

Infrastructure and Service Support to Maha Kumbh of Unity at Prayagraj 2025

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Abstract : *The Maha Kumbh celebrations at Prayagraj stand as a testament to the grandeur and spiritual vibrancy of India. In the 21st century, it has set a benchmark in event management and global cultural exchange, be it Shahi Snan or digital innovations or sustainability initiatives. Both the Central and State governments have realized Maha Kumbh as a major religious, cultural and economic event. Therefore, ensured infrastructural development, security, crowd management, tourism promotion and environmental care while integrating technology for smooth operations. The present paper focuses on the role of government in the management of this mega event, a Maha Kumbh Mela, which is a vibrant tapestry of faith, culture and innovation.*

Key words: *Religious Congregation, Economic Engine, Kalpvas, Satellite Parkings.*

Introduction

The Maha Kumbh Mela is the rarest and most sacred gathering amongst the Kumbh Mela, which is only held in Prayagraj, after the completion of 12 Purna Kumbh Mela (Darian, 2001). It is believed that after 144 years, as mentioned in the positioning of all the four planets, i.e. Sun, Moon, Jupiter, and Saturn are in a line and three hours before Amavasya (January 29) importantly, 'Purna Nakshatra' also aligned with the aforementioned planets. In this way, it is considered to be the most auspicious of all the Maha Kumbh in the past 144 years (Peterson, 2005). According to the Hindu mythology, the origin of Kumbh Mela is linked to 'Samudra Manthan', i.e. the churning of the cosmic ocean by the deities and demons to attain *amrita* or the nectar of immortality. During the churning process, *Dhanvantri* emerged carrying the elixir of immortality. To make sure that the demons do not get it, Indra's son Jayanta, ran off with the pot. As he ran, the *amrita* split at four places, i.e. Haridwar, Prayagraj, Ujjain and Nashik. Since then, these places have become the holy site and there is a belief that by taking a dip in the rivers flowing through the aforementioned places would lead to salvation (Ray and Mishra, 1996). As Jayanta ran for 12 days, and one day of the Devas is equal to one year of the humans, therefore Kumbh Mela is celebrated at the aforementioned locations every 12 years. It is based on the relative positions of the Sun, Moon, and Jupiter. Each of the aforementioned locations has hosted the Kumbh Mela

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on a rotational basis for centuries, but the Prayagraj celebration is considered to be the most important and spectacular event (Table 1).

Table 1: Details of Kumbh Mela Celebrations

Sl. No.	Type of Kumbh	Place	River Banks	Description
1.	Maha Kumbh Mela	Only at Prayagraj	Confluence of Ganga, Yamuna and Saraswati	Every 144 years after the 12 Purna Kumbh Mela
2.	Purna Kumbh Mela	At 4 places: Prayagraj Haridwar Nashik Ujjain	Confluence of Ganga, Yamuna and Saraswati Banks of Ganga Banks of Godavari Banks of Shipra	Comes every 12 years and rotates among the four places
3.	Ardh Kumbh Mela	Prayagraj Haridwar	Confluence of Ganga, Yamuna and Saraswati Banks of Ganga	Every 6 years, only at 2 places
4.	Kumbh Mela	At 4 places: Prayagraj Haridwar Nashik Ujjain	Confluence of Ganga, Yamuna and Saraswati Banks of Ganga Banks of Godavari Banks of Shipra	Every 3 years in rotation at 4 places
5.	Magh Kumbh Mela or Magh Mela	Only at Prayagraj	Confluence of Ganga, Yamuna and Saraswati	Held annually in January

Source: Compiled by the Author.

Maha Kumbh Mela

The Maha Kumbh mela is one of the world's oldest and most significant spiritual gatherings, dating back over 2000 years. During the medieval period, it underwent significant transformations, and the British rebranded and institutionalized it. In other words, the colonial era was a pivotal period that shaped its current form (Ray, 1996). The Maha Kumbh mela is considered to be the world's largest congregation, which started off on January 13, 2025 (See Fig. 1.0). It is considered to be the holiest time in the Hindu religion, and also taking a bath in the holy rivers washes away one's sins and makes the way for salvation. However, some dates are especially auspicious, which depend on the alignment of planets, the Sun and the Moon. The details of the important bathing dates have been given in Table 2.

The divine experience to take a dip in Maha Kumbh, the grandest festival of the *Sanatan Dharma* and *faith* is considered to be a sacred opportunity for all the followers of this tradition to earn '*Akshay Punya*' (everlasting good merit), by participating in holy baths during the main

