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A STUDY ON THE CONTRIBUTION OF BLUE FLAG BEACHES TO SUSTAINABLE BEACH TOURISM IN INDIA

Dr. K. Rajesh, Guest Faculty, Department of Tourism & Hospitality Management, Acharya Nagarjuna University

K. Divya, Research Scholar, Department of Tourism & Hospitality Management, Acharya Nagarjuna University

G. Leela Lakshmi, Research Scholar, Department of Tourism & Hospitality Management, Acharya Nagarjuna University

Abstract: Beach tourism is a visible and livelihood-oriented component of coastal tourism in India. The recent revision of India's coastline to 11,098.81 km expands the planning base for coastal destinations, including mainland states and island territories. This paper examines the contribution of Blue Flag beaches to sustainable beach tourism by linking certification standards with official coastline data, Ministry of Tourism tourist visit statistics and beach/coastal destination development initiatives. The study is descriptive and analytical and uses secondary data from Government of India sources, including Ministry of Tourism statistical statements, Parliamentary replies and Press Information Bureau releases. The analysis shows that Blue Flag beaches contribute to sustainability through improved environmental management, bathing-water quality, safety services, visitor information, cleanliness, accessibility and destination branding. State-wise tourist visit data also show that large coastal states such as Tamil Nadu, Karnataka and Andhra Pradesh record high domestic tourist visits, while Maharashtra, West Bengal and Gujarat are leading coastal states in foreign tourist visits. However, the study finds a major data gap: official national statistics are mostly State/UT-wise and do not provide regular beach-wise footfall. The paper recommends beach-wise visitor monitoring, wider adoption of Blue Flag standards, community participation and stronger integration of tourism development with coastal conservation.

Keywords: Blue Flag beaches, sustainable beach tourism, coastal tourism, Ministry of Tourism, tourist footfall, coastline length, India.

I. INTRODUCTION

India's coastal geography provides a strong natural base for beach tourism. The country's beaches are used for leisure, recreation, photography, coastal cuisine, cultural festivals, adventure sports, wellness activities and marine nature experiences. Beach tourism also creates opportunities for transport providers, accommodation units, food vendors, guides, local artisans, water-sport operators and safety personnel. At the same time, beaches are ecologically sensitive spaces, and unmanaged growth can lead to littering, erosion, crowding, biodiversity loss and pressure on coastal communities.

The Government of India has recently revised the coastline length of the country from 7,516.6 km to 11,098.81 km. The updated coastline measurement, prepared with modern GIS tools and high-resolution High-Water Line data, is useful for tourism planning, coastal infrastructure, disaster-risk assessment and marine resource management. This expanded statistical picture makes sustainable beach tourism planning more important than ever.

Blue Flag certification provides a practical framework for such planning. It evaluates beaches against criteria related to environmental education, water quality, environmental management, safety and services. For India, certified beaches such as Rushikonda, Golden Beach, Kappad, Shivrajpur, Radhanagar and others serve as demonstration sites where tourism development is connected with cleanliness, visitor safety and conservation.

II. REVIEW OF LITERATURE

Beach tourism studies generally recognise beaches as high-demand recreational landscapes with direct and indirect economic benefits. They also note that beaches are vulnerable to seasonal pressure, solid waste, coastal erosion, unregulated construction, water pollution and visitor crowding. Sustainable beach tourism therefore requires management systems that balance visitor experience with ecological protection and local community welfare.

Studies on sustainable tourism emphasise responsible destination management, community participation, environmental education and measurable quality standards. The Blue Flag programme is relevant in this context because it converts sustainability principles into destination-level criteria, including bathing-water quality, information boards, waste management, safety facilities, accessibility and environmental awareness. In India, the scope for research is still expanding because beach-wise visitor data are not available in a uniform national time-series. This creates a gap between sustainability certification and measurable tourism performance.

