present pandemic situation as more travellers are preferring natural and less crowded tourism destinations with some sort of activity to learn and get entertained. India, with its wide diversity of rich tourist attractions and destinations offer immense scope for Astrotourism and has taken some good initiatives. Astrotourism being a maiden topic for research in the tourism academic field, this article brings out in brief the scope of the theme and successful experiential case studies that has been launched in India.

Keywords: Astrotourism, Niche tourism attraction, Experiential tourism

INTRODUCTION

From the time immemorial itself the stary sky and Milky Way fascinated traveller. The human civilisation has expressed intensive curiosity to study the infinite universe. Astronomy tourism or Astrotourism is a novel research topic where the scope of astronomy has been together combined with tourism. ‘Astrotourism goes back many centuries when mankind looked up to the stars, imagined figures and gave them meanings’(Matos 2017). Astro tourism can be stated as “ a leisure activity, (within the branch of ecotourism and scientific tourism) conceived as the action of planning, travelling to, and staying in very particular places (astro destinations), with very concrete features, to live new and different astronomical experiences which are not available in the place of residence” (Hobkirk 2020).

***Correspondence to:** Mahadevan P, Chief Operating Officer, Sustainable Tourism & Hospitality Innovation, Research & Accreditation (SUSTHIRA), Regd. Office: Mumbai, India, Tel: +91 9249994112, +91 9037508253; E-mail: machtourism@gmail.com

It is believed that the Nebra Sky Disk was discovered in 1600 BC (Pa'sztor 2015). The planets and time of eclipses were known to Babylonians which was followed by Greeks (Ossendrijver, 2020). In the holy book of the Bible itself, there is ample evidence that how stars showed routes to ancient travellers and pilgrims. Likewise, voyages of famous travellers like Magellan and Christopher Columbus were motivated from the astronomical theory of 'Spherical Earth' (Mainwaring & Hanley, 2019). The concept of Astrotourism is a maiden topic for research in the academic field.

SCOPE OF ASTROTOURISM IN THE PRESENT SCENARIO

The early corona virus pandemic outbreak in January, by the end of March 2020 has hit global tourism industry badly and as a result, international tourist arrival has dropped down to 72% from January to October 2020 (UNWTO, 2020). This has cost a revenue loss of 933 billion in tourism export revenue (UNWTO, 2020). Nevertheless, global tourism is making a fast recovery from the previous tourism slowdown through various measures, especially giving importance to domestic tourism; encouraging travel bubbles with neighbouring countries and introducing new diverse tourism products.

There is an increasing rise in natural-based tourism in a post covid scenario. Astrotourism is an outstanding tourism tool to rejuvenate the present economic slowdown and promote tourism in a more sustainable way through local participation. Many of the destinations suitable for Astrotourism with clear visible sky are located in remote and rural locations away from urban centres with lot of light pollution. Therefore, it can be directly inferred that these places are all lesser known and unspoilt destinations away from mass tourism centres. Tourists can have a safe and hygienic stay practicing social distancing measures experiencing nature as well as the sky in pristine environment, bringing in an added economic resurgence to the local community.

As relatively low-impact tourism, Astrotourism has immense opportunities for rapid growth and sharing unique experiences, thereby benefiting local community. Indeed, this can be an additional tourist attraction in established tourism destinations like national parks, wildlife sanctuaries or eco-tourism destinations in which the destination authorities can sell this wonderful tourism product and exceptional experience in night time also. Furthermore, proper training and development for rural communities in the theme will help to engage local communities in tourism activity bringing overall development to the host region.

TYPES OF ASTROTOURISM

Generally, Astrotourism can be broadly classified into two: permanent year around facilities and seasonal or particular time-based temporary activities. Permanent facilities for Astrotourism include observatories, planetariums, Astro parks, leisure facilities that provide accommodation like Astro stays and Astro resorts. Temporary Astro specific activities include gathering of large number of visitors at specific points to watch eclipses where they are clearly visible. Other examples include tourists visiting Scandinavian countries to experience phenomena like the 'Midnight Sun' and 'Auroras' during specific seasons. Astrotourism includes a number of activities like star gazing, astrophotography etc (Wen, 2017).

Astrotourism shares a relationship with Space tourism which is a very expensive version with an actual experience in space. The International Astronomical Union (IAU) founded in 1919 is the apex organization promoting astronomic research across the world through international cooperation (Sterken & Duerbeck, 2004). The organization has eighty-two national members and over 12000 individual members.

Astrostays and Astoresorts is another trending concept where tourists can stay at indigenous home stays and can observe the natural resources and clear dark sky with stars with the help of advance telescopes. Such trending stays are emerging in the tourism market all over the world especially in Australia, New Zealand, South Africa and various states in India. Tekapo's Dark Sky project in New Zealand, Sutherland Astrotourism and the project jointly promoted by International Astronomical Union and the South Africa National Research Foundation and Department of Science and Innovation are attracting lots of tourists to South Africa.

INDIA'S LEGACY IN ASTRONOMY

India has one of the ancient astronomical systems in the world and is referred to as 'Khagola Shastra' in Sanskrit (Metha, 2004). As early as 500 AD, Aryabhata found out the Earth's spin on its axis and planetary motion with respect to the Sun. Indians also developed solar and lunar calendars (Dutta, 2006). India also had permanent astronomical facilities popular as 'Jantar Mantar' in Delhi and Jaipur which stand as great heritage sites today. For educating public on astronomy India has some of the famous and most sophisticated planetariums and research observatories across different places spread all over the country which are already main centres of tourist attractions.