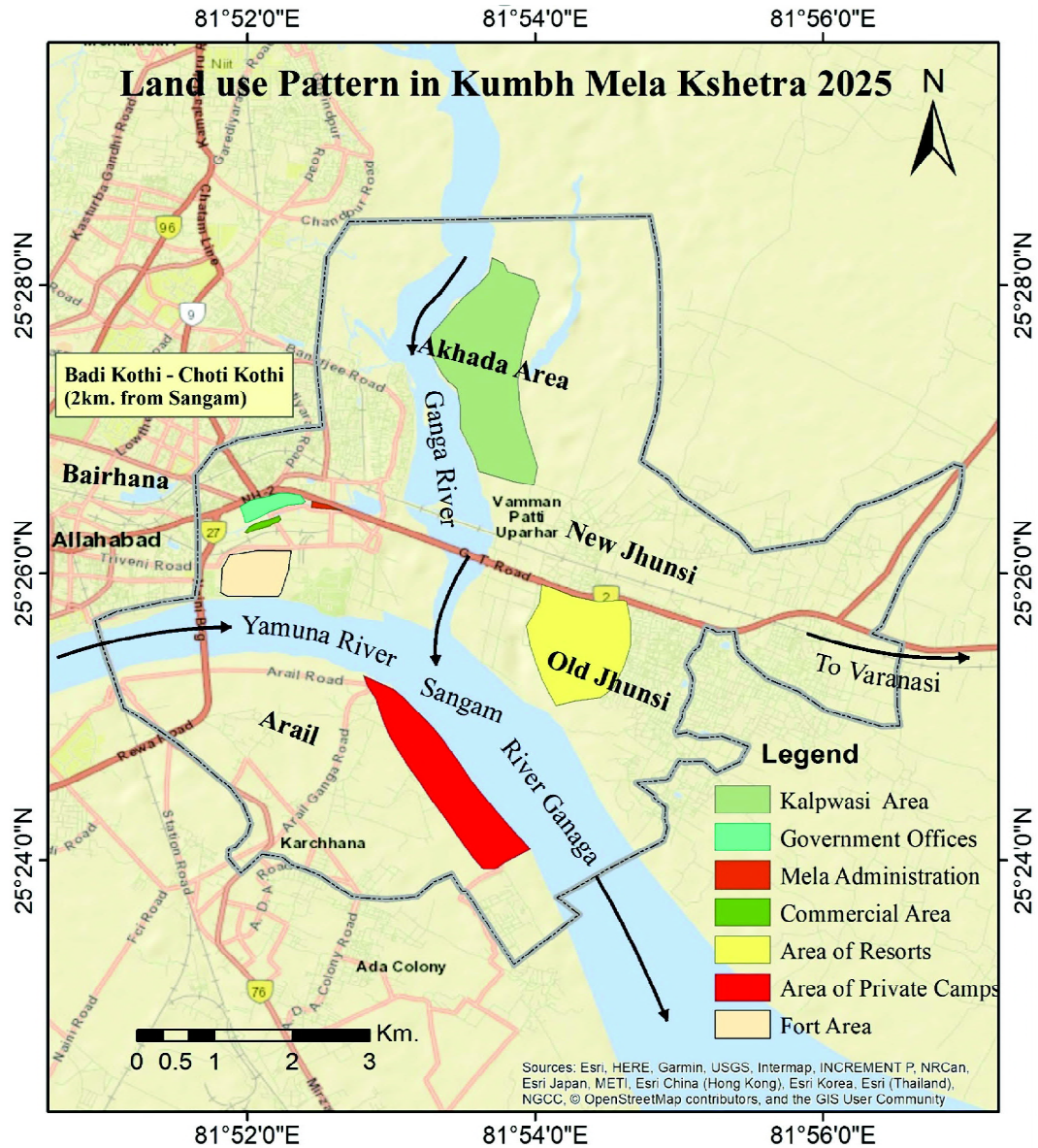


Fig. 1: The Landuse pattern of Mela kshetra

bathing festivals and undertaking Kalpvas on the banks of the Sangam Kshetra (Hindustan Times, 12 Jan, 2025). Various scriptures have mentioned that there are 84 types of donations. The offerings depend on each devotee’s faith and capacity. Common donations include bed, food, clothing and

Table 2: Significant Bathing Dates and Pilgrim Turnout

Sl. No.	Dates	Occasion	Pilgrim Turnout
1.	13 th January	Paush Purnima <i>Snan</i>	Over 16 million (1.6 -1.7 crores approx.)
2.	14 th January	Makar Sankranti <i>Snan</i>	35 million (3.5 crores approx.)
3.	29 th January	Mauni Amavasya	18 million (1.8 crores approx.)
4.	3 rd February	Vasant Panchami	19 million (1.9 crores approx.)
5.	12 th February	Maghi Purnima <i>Snan</i>	20.4 million (2.04 crores approx.)
6.	26 th February	Shiv Ratri <i>Snan</i>	15 million (1.53 crores approx.)

Source: UP Government Report, 2025.

money (John, 13 Feb H.T., 2025). It is also believed that continuous bathing, liberate one's soul from the 'cycle of rebirth' (Black, 2018). In this 'Maha Yagya' (grand offerings), two types of people participate, i.e. one who comes with only faith. They wait for hours for a holy bath in the Sangam and take the Ganga water back home without any complaint. Their action is guided by faith only. While another group of people visit the place just to serve the people in the Mela area (Jain, 2019). On average, the total number of devotees taking a dip in the Sangam remained above the one crore mark. Even during the last days, the influx rate of the crowd seemed to maintain its pace with an average of over a crore. Thus, Prayagraj witnessed an unprecedented surge of pilgrims throughout the Kumbh mela period (Mishra, 2019).

Role of the Government

The danger of an uncontrolled crowd at the religious events in India is neither new nor unexpected. (Maclean, 2008). In fact, crowd control became an urgent problem after 1820 (Maclean, 2008). The 1954 Kumbh Mela was the first mela after the country's independence. About 5 million pilgrims attended, and it was a major crowd crush. Later on, government planning witnessed a massive transformation, evolving from basic crowd management into a sophisticated, high-tech operation (Ray, and Bhattacharya, 2005). The state government shifted towards a specialized safety-oriented approach. In other words, the post-1954 period witnessed a paradigm shift, viz., evolution of infrastructure and logistics (1966-2013); and modernization and high-tech planning (2019-2025). The Maha Kumbh Mela is a unique event in the world with a name matching it in size and scale. So, both the Centre and State played a major role in organizing this mega event. The Maha Kumbh area of Prayagraj was declared as the 76th district of the State. This new district was known as the Maha Kumbh Mela district. According to a notification as of December 2nd, 2024, 66 villages of Sadar, Soraon, Phulpur and Karchana tehsils were included in the new district, which will remain till March 31, 2025, to ensure a seamless coordination of logistics, law enforcement and facilities for the pilgrims expected to attend the Maha Kumbh. For this, the government appointed a dedicated administrative team to oversee preparations and maintain services during the mela. The