III. STATEMENT OF THE PROBLEM

India has a long coastline and many beach destinations, but the quality of beach infrastructure and sustainability management differs from place to place. Several beaches attract large numbers of visitors without uniform systems for visitor monitoring, waste control, accessibility, safety services and environmental education. Blue Flag beaches demonstrate a higher standard of management, but their contribution to sustainable beach tourism needs to be examined through official statistical and policy data. The main problem addressed in this paper is how Blue Flag beaches support sustainable beach tourism in India and how Ministry of Tourism tourist visit statistics can be interpreted for the wider coastal tourism context.

IV. OBJECTIVES OF THE STUDY

- To study the contribution of Blue Flag beaches to sustainable beach tourism in India.
- To present the official list of Blue Flag certified beaches in India.
- To analyse the latest revised coastline length data for coastal States and Union Territories.
- To examine Ministry of Tourism tourist visit data for coastal States/UTs.
- To identify sustainability benefits related to cleanliness, safety, water quality, environmental education and local livelihood opportunities.
- To provide suggestions for strengthening sustainable beach tourism policy and practice in India.

V. RESEARCH METHODOLOGY

The paper is descriptive and analytical. It is based on secondary data collected from official Government of India sources such as Ministry of Tourism statistical statements, Lok Sabha and Rajya Sabha replies, Press Information Bureau releases and Blue Flag-related official references. The study uses tables, charts and percentage-based interpretation to examine coastline length, State/UT-level tourist visits and selected beach/coastal infrastructure projects. The study does not use primary survey data; therefore, the interpretation of tourist footfall is limited to official State/UT-level data.

VI. DATA ANALYSIS AND INTERPRETATION

6.1 National tourism statistical context

Indicator	Value / Latest available figure
Domestic Tourist Visits (DTV)s, India, 2024	2,948,190,825
Foreign Tourist Visits (FTVs) to States/UTs, 2024	20,942,074
Foreign Tourist Arrivals (FTAs) in India, 2024	9.95 million
Foreign Exchange Earnings from tourism, 2024	Rs. 2,93,033 crore
Tourism employment, 2023-24	84.63 million

Source: Compiled from Ministry of Tourism and PIB, Government of India.

The national figures show that domestic travel remains the main driver of tourism volume in India. Coastal states benefit from this growth because beaches, coastal circuits, cruises, water sports and waterfront experiences form part of the leisure tourism market. Foreign tourist visits also remain important for internationally known coastal destinations such as Goa, Kerala, Maharashtra and island territories.

6.2 Latest revised coastline length of India

Rank	State/UT	Old coastline (km)	Revised coastline (km)
1	Andaman & Nicobar Islands	1,962.00	3,083.50
2	Gujarat	1,214.70	2,340.62
3	Tamil Nadu	906.90	1,068.69
4	Andhra Pradesh	973.70	1,053.07
5	Maharashtra	652.60	877.97
6	West Bengal	157.50	721.02
7	Kerala	569.70	600.15

8	Odisha	476.40	574.71
9	Karnataka	280.00	343.30
10	Goa	160.50	193.95
11	Lakshadweep	132.00	144.80
12	Daman & Diu	-	54.38
13	Puducherry	30.60	42.65

Source: Government of India, Ministry of Earth Sciences / PIB, Parliament Question on Coastline of the Country, 04.12.2025.

