

# Telangana



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# About Telangana

- Telangana is India's youngest state, officially formed on June 2, 2014, becoming the 29th state of India.
- The state presents a beautiful blend of culture, tradition, and modern development.
- It is known for the peaceful co-existence of different religions, with communities celebrating festivals together with unity.
- Historical monuments like Charminar, Golconda Fort, and Kakatiya-era temples showcase Telangana's rich and diverse heritage.
- The capital city Hyderabad is a major IT hub, also famous for its rich Nizami history, iconic food like Biryani, and bustling bazaars.
- Telangana is home to unique arts and crafts such as Pochampally Ikat, Bidriware, and Nirmal paintings.



# Goals and Objectives

- To enhance tourism in Telangana by identifying trends, forecasting growth, and providing actionable insights.
- **OBJECTIVE N° 1**  
To analyze domestic and foreign visitor trends across all districts (2016–2019).
- **OBJECTIVE N° 2**  
To connect high-performing districts with low-performing ones to increase overall tourism.
- **OBJECTIVE N° 3**  
To support Telangana state in improving tourism through data-driven recommendations.



# Stages in this project

## Preliminary Research

### Provide Insights For Telangana Government Tourism Department

**Preliminary Research Questions:** (Answers can be found directly from the given data)

1. List down the top 10 districts that have the highest number of domestic visitors overall (2016 - 2019)?  
(Insight: Get an overview of districts that are doing well)

2. List down the top 3 districts based on compounded annual growth rate (CAGR) of visitors between (2016 - 2019)?  
(Insight: Districts that are growing)

3. List down the bottom 3 districts based on compounded annual growth rate (CAGR) of visitors between (2016 - 2019)?  
(Insight: Districts that are declining)

4. What are the peak and low season months for Hyderabad based on the data from 2016 to 2019 for Hyderabad district?  
(Insight: Government can plan well for the peak seasons and boost low seasons by introducing new events)

5. Show the top & bottom 3 districts with high domestic to foreign tourist ratio?  
(Insight: Government can learn from top districts and replicate the same to bottom districts which can improve the foreign visitors as foreign visitors will bring more revenue)

## Secondary Research

**Secondary Research Questions:** (Need to do research and get additional data)

6. List the top & bottom 5 districts based on 'population to tourist footfall ratio\*' ratio in 2019? (\* ratio: Total Visitors / Total Residents Population in the given year)

(Insight: Find the bottom districts and create a plan to accommodate more tourists)

7. What will be the projected number of domestic and foreign tourists in Hyderabad in 2025 based on the growth rate from previous years?

(Insight: Better estimate of incoming tourists count so that government can plan the infrastructure better)

8. Estimate the projected revenue for Hyderabad in 2025 based on average spend per tourist (approximate data)

Tourist	Average Revenue
Foreign Tourist	₹ 5,600.00
Domestic Tourist	₹ 1,200.00

Suggested areas for further secondary research to get more insights:  
Crime rate, Cleanliness Ratings, Infrastructure Development Ratings etc.

## Recommendations

**Recommendations that can be provided to the government**

9. Districts with highest potential
  - a. Which districts has the highest potential for tourism growth and what actions government can take?
10. Cultural / Corporate Events to boost tourism
  - a. What kind of events the government can conduct?
  - b. Which month(s)?
  - c. Which districts?
11. Dubai has made itself a business hub and enjoys massive business tourism. Can Hyderabad emulate the Dubai model? Provide insights based on your research.
12. Provide all other recommendations that can boost the telangana tourism, particularly