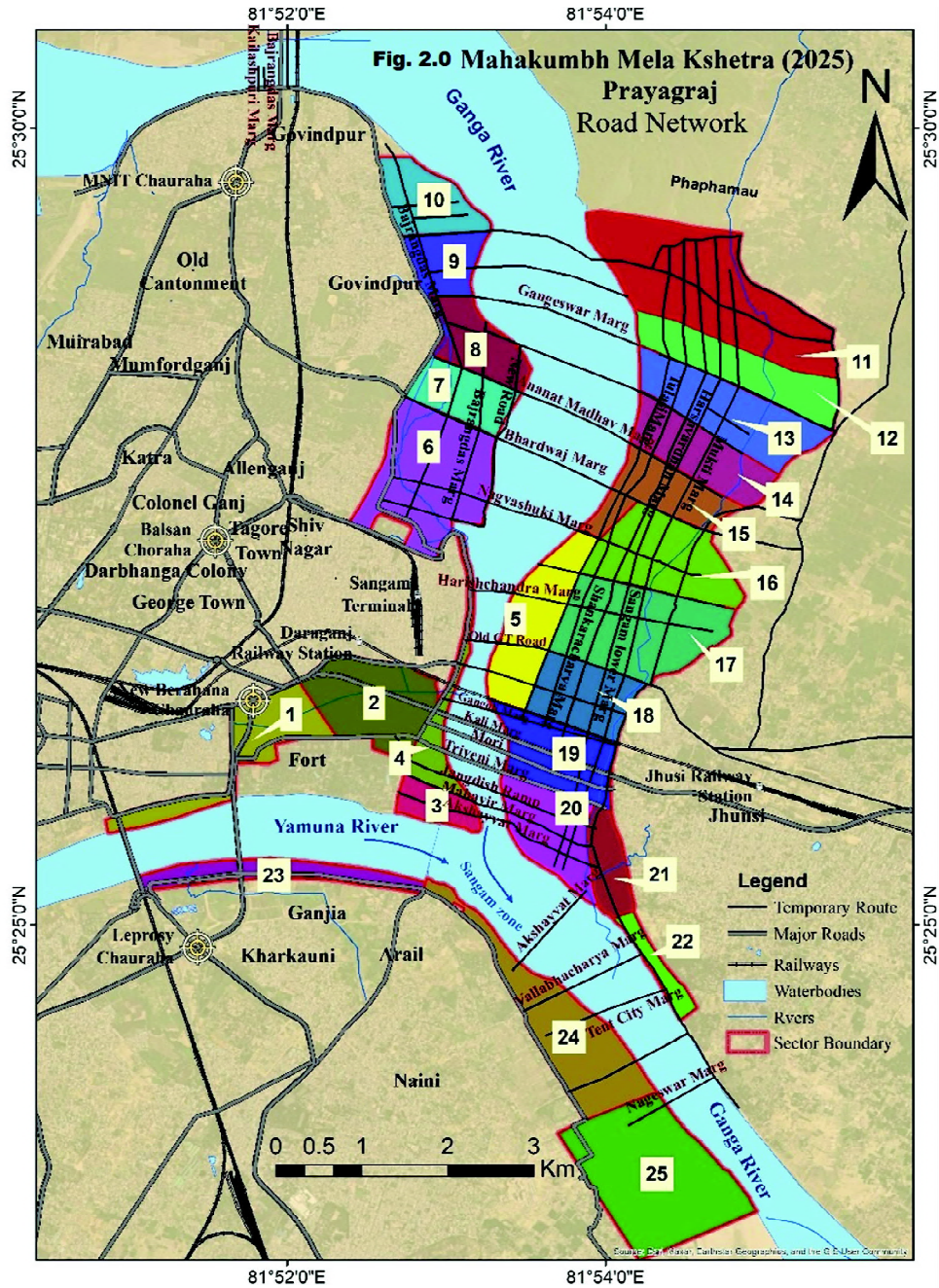


Fig. 2: The 25 sectors along with road network and pantoon bridges

total area of the temporary tent city was about 4,000 hectares (See Fig. 2.0) which featured spatial zones, infrastructure, supply lines, food distribution networks and public gathering spaces (Table 3).

Table 3: Government Facilities

Sl. No.	Types	
1.	Swachh Kumbh	<ul style="list-style-type: none"> ● 1.5 lakh toilet ● 2500 dustbins/100 mtrs. ● 15000 sanitation workers ● <i>Ganga Seva Doots</i> (service assistance/volunteers) 1500 ● 160 waste management vehicles
2.	Safe Kumbh	<ul style="list-style-type: none"> ● Deployment of special boats and air force helicopters for security ● 40 companies of PAC (Provincial Armed Constabulary) 85 companies of CRPF (Central Reserve Police Force) 20 companies of NDRF (National Disaster Response Force) 6 companies of SDRF (State Disaster Response Force) ● 50,000+ security forces ● 50 fire stations ● 20 fire post setups ● 4300 fire hydrants ● 2000 trained personals
3.	Digital Kumbh	<ul style="list-style-type: none"> ● Hi-tech digital media centre with dedicated broadcast room ● 65+ workstations ● Monitoring 1.6 lakh tents & 1.5 lakh toilets ● 2750+ cameras for crowd management ● 24X7 ICCC (Integrated Command and Control Centre) monitoring ● 10 digital lost & found centers
4.	AI-Enabled Personal Guide	<ul style="list-style-type: none"> ● BHASHINI APP 11 languages ● Equipped with Google navigation, an Interactive conversation
5.	Smart City	<ul style="list-style-type: none"> ● Rejuvenation of 300 + parks ● Widening & strengthening of roads ● Beautification of 40 intersections and 48 roads ● Development of 14 ROBs (Road Over Bridges) and flyovers ● Well-organized into 25 sectors