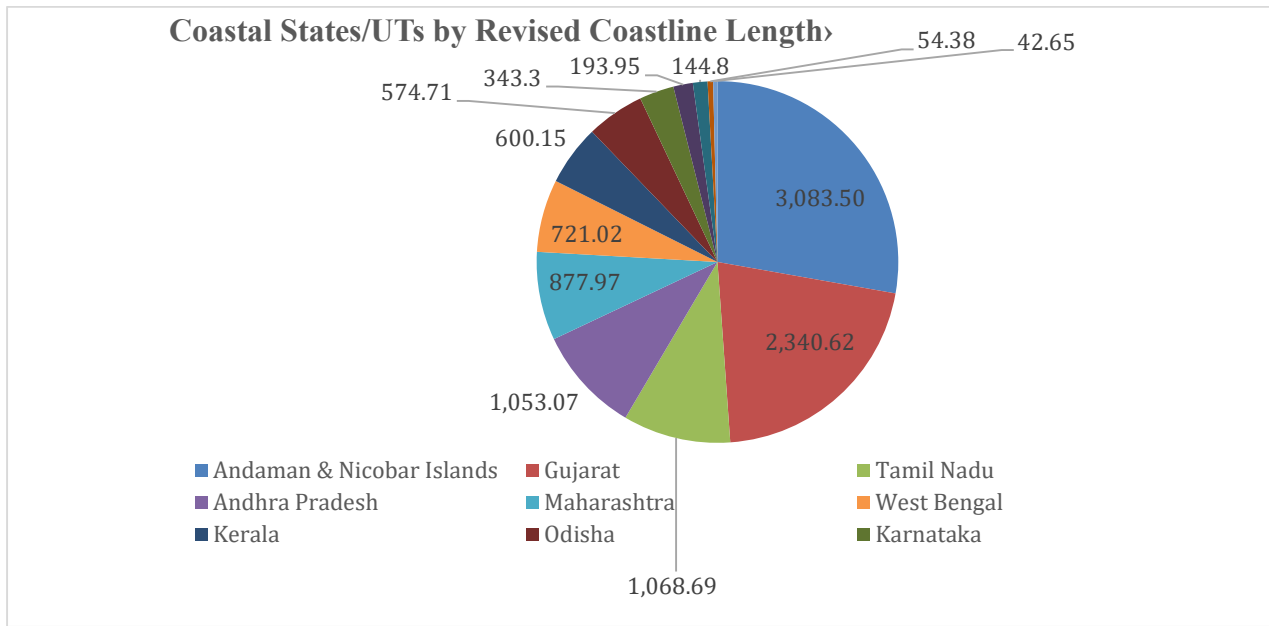


Figure 1. Coastal States/UTs by Revised Coastline Length

The revised coastline data show that island territories and indented coastal states possess a larger measured coastline than previously reported. Gujarat is the leading coastal state, while Andaman & Nicobar Islands have the highest coastline length among all coastal units. Andhra Pradesh has a revised coastline of 1,053.07 km, and Goa has 193.95 km. Coastline length indicates physical potential, but it does not by itself measure tourism performance.

6.3 Top 10 highest and lowest coastline lengths

Rank	Top 10 highest coastline States/UTs	Revised km	Rank	Top 10 lowest coastline States/UTs	Revised km
1	Andaman & Nicobar Islands	3,083.50	1	Puducherry	42.65
2	Gujarat	2,340.62	2	Daman & Diu	54.38
3	Tamil Nadu	1,068.69	3	Lakshadweep	144.80
4	Andhra Pradesh	1,053.07	4	Goa	193.95
5	Maharashtra	877.97	5	Karnataka	343.30
6	West Bengal	721.02	6	Odisha	574.71
7	Kerala	600.15	7	Kerala	600.15
8	Odisha	574.71	8	West Bengal	721.02
9	Karnataka	343.30	9	Maharashtra	877.97
10	Goa	193.95	10	Andhra Pradesh	1,053.07

Source: Compiled from revised coastline data, Government of India.