RECENT DEVELOPMENTS OF ASTROTOURISM IN INDIA

There are many excellent and exotic locations for Astrotourism in India. Some of the locations include Ladakh, Spiti in Himachal Pradesh, North Sikkim, Jaisalmer in Rajasthan, Khajuraho in Madhya Pradesh, Rann of Kutch in Gujarat and Coorg in Karnataka. A number of initiatives have been introduced by industry players in the country.

Global Himalayan Expedition (GHE) in collaboration with the International Astronomical Union has launched terrestrial Astrotourism project in Pangong Lake in the cold desert of Ladakh (*Global Himalayan Expedition*, n.d.). The location of Ladakh with little light pollution and high altitude makes it a suitable location for star gazing. It is also one of the few locations with uninterrupted sky views in the country. Facilities created include accommodation options called Astrostays local community members called Astropreneurs to guide visitors to spot constellations and facilities including a Dobsonian telescope as well as stargazing mobile applications like Stellarium. More 'Astrostays' are planned here with a vision to make Ladakh as the hub of Astrotourism in India.

India's first Astropark is under development in Mandu in Madhya Pradesh. India's first Astoresort has been started at the famous Sariska Tiger Reserve which has coupled wildlife tourism with the astro theme. The historic Jantar Mantar and Jawahar Kala Kendra art centre in Rajasthan have been identified for night sky tourism in Jaipur. Another development includes the proposed project of Nainital District Tourism department wherein the two villages of Takula and Devasthal are

being promoted as model Astrotourism villages (Jha, 2021). The technical support for the project is being provided by the Nainital based Aryabhata Research Institute of Observational Sciences (ARIES).

In South India, there are camping sites for star gazing and other activities in hill stations like Nilgiris, Kodaikanal and Yelagiri. Recently, the state of Kerala is developing its Astrotourism project in Manjampothikkunnu at Kanhangad in the northern district of Kasaragod (*Eco-Sensitive Astro Tourism Project*, n.d.). Space Popularisation Association of Communicators and Educators (SPACE), a leading astronomy education and astronomy travel provider operating from Delhi and Chennai is offering exciting package tours, especially for students, covering all important international space observatories, space camps and space trek in USA, Europe and Asia and South Pacific (*Space Popularisation Association of Communicators and Educators*, n.d.). This all shows that Astrotourism is here to stay and expand in India and the country will emerge as a global destination in this sector.

CONCLUSION

This study analyses the role of Astrotourism as a niche tourism product to enhance the tourism business which was severely impacted by the pandemic crisis. This niche tourism product would act as a supplementary attraction in an established tourism destination or in another way this could be a new attraction that can invite attention of special interest tourists to an indigenous rural place that lacks attraction. This study aims to explore the niche features of Astrotourism as an evolving tourism product in India.

REFERENCES

- Dutta, A.K. (2006). Āryabhata and Axial Rotation of Earth. *Resonance* 11(3), 51-68.
- Eco-Sensitive Astro Tourism project. (n.d.). Available online at: <https://www.ebusinesskerala.com/keralas-first-eco-sensitive-astro-tourism-project-at-manjampothikkunnu/1005.html>
- Global Himalayan Expedition. (n.d.). Available online at: <https://www.ghe.co.in/>
- Hobkirk, I. (2020). Unified Definition of the term Astrotourism UNIFIED DEFINITION OF THE TERM ASTROTOURISM Tourism Management Bachelor Degree Thesis (Issue June 2019). Srinakharinwirot University.
- Jha, P. (2021). Two villages in Nainital to be developed for astro-tourism. Times of India.
- Mainwaring, R.D., & Hanley, F.L. (2019). The earth is round! *Journal of Thoracic and Cardiovascular Surgery*, 157(4), e207-e208.
- Matos, A.L. (2017). Terrestrial Astrotourism-Motivation and Satisfaction of Travelling to Watch the Night Sky (Issue May) [Aalborg University]. Available online at: https://projekter.aau.dk/projekter/files/260343239/THESIS_ASTROTOURISMPDF
- Metha, A. (2004). History of ancient India. *ABD Publishers*.
- Ossendrijver, M. (2020). The Moon and Planets in Ancient Mesopotamia. Oxford Research Encyclopedia of Planetary Science, Available online at: <https://doi.org/10.1093/acrefore/9780190647926.013.198>
- Pasztor, E. (2015). Handbook of archaeoastronomy and ethnoastronomy. *Handbook of Archaeoastronomy and Ethnoastronomy* pp: 1-2297.
- Space Popularisation Association of Communicators and Educators. (n.d.). Available online at: http://www.spacegroupindia.org/companies_in_group.html

Sterken, C., & Duerbeck, H.W. (2004). ASTRONOMICAL ARCHIVES AND HISTORIC TRANSITS OF VENUS. *The Journal of Astronomical Data* 10(7).

UNWTO. (2020). Impact assessment of the covid-19 outbreak on international tourism. Available online at: <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism>

Wen, J. (2017). Astronomy tourism: exploring an emerging market: group culture, individual experience, and industry future. [James Cook University]. Available online at: <http://jcu.summon.serialssolutions.com>.