6.	Clean Drinking Water Supply	<ul style="list-style-type: none"> ● 1249 km of water pipeline ● 7000 drinking water stand-posts ● 200 water pipelines ● Establishment of Har Ghar Jal village in a 40,000 sq. ft area ● 51,000 connections, 85 tube-wells for efficient clean water supply
7.	Next Generation Infrastructure	<ul style="list-style-type: none"> ● Grand Airport: upgradation of the older terminal and construction of a new terminal ● 1500 signage: Guidelines in 12 constitutional, 6 UN (United Nations) languages ● Construction of 2 new substations ● Installation of 66 new transformers of 250 KVA (kilovolt-ampere) ● Capacity increase of 32 overload transformers ● 200 km roads were illuminated with street lights of thematic lights
8.	Largest Temporary City	<ul style="list-style-type: none"> ● 1.6 lakh tents ● 69,000 LED lighting and solar hybrid street lighting ● 450 km of temporary roads and chequered plate sheets ● 31 pontoon bridges
9.	Temples and Ghats	<ul style="list-style-type: none"> ● Beautification of 29 ancient temples ● Construction of 11 corridors ● 12 km temporary ghats (9 permanent ghats) ● 8 km of river front roads ● Special arrangements for cleanliness on the ghats ● Use of single-use plastic is completely prohibited
10.	Easy Transportation	<ul style="list-style-type: none"> ● 3300 Kumbh special trains ● 13000+ regular trains ● More than 200 electric buses ● 7000 roadways buses ● 550 shuttle buses ● 55 flight from different areas
11.	Maha Kumbh Helpline	<ul style="list-style-type: none"> ● 1920 Maha Kumbh Mela helpline ● 1944 Mela Police ● 1945 Fire Services ● 1010 Food & Supplies ● 102, 108 Ambulance Service ● 18004199139 Railway helplines
12.	Green Souvenirs	<ul style="list-style-type: none"> ● 1000 souvenirs: <i>Bel</i> fruit (aegle marmelos), bananas, guavas (symbolizing the events' spiritual & cultural essence) to Russia, Germany, France, Israel & Italy

Source: Compiled by the Author.

Apart from this, the government issued six colour e-passes, keeping the safety and convenience of devotees in mind. These passes were designed to regulate vehicle movement and ensure effective crowd management during the event (Table 4).

Table 4 : E-Pass Issued by the Government

S1. No.	E-Pass Type	Description
1.	White Coloured	VIPs, Foreign Ambassadors, NRIs, High Court and representatives from central and state government departments
2.	Saffron Coloured E-Pass	<i>Akharas</i> and Institutions
3.	Yellow Coloured E-Pass	Working agencies, vendors, food courts and milk booths
4.	Red Coloured E-Pass	Emergency and essential services
5.	Sky Blue Colored E-Pass	Media Personals
6.	Blue Coloured E-Pass	Police force

Source: Mela Administration Office, 2025, Prayagraj.

As we all know, the Maha Kumbh Mela is one of the largest spiritual gatherings in the world, which draws millions of devotees from around the globe to the sacred city of Prayagraj. The government of Uttar Pradesh has gone to great lengths to ensure that the event is not only spiritually enriching but also safe and secure for all. The security measures included comprehensive force deployment; expansion of infrastructure and personnel; fire safety; river security by water police; digital surveillance; and established high-tech lost and found registration centres. In Prayagraj, Police Commissionerate, permanent and temporary infrastructures were also established, which included 8 zones, 18 sectors, 13 temporary stations, 44 permanent stations, 33 temporary checkpoints, 5 companies of PAC, 4 teams of NDRF, 12 teams of AS (Assault Squad) check and 4 teams of BDD (Bomb Detection and Disposal Squad).

[A] Parking of Vehicles: During the Mela period of 46 days, Maha Kumbh Kshetra was declared as a 'no vehicle zone'. Strict parking regulations were implemented, viz., one-way routes, restricting vehicle access to only essential services and emergency services (See Fig. 3.0). Most of the pilgrims were expected to travel on foot or use public transportation to reach the bathing ghats. Details of the parking location for 3 points, i.e. Parade, Jhunki and Arail, (Table 5). Apart from this, 1700 signages for the visitors, 500 shuttle buses, 84 holding areas (45 city in Trans-Yamuna) and 195 watch towers were established for guidance; colored e-rickshaws viz., for Jhunki (blue); Naini (yellow); Phaphamau (green); Dhoomanganj (red), city areas (white), and mela area (orange) were deployed to avoid any confusion. The majority of the parking lots have been set up within a 5 km radius of the *Sangam* area. About 102 parking lots and 20 satellite parking lots were established, which covered an area of 1900 hectares. For this, 1400 traffic police personnel

and home guards were assigned the job to regulate the movement of the devotees. The satellite parking lot had cloakrooms, 'rain *basera*' (night shelter), crane facility, first aid post, police assistance booths and shops for essential communities.

Major highlights for the efficient management of traffic were as follows:

- *No traffic zone on major bathing days.*
- *Strict entry times.*
- *Separate entry and exit routes.*
- *Public transport enhancement.*

Table 5: Parking Locations

Sl. No.	Routes	Parking Places
1.	Vehicles from Jaunpur	Sugar Mill Parking, Pure Surdas Parking (Gurapur Road), Samaya Mai Mandir, Badra Saunauti Rahimpur Road <i>Pilgrims will enter Mela area on foot via Old GT Road</i>
2.	Vehicles from Varanasi	Mahua Bagh Thana Jhunsi (Akhada Parking), Saraswati Parking, Jhunsi Railway Station, Nageshwar Temple Parking, Gyan Ganga Ghat, Chhatnag Parking, Shiv Mandir Ustapur Mahmoodabad Parking <i>Entry on foot via Chhatnag Road</i>
3.	Vehicles from Mirzapur	Devrakh Uparhar Parking North/South, Tent City Parking (Madanua, Mawaiya, Devrakh) Omaxe City Parking and Ghazia Parking North/South. <i>Entry on foot via Arail Bandh Road</i>
4.	Vehicles from Rewa-Banda-Chitrakoot	Parking at Navprayag Parking, Agriculture Institute Parking Yamuna Patti, Maheva East/West Parking and Mirkhpur Kachhar Parking <i>Entry on foot via Old Rewa Road and New Rewa Road from Arail Bandh</i>
5.	Vehicles from Kanpur-Kaushambi	Parhigat Kali extension Plot No. – 7 Allahabad Degree College Ground, Dadhi Kando Ground <i>Entry on foot via GT Jawahar Square and Kali Road</i>
6.	Vehicles from Lucknow-Pratapgarh	Gangeshwar Mahadev Kachhar Parking, Nagvasuki Parking, Bakshi Bandh Kachhar Parking, Bada Bagada Parking and IERT Parking <i>Entry on foot via Navas Margh</i>
7.	Vehicles from Ayodhya-Pratapgarh	Shiv Baba Parking <i>Enter the Mela area on foot via Sangam Lower Marg</i>