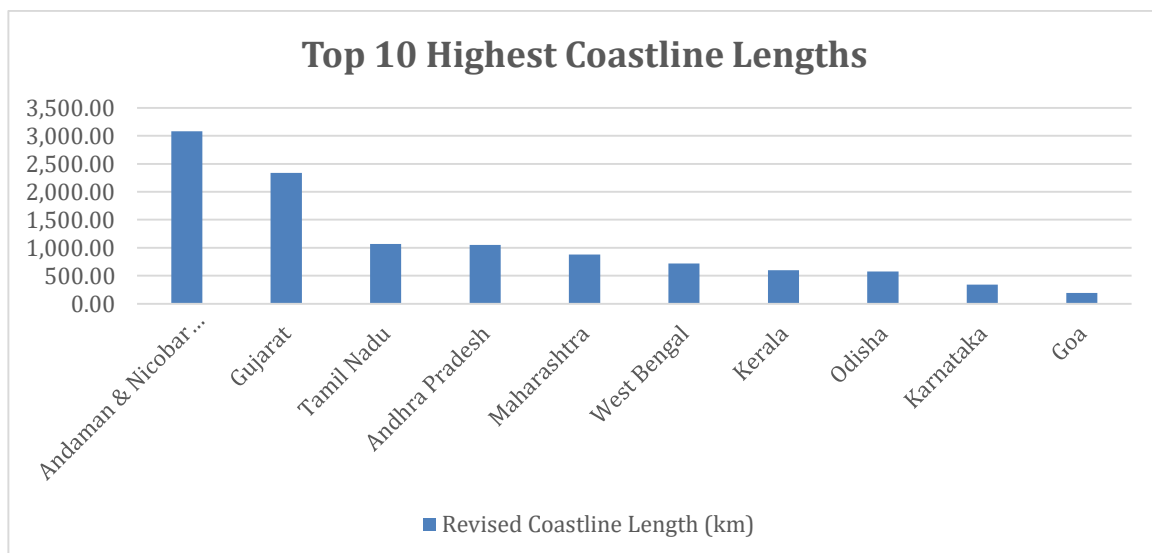


Figure 2. Top 10 Highest Coastline Lengths (km)

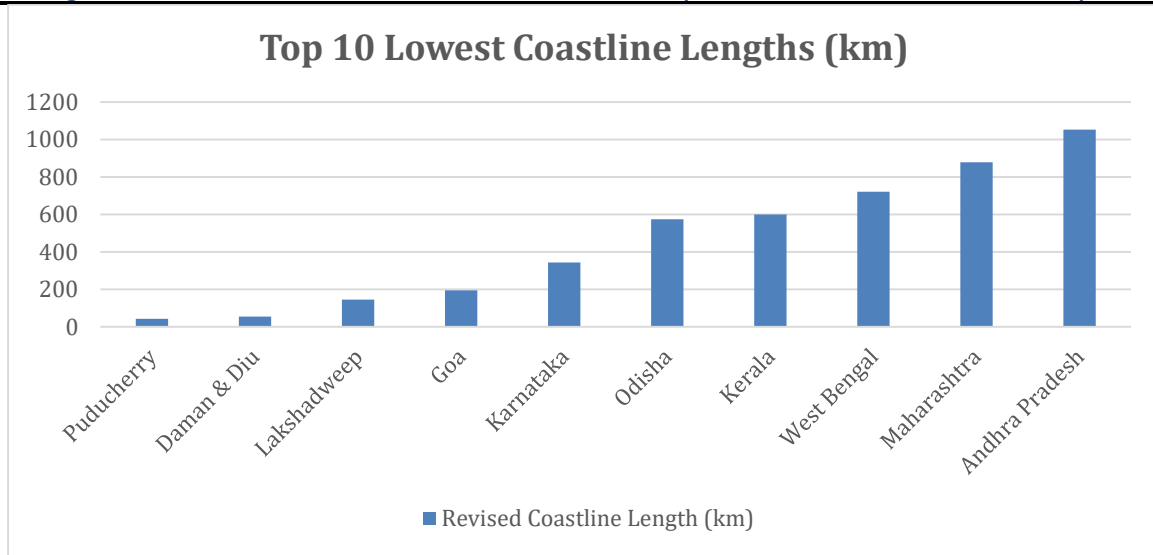


Figure 3. Top 10 Lowest Coastline Lengths (km)

The coastline length does not automatically determine tourism performance. For example, Goa has a much shorter coastline than Andhra Pradesh, Gujarat or Tamil Nadu, but it has a strong beach tourism brand. Similarly, island territories such as Andaman & Nicobar Islands and Lakshadweep have high-value beach and marine tourism potential despite lower total tourist volumes.

6.4 List of Blue Flag certified beaches in India

Blue Flag certification is awarded by the Foundation for Environmental Education based on criteria linked to environmental education and information, bathing-water quality, environmental management and conservation, and safety and services. The Government of India has reported the following certified beaches.