Source: Hindustan Times Feb. 12, HT Correspondent Maha Kumbh Nagar

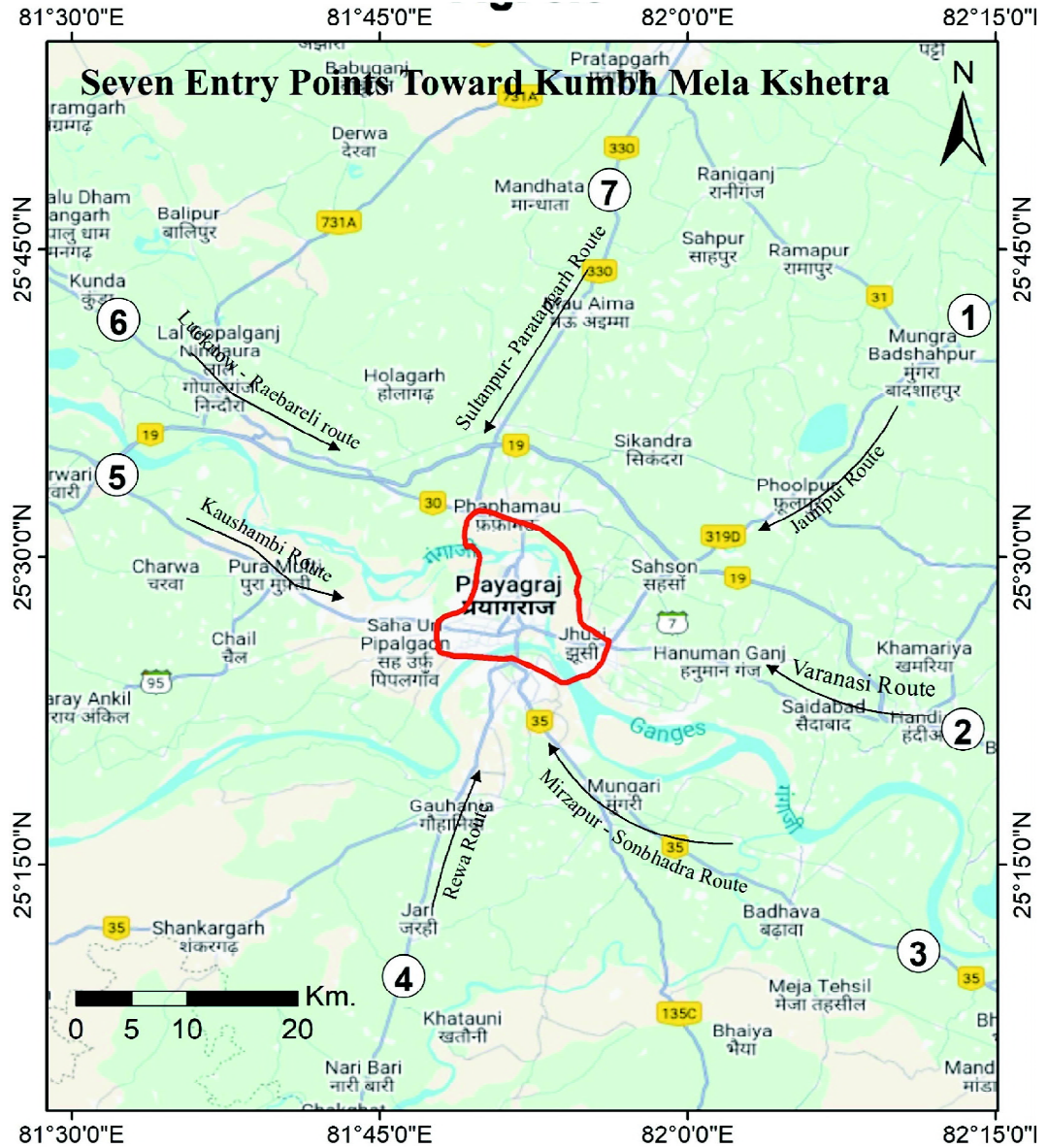


Fig. 3: The Entry points from the different directions towards Mela kshetra

- *Traffic diversions.*
- *Police monitoring.*
- *Accessibility for emerging services.*
- *Interstate/inter-district coordination along with GRP (Government Railway Police), railways, roadways, and district police.*
- *Communication and awareness.*

[B] Railways: At present, Prayagraj has nine railway stations, viz., Prayagraj Junction, Naini Junction, Prayagraj, Cheoki, Subedarganj, Prayagraj Sangam, Prayagraj Junction, Phaphamau Junction, Prayagraj, Rambagh Station and Jhunsi Station. Indian Railways has deployed regular and special trains to facilitate the movement of pilgrims with infrastructural upgrades and enhanced amenities at the above-mentioned stations. Among the nine stations serving Prayagraj, the number of trains providing support to the pilgrims (Tables 6 and 7). In Table 9, details of the colour code for the convenience of the pilgrims have been given.

Table 6: Station-Wise Train Breakup

Sl. No.	Station	No. of Trains
1.	Prayagraj Junction	5332
2.	Naini Junction	2017
3.	Prayagraj Cheoki	1993
4.	Subedarganj	4313
5.	Prayagraj Sangam	515
6.	Prayag Junction	1326
7.	Phaphamau Junction	1010
8.	Prayagraj Rambagh	764
9.	Jhunsi Station	1207

Source: DRM Office (Indian Railways), Prayagraj.

Meticulous planning has been made by the Indian Railways to facilitate smooth travel for the pilgrims. A 'war room' was set up by the railway board to oversee nine railway stations in the Prayagraj region through CCTV cameras. About 17 new temporary passenger shelters have been built, which increased the total number of railway shelters to 28. However, the holiday capacity of these shelters has been increased from 21,000 to 110,000.

Table 7: Train Arrangements for Pilgrims

Sl. No.	Train Types	No. of Trains
1.	Regular Train Services	10,028
2.	Special Train Services	3468 (originated from Kumbh)
3.	Mela Special Long-Distance Trains	706 (reserved)
4.	Mela Special Short-Distance Trains (200-300 km)	1869 (unreserved)
5.	Ring Rail Services	559

Source: DRM Office (Indian Railways), Prayagraj.

The Railways aimed to improve crowd management and provide assistance to the passengers and staff. However, the main features are as follows:

- Allotment of Rs. 5000 crore by the government
- Enhanced station infrastructure
- CCTV installations
- Special trains for pilgrims
- Multilingual announcements (12 languages)
- Setting up a war room to monitor all the stations
- Medical booth on every platform
- All level crossing gates have been closed
- Construction of 21 new ROBs (Road Over Bridges) and RUBs (Road Under Bridges) for smooth operation
- Separate entry gates for unreserved and reserved class passengers
- Direction-based colour-coded tickets
- More than 20,000 sq. meters of wall space at stations has been painted with the Kumbh theme

[C] Bathing Ghats: For this auspicious time where millions of pilgrims, sadhus, and saints were supposed to take a holy dip at the confluence of three rivers, the government has developed 41 ghats, which include 8 permanent ghats. Apart from this, there are 100 raw ghats. Three ghats have been constructed on the river Ganga and five on the river Yamuna (Tables 9 and 10). The irrigation department has reclaimed more than 2 hectares of land at Triveni Sangam within 85

Table 8: Codes for the Convenience of the Pilgrims

Railway Stations	Gate	Passenger Shelter	Color Code	Travel Towards
Prayag Junction	1	1	White Regular Ticket	Reserved Ticket Passenger
	2	2	Yellow	Varanasi, Jaunpur
	3	3	Green	Lucknow
	3	4	Blue	Ayodhya
Phaphamau	1	1	Yellow	Varanasi, Jaunpur
	1	2	Green	Lucknow
	1	3	Blue	Ayodhya
Prayagraj Junction	1	1	Red	Lucknow, Varanasi
	2	2	Blue	Mugalsarai
	3	3	Yellow	Manikpur, Jhansi, Satna
	4	4	Green	Kanpur, New Delhi
	5	-	White Regular Ticket	Reserved Ticket Passenger
Naini Junction	4,3	4A,4B	Yellow	Mugalsarai
	2	-	White Regular Ticket	Reserved Ticket Passenger
	1	3	Red	Manikpur, Satna
	1	2	Blue	Manikpur, Jhansi
	1	1	Green	Kanpur, New Delhi
Prayagraj Cheoki	1A	2	Red	Manikpur, Satna, Jhansi
	1B	1	Green	Pt. Deen Dayal Upadhyay
	2	Reserved	Passengers	All Directions
Subedarganj	1	1	-	Kanpur
	3	Reserved	Passengers	All Directions

Source: Times of India, January, 2025, Prayagraj.

days to allow 2 lakh devotees to bathe at once. With the use of 4 Dredging Machines, 26 hectares of land have been reclaimed for the bathing ghats.

Table 9: Comparative Development of Ghats Stretch

Sl. No.	Year of Kumbh Mela	Bathing Stretch	Ghats
1.	2013	12 km	5 permanent
2.	2019	8 km	40 bathing ghats (7 permanent)
3.	2025	12	41 bathing ghats (8 permanent)

Source: Mela Administration, 2025

Table 10: Permanent Bathing Ghats

Sl. No.	Name of Ghats	River	Dimensions
1.	Dashwamedh Ghat	Ganga	110m length X 95m wide
2.	Quila Ghat	Yamuna	60m X 70m
3.	Saraswati Ghat	Yamuna	60m X 30m
4.	Mori Ghat	Yamuna	60m X 30m
5.	Kali Ghat	Ganga	60m X 30m
6.	Chatnag Ghat	Ganga	60m X 30m
7.	Maheva Ghat	Yamuna	60m X 30m
8.	Arail Ghat	Yamuna	150m X 150m

Source: Irrigation Department, U.P.

Apart from the above ghats, other ghats are Triveni Sangam Ghat, Naukayan Ghat (for boating opportunities on the river Yamuna), Ram Ghat on the river Yamuna; Saraswati Ghat (next to Sangam area); Nagvasuki Ghat (on the river Ganga); Chandra Shekhar Azad Ghat (Rasulabad on the river Ganga, (60m X 30m); Gyan Ganga Ghat on river Ganga (60m X 30m); and Gau Ghat on the river Yamuna. Water has been reserved as the essence of life. It has been seen as a medium for physical, mental and spiritual purification. The mela administration divided the total sectors route-wise for the holy dip (Table 11).

Apart from this, lighting arrangements were made across all the ghats. Stairs were reinforced using a combination of straw, grass and soil packed in sacks. Changing rooms for women were also set up, and efforts were made to keep the ghats and water clean. Watch towers were set up to monitor the bathing ghats, and different insignia were being installed at every ghat for easy identification. Other facilities included sitting places, parking, yagna shalas, aarti sthal, meditation centres, ramps for the disabled and a green zone.

Table 11: Holy Dip in Different Sectors

Sl. No.	Routes	Holy Dip in Different Sectors
1.	From Jaunpur Route	5, 13, 14, 15 and 16 sectors
2.	From Varanasi Route	Old GT and Chatnag area
3.	From Mirzapur Route	24 and 25 sectors
4.	From Rewa-Banda-Chitrakoot	23 and 24 sectors
5.	From Kanpur and Kaushambi	Upper Sangam Marg to Sangam Nose
6.	From Ayodhya and Pratapgarh	11 sectors

Source: Compiled by the Author

[D] Pollution Control: Prayagraj generates 468.28 million litres of sewage per day. The treatment capacity was around 340 million litres per day. Now the challenge was to treat 34 untrapped drains that released 128.28 million litres per day of sewage untreated into the river. (Hindustan Times, 2025). On 5th November, 2024, Dissolved Oxygen was 7.9 milligrams/litre and Biochemical Oxygen Dissolved was 2.8 milligrams/litre. Several measures were taken which are as follows:

1. Sewage Management

- Upgradation and expansion of sewage treatment plants
- 100% treatment before being discharged into the river
- Interception and diversion of major drains