S. No.	Blue Flag beach	State/UT	Location / note
1	Shivrajpur Beach	Gujarat	Devbhumi Dwarka district
2	Ghoghla Beach	Diu	Diu coast
3	Kasarkod Beach	Karnataka	Uttara Kannada district
4	Padubidri Beach	Karnataka	Udupi district
5	Kappad Beach	Kerala	Kozhikode district
6	Kovalam Beach	Tamil Nadu	Chengalpattu/Chennai region
7	Eden Beach	Puducherry	Puducherry coast
8	Radhanagar Beach	Andaman & Nicobar Islands	Swaraj Dweep
9	Rushikonda Beach	Andhra Pradesh	Visakhapatnam coast
10	Golden Beach	Odisha	Puri coast
11	Minicoy Thundi Beach	Lakshadweep	Minicoy Island
12	Kadmat Beach	Lakshadweep	Kadmat Island

Source: Government of India, Ministry of Environment, Forest and Climate Change, Rajya Sabha reply on Blue Flag Certification.

The certified beaches are distributed across mainland states and island territories. This geographical spread shows that Blue Flag certification is not limited to one tourism region. It can be used as a replicable model for beach quality improvement in emerging and established beach destinations.

6.5 Coastal State/UT tourist footfall: domestic and foreign tourist visits, 2024

Rank	Coastal State/UT	DTVs 2024	FTVs 2024	Total tourist visits 2024
1	Tamil Nadu	306,842,014	1,161,302	308,003,316
2	Karnataka	304,563,569	485,204	305,048,773
3	Andhra Pradesh	290,266,452	262,431	290,528,883
4	Maharashtra	189,371,541	3,705,170	193,076,711
5	West Bengal	184,475,527	3,124,462	187,599,989
6	Gujarat	184,014,075	2,274,477	186,288,552
7	Kerala	22,246,989	738,374	22,985,363
8	Odisha	10,998,819	87,854	11,086,673
9	Goa	9,941,286	467,911	10,409,197
10	Puducherry	2,119,792	17,819	2,137,611
11	Dadra Nagar Haveli & Daman & Diu	1,358,901	2,626	1,361,527
12	Andaman & Nicobar Islands	710,397	11,497	721,894
13	Lakshadweep	67,430	898	68,328

Source: Ministry of Tourism, State/UT-wise Domestic and Foreign Tourist Visits, 2024. Note: these are total State/UT tourist visits and not beach-only counts.

Tamil Nadu, Karnataka and Andhra Pradesh recorded very high domestic tourist visits in 2024 among coastal states. Maharashtra, West Bengal and Gujarat recorded higher foreign tourist visits among coastal states. Goa's overall numbers are lower than larger states, but its brand identity remains strongly beach-oriented. The interpretation must be cautious because Ministry of Tourism data are State/UT-wise and include pilgrimage, heritage, business, urban, hill, wildlife and other forms of tourism along with beach tourism.

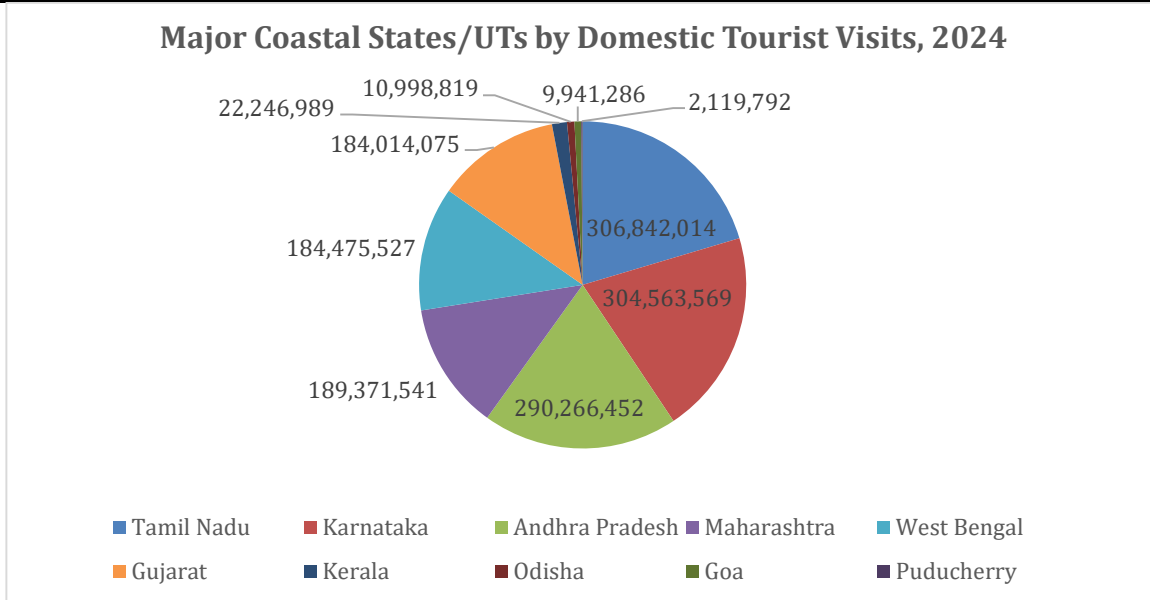


Figure 4. Major Coastal States/UTs by Domestic Tourist Visits, 2024

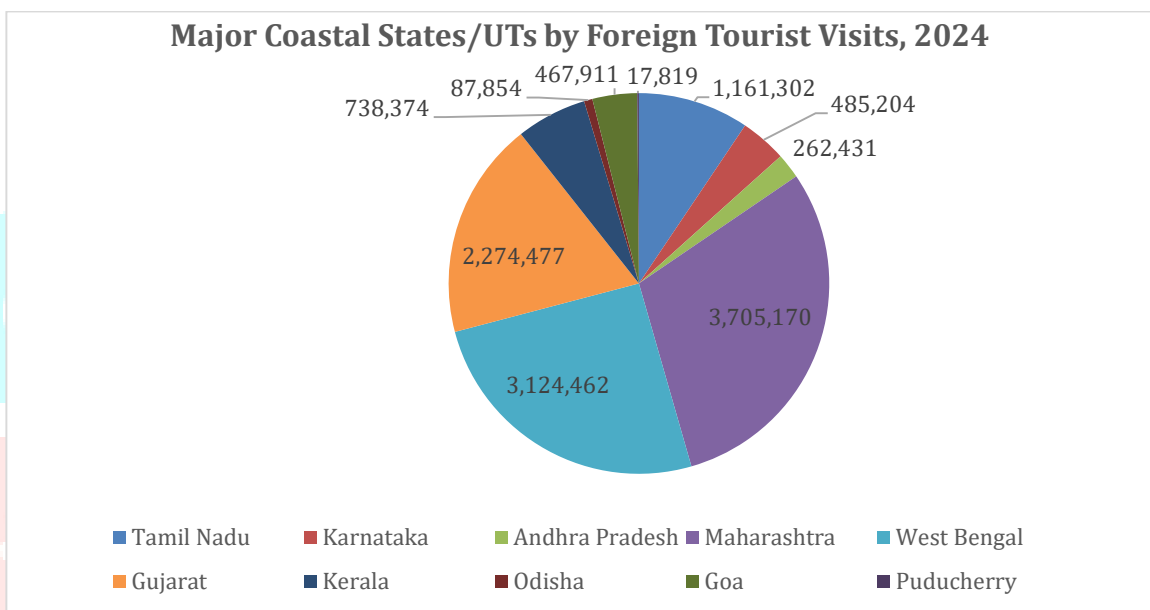


Figure 5. Major Coastal States/UTs by Foreign Tourist Visits, 2024

6.6 Foreign tourist visits to coastal States/UTs, 2019-2024

S. No.	State/UT	2019	2020	2021	2022	2023	2024
1	Maharashtra	5,528,704	1,262,409	185,643	1,511,623	3,387,739	3,705,170
2	West Bengal	1,656,145	463,285	34,828	1,037,017	2,706,942	3,124,462
3	Gujarat	595,607	210,047	11,319	1,777,215	2,806,871	2,274,477
4	Tamil Nadu	6,866,327	1,228,323	57,622	407,126	1,174,899	1,161,302
5	Kerala	1,189,771	340,755	60,487	345,549	649,057	738,374
6	Karnataka	608,754	165,325	72,487	128,520	409,333	485,204
7	Goa	937,113	302,751	22,128	174,799	452,692	467,911
8	Andhra Pradesh	280,356	67,591	27,551	165,845	60,426	262,431
9	Odisha	115,128	10,206	2,269	22,121	45,173	87,854
10	Puducherry	149,919	92,080	321	862	31,214	17,819
11	Andaman & Nicobar Islands	16,206	5,412	1,687	4,461	9,025	11,497
12	Dadra Nagar Haveli & Daman & Diu	7,369	1,604	185	1,791	4,048	2,626
13	Lakshadweep	820	413	4	125	755	898

Source: Ministry of Tourism, Development of Beach and Coastal Tourist Sites, Lok Sabha Starred Question No. 139, 09.02.2026.

The foreign tourist visit trend shows a sharp decline during 2020 and 2021 because of the COVID-19 disruption, followed by recovery after 2022. In 2024, Maharashtra, West Bengal and Gujarat reported the highest foreign tourist visits among the coastal States/UTs covered in the Ministry of Tourism statement. Goa and Kerala continue to remain important for leisure and beach-linked international tourism, even though their total numbers are lower than the leading large states.

6.7 Ministry of Tourism beach and coastal destination projects

Scheme	State/UT	Project	Year / date	Sanctioned cost (Rs. crore)
Swadesh Darshan 1.0	Andhra Pradesh	Kakinada - Hope Island - Coringa - Aduru - S Yanam - Kotipally coastal circuit	2014-15	67.83
Swadesh Darshan 1.0	Andhra Pradesh	Nellore - Pulikat Lake - Nelapattu - Mypadu - Ramateertham - Iskapalli circuit	2015-16	49.55
Swadesh Darshan 1.0	Goa	Sinquerim - Baga - Anjuna - Vagator - Morjim - Keri - Aguada coastal circuit	2016-17	97.65