Impact – *This will reduce pollution from untreated sewage.*

2. Industrial Pollution Control

- Strict monitoring and enforcement of pollution norms
- Closure of non-compliant industries before the event

Impact – *This will lower the contamination from industrial waste.*

3. Solid Waste Management

- Deployment of cleaning teams for regular waste collection
- Installation of dustbins and bio-toilets at ghats

Impact – *Thus solid waste will be prevented to enter the river.*

4. Water Quality Monitoring

- Regular testing by CPCB and UPPCB for key water quality parameters
- Real time monitoring of DO, BOD and Fecal Coliform

Impact – *This will ensure timely corrective actions if pollution level rises.*

5. Water Flow Management

- Controlled water release from upstream reservoirs to maintain the flow
- Periodic flushing of water to dilute pollutants

Impact – *This will improve the self-purification capacity of the rivers.*

6. Public Awareness and Regulations

- Strict enforcement of antipollution laws
- Awareness campaigns to educate pilgrims

Impact – *This will inculcate a sense of responsibility among the visitors and bathers.*

Thus, the aforesaid efforts were made to ensure safe and clean water for millions of pilgrims. The quality of water was a focal point of concern both for the authorities and the pilgrims. Therefore, a regular monitoring of water quality was conducted by the Central Pollution Control Board. The monitoring occurred twice a week from January 12 to February 22, 2025. It included auspicious bathing days, at five locations on the river Ganga and two on the river Yamuna (Times of India, 2025). Due to significant variability in the data across different dates and locations, the Central Pollution Control Board issued data based on median values which provided a more accurate representation of overall permissible water quality (Table - 12).

Table 12: Permissible Limits

Parameters	Median Value	Permissible Limit	Unit
pH	–	6.5-8.5	
DO	8.7	eH 5	mg/l
BOD	2.56	d” 3	mg /l
Fecal Coliform	1,400	dH 2500	MPN/100ml

MPN = Most Probable Number

Source: Central Pollution Control Board, 2025.

However, the water quality status on the day before the beginning of the mega event has been depicted in Table 13, and the water quality of Geo Tubes (Table 14).

Table 13: River Quality Status at Prayagraj

River	Location	pH (6.5-8.5)	DO (≥ 5 mg/l)	BOD (mg/l)	Total Coliform	Fecal Coliform
Ganga	Shringverpur Ghat	7.45	9	2.44	4500	<1.8
Ganga	Lord Curzon Bridge	7.41	8.8	2.36	7800	<1.8
Ganga	Before Shashtri Bridge near Nagvasuki	7.48	8.7	2.16	4500	,1.8
Ganga	Sangam	7.52	8.7	3.74	4500	2000
Ganga	Decha Ghat	7.63	7.9	5.24	17000	4500
Yamuna	Old Naini Bridge	7.87	8	4.52	17000	2000
Yamuna	Ganga at Sangam	7.84	8.1	3.64	70000	4500

Source: UP Pollution Control Board

Table 14: Water Quality of GeoTubes at Prayagraj

Sl. No.	Sample Location	pH	BOD (mg/l)	C.O.D. (mg/l)	TSS (mg/l)	T.C. (MPN/100ml)	F.C. (MNP/100ml)
1.	Geotube Salori Drain	7.15	28.0	112.0	84.0	2400	930
2.	Geotube Jondhwal Drain	7.44	27.0	90.0	82.0	2000	680
3.	Geotube Sadar Bazar Drain	7.40	25.0	96.0	78.0	1700	780
4.	Geotube Rajapur Drain	7.24	29.0	128.0	96.0	2200	940
5.	Geotube Shivkuti Drain	7.53	29.0	114.0	90.0	2100	780
6.	Geotube ADA Drain	7.18	27.0	104.0	88.0	2600	920

Source: UPPCB (Uttar Pradesh Pollution Control Board), 2025

No doubt the government has made sincere efforts to keep the water suitable for bathing. Although in some sample locations, the water quality was below the desired norms.

Field Observation and Analysis

With a sample size of 3000 pilgrims who visited the Maha Kumbh held at Prayagraj, 2025, an opinion was gathered regarding satisfaction with the government facilities, which included, *first*, the sanitation, drinking water, security, medical camps, transport and crowd management. *Second*, the purpose of the visit, viz., religious, spiritual, tourism or research observation. *Thirdly*, expectation vs experience. For details, see Tables 15, 16, 17 and 18.

Table 15: Age Group Classification

Age-Group	Number of Pilgrims	Percentage
Youth (18-30 yrs)	1000	33.3%
Adult (31-59 yrs)	1200	40%
Old (60+yrs)	500	26.70%
Total	3000	100%

Source: Field survey conducted by the author.

Table 16: Satisfaction Regarding Government Facilities

Age- Group	Satisfied	Neutral	Dissatisfied	Total
Youth	700	200	100	1000
Adults	850	200	150	1200
Old	500	150	150	800
Total	2050	550	400	3000

Source: Field survey conducted by the author.

Table 17: Purpose of Visit

Age- Group	Religious Bath	Spiritual Experience	Tourism	Research Observation
Youth	450	250	250	50
Adults	800	250	100	50
Old	650	120	20	10

Source: Field survey conducted by the author.

Table 18: Expectations vs Experience

Age-Group	Expected High Facilities (%)	Reported Positive Experience (%)
Youth	75	70
Adults	80	72
Old	85	62

From the aforementioned tables, it is clear that the old age group showed slightly lower satisfaction compared to their expectations.

Hypothesis Formulation: Chi-Square test was applied in order to compare the age group and satisfaction level.

Null Hypothesis (H_0): There is no significant association between age group and satisfaction level.

Alternative Hypothesis (H_1): There is a significant association between age groups and satisfaction levels. Expected frequency has been calculated, and details are given in Table 19.

Table – 19

Age-Group	Satisfied (E)	Neutral (E)	Dissatisfied (E)
Youth	683.33	183.33	133.33
Adults	820.00	220.00	160.00
Old	546.67	146.67	106.67

The total Chi-Square value was **35.49**, and the degrees of freedom were 4; the critical value was 9.488 (5% significance level). Since $35.49 > 9.488$, the null hypothesis is rejected.