Swadesh Darshan 1.0	Goa	Coastal Circuit II: Rua De Orum Creek-Dona Paula-Colva-Benaulim	2017-18	99.35
Swadesh Darshan 2.0	Andhra Pradesh	Suryalanka Beach Experience	29.03.2025	97.52
Swadesh Darshan 2.0	Goa	Colva Beach Experience	28.08.2024	19.89
Swadesh Darshan 2.0	Puducherry	Karaikal beach and waterfront experience	05.03.2024	20.30
Swadesh Darshan 2.0	Lakshadweep	Eco-retreat, adventure, beach and MICE experience at Bangaram	29.03.2025	81.18

Source: Ministry of Tourism, Lok Sabha Starred Question No. 139, 09.02.2026.

The project data show that beach and coastal tourism is being supported through destination development schemes, including Swadesh Darshan 1.0, Swadesh Darshan 2.0 and related infrastructure initiatives. Projects such as Suryalanka Beach Experience in Andhra Pradesh and Colva Beach Experience in Goa are examples of beach-specific destination development that can support sustainable facilities and visitor management.

VII. CONTRIBUTION OF BLUE FLAG BEACHES TO SUSTAINABLE BEACH TOURISM

Environmental quality: The certification framework encourages regular attention to beach cleanliness, waste control, conservation measures and bathing-water quality. These practices reduce the negative environmental footprint of tourism.

Safety and tourist services: Lifeguards, first-aid support, signage, information boards, access facilities and emergency preparedness increase visitor confidence and reduce risks at beach destinations.

Destination branding: The Blue Flag label works as a recognised quality marker. It helps beaches communicate cleanliness, safety and sustainability to domestic and foreign tourists.

Community livelihood opportunities: Improved beach management supports opportunities in food services, accommodation, transport, guiding, recreation, handicrafts and local entrepreneurship when community participation is built into planning.

Responsible visitor behaviour: Environmental education boards and visitor information create awareness about plastic reduction, coastal ecology, safe bathing and responsible use of public beach spaces.

Replicable model: Certified beaches can act as demonstration sites for other Indian beaches that require improvement in cleanliness, accessibility, safety and environmental management.

VIII. MAJOR FINDINGS

- India's revised coastline length of 11,098.81 km expands the planning base for beach and coastal tourism.
- Andaman & Nicobar Islands, Gujarat, Tamil Nadu, Andhra Pradesh and Maharashtra are the leading coastal units by revised coastline length.
- Twelve Indian beaches are listed as Blue Flag certified in the official Government of India source used in this study.
- Coastal tourist visit data show that high domestic tourism volume is concentrated in large states such as Tamil Nadu, Karnataka and Andhra Pradesh.
- Foreign tourist visits in coastal States/UTs recovered after the pandemic, with Maharashtra, West Bengal and Gujarat leading in 2024 in the Ministry of Tourism statement.
- Blue Flag beaches contribute to sustainable tourism through cleanliness, safety, environmental education, visitor services and destination branding.
- A major limitation is the lack of uniform national beach-wise tourist footfall data; therefore State/UT-wise tourist visits must be interpreted as a contextual indicator, not as exact beach footfall.

IX. DISCUSSION

The analysis shows that beach tourism potential depends on more than coastline length. Andhra Pradesh has a much longer coastline than Goa, but Goa has a stronger beach tourism brand because of its long history as a leisure destination, better beach-based accommodation networks, nightlife, water sports, coastal cuisine and international recognition. Similarly, large states such as Tamil Nadu and Karnataka record high domestic tourist visits, but these visits include multiple forms of tourism beyond beaches.

Blue Flag beaches help convert coastal potential into managed tourism spaces. Their value lies not only in attracting visitors but also in improving the quality of tourism development. Cleanliness, safety, water quality and environmental education are directly connected with tourist satisfaction and responsible tourism behaviour. If more beaches adopt similar standards, India can move from unregulated mass beach use to sustainable coastal destination management.

X. SUGGESTIONS AND RECOMMENDATIONS

- Create a national beach-wise tourist footfall monitoring system covering domestic visitors, foreign visitors, seasonality, visitor satisfaction and carrying capacity.
- Extend Blue Flag or Blue Flag-equivalent sustainability standards to more high-potential beaches in Andhra Pradesh, Tamil Nadu, Gujarat, Odisha, Maharashtra, Karnataka, Kerala, Goa and island territories.
- Integrate beach tourism planning with Coastal Regulation Zone norms, climate adaptation, erosion management and disaster-risk reduction.
- Improve basic facilities such as toilets, changing rooms, drinking water, first aid, lifeguards, access for differently abled persons, waste segregation and multilingual signage.
- Encourage community-based beach tourism through local cuisine, handicrafts, homestays, trained beach guides, responsible water sports and coastal festivals.
- Regulate adventure and water sports through licensing, insurance, safety audits, trained operators and periodic monitoring.
- Use Goa's destination branding and Blue Flag beaches' management standards as learning models for emerging beach destinations.

XI. LIMITATIONS OF THE STUDY

- The study is based on secondary data and does not include a primary tourist survey.
- Ministry of Tourism statistics are State/UT-wise and do not provide regular beach-wise tourist footfall for all beaches.
- The Blue Flag list is based on the official Government of India source available for the stated period.
- Domestic tourist visits include pilgrimage, heritage, business, urban and other forms of tourism, not only beach tourism.
- The analysis is descriptive and does not establish causal impact of Blue Flag certification on tourist arrivals.

XII. CONCLUSION

Blue Flag beaches contribute to sustainable beach tourism in India by creating cleaner, safer and better-managed coastal destinations. They connect tourism development with measurable standards for environmental education, bathing-water quality, environmental management and safety services. India's revised coastline of 11,098.81 km indicates extensive scope for future beach tourism development, but the success of this sector depends on quality management rather than coastline length alone. Ministry of Tourism data show that coastal states contribute significantly to domestic and foreign tourist visits, but the absence of beach-wise national footfall data limits precise impact assessment. The study concludes that India should strengthen beach-wise data systems, expand sustainability standards, involve local communities and integrate tourism growth with coastal conservation. Blue Flag beaches can serve as model destinations for transforming beach tourism from a simple leisure product into a responsible and sustainable coastal development strategy.

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