Interpretation

There is a statistically significant association between age group and satisfaction level regarding government facilities at the Maha Kumbh, Prayagraj, 2025. The satisfaction level was not uniform across age categories. The old pilgrims showed relatively lower satisfaction as compared to the youths and the adults.

Findings

After conducting a survey with sample size of 3000 pilgrims in different parts of Maha Kumbh mela area to know their level of satisfaction in terms of expectation versus experience related to facilities and religious activities have been discussed. An interesting find was that a vast majority of the pilgrims showed high levels of contentment towards the experience, posting a 68.3% satisfaction index. Religious bathing was the main motive of the visit, thus, confirming the highly religious nature of the pilgrimage experience. On the other hand, the younger pilgrims showed relatively higher tourist motivation. As a considerable number of them had prior plans to spend time at nearby tourist attractions like Ayodhya, Varanasi, and Chitrakoot. It can be deduced from these findings that younger pilgrims have increasingly integrated their religious experience with other forms of tourism, thereby indicating a growing trend within the motivational pattern of young pilgrims. As opposed to the younger pilgrims, the expectations of the older group of pilgrims were relatively high, and various infrastructural factors played a significant role in their cause of dissatisfaction. The long distance of about 5 to 6 kilometres, separating the parking area from the bathing ghats posed a considerable physical challenge for senior citizens. Moreover, the shuttle

buses provided to transport pilgrims around the city were relatively few in numbers and inadequately operated.

Even cases of financial exploitation were also noted throughout the entire pilgrimage route. At the Naukayan Ghat, boatmen were reportedly charging prices that were far beyond what was officially set by the government, and there were few, if any, attempts made by police officials at the scene to stop this trend. Additionally, transport vehicles driven by private individuals were also imposing excessive fares for journeys spanning distances between half a kilometer and one kilometer, thus, added to the troubles faced by the pilgrims. In this regard, elderly travelers found themselves in a more precarious situation, especially when considering their socio-economic status within the middle and lower-middle categories, who simply could not afford the increased charges. The result shows that the older pilgrims had significantly higher demands regarding comfort, accessibility, medical care, and crowd control. The greater contribution of the Chi-Square test for elderly dissatisfied respondents further corroborates the argument that the available infrastructure was insufficiently responsive to the needs of this age group.

Conclusion

The Maha Kumbh Mela is a monumental event and is considered the most revered religious gathering of the Hindus. This festival holds profound spiritual significance, deeply rooted in Hindu mythology and tradition (Singh, 2014). In fact, this sacred gathering offered the pilgrims the opportunity to purify themselves by bathing in the Triveni Sangam. The 2019 Kumbh Mela (Ardh Kumbh) was the world's largest peaceful congregation. It was promoted by the Uttar Pradesh government as a "divine and grand event" (Uttar Pradesh Government Report, 2019). This year, the Government of Uttar Pradesh, along with the support of the Central Government, acknowledging the spiritual significance of the '*Sangam Snan*', made substantial efforts to enlarge bathing ghats, along with infrastructural development, which included roads, railways, bus stations, an airport and many other facilities for the 45-day-long mega event. This fair was a hub of a wide range of economic activities and also witnessed significant revenue inputs. (Kenneth John, 2025) The services and supplies offered to the pilgrims included a wide range of basic devotee management to hotels, transport, food grains to helicopters and AI – based services. Both thousands of old Tirth-Purohiths and the Corporate World earned substantially. For comparative

Table – 20

Sl. No.	Years	Investment	Revenue Generated	Employment Generated
1.	2013	₹ 1300 crore	₹ 12000 crore approx.	1,00,000 approx.
2.	2019	₹ 4200 crore	₹ 1.2 lakh crore approx.	Over 6,00,000
3.	2025	₹ 7500 crore	₹ 2 lakh crore approx.	Estimated over 8,00,000

Source: Compiled by the Author

understanding, total expenditure and revenue earned have been given in Table 20 and item-wise income is depicted in Table 21.

Table 21: Item-wise Income

Sl. No.	Item Wise	Income Generated (in crores of Rupees)
1.	Puja Items	2000
2.	Flower Trade	800
3.	Groceries	4000
4.	Edible Oil	1000
5.	Vegetables	2000
6.	Bed mattress, Bed sheets & Other household goods	5000
7.	Dairy Products	4000
8.	Heaters/Blowers	50
9.	Plastic Jerry Cans	60
10.	Hospitality	2500
11.	Travel	300
12.	Boatmen	50
13.	Miscellaneous	300

Source: Compiled by the Author based on various newspapers.

One thing is evident that the scale of economic activities surrounding the Maha Kumbh was immense, spanning tourism, infrastructure development, retail, hospitality and transportation. In fact, in 2025, Maha Kumbh has surpassed previous melas in terms of both expenditure and revenue earned due to enhanced infrastructure and promotional efforts (CII, 2019). Thousands of part-time and full-time jobs have been created in various sectors, viz., hospitality and catering, transportation, construction, and local business. Thus, the government played a pivotal role in organizing this mega event. It planned extensive initiatives which included technology integration, public safety and environmental protective measures for a long-term economic stability and sustainability (Hindustan Times, 2025). It was more than a religious congregation and a powerful example of how tradition and modernity can coexist to create a lasting economic and social impact. Hence, it can be viewed either as a spiritual journey or as an economic engine or even both (Jeelani, 2025). This makes Maha Kumbh's significance undeniable as culture and economy are intertwined, not just shaping a city but an entire nation, which the Western economic models cannot. It integrates commerce, spirituality and social interactions in a unique fashion (Yadav,

2024). From a geographical perspective, this study highlights how demographic factors influence the perception of public service delivery in mega religious gatherings like Kumbh Mela. Thus, the age factor emerged as a significant determinant in evaluating event management efficiently. The study also reveals that while the government's arrangements were broadly successful in managing a large-scale pilgrimage event, targeted overall improvements like infrastructure, accessibility, medical aid, etc., were not made. However, the policy planners should consider differentiated service planning based on demographic characteristics to enhance inclusive satisfaction in future such mega events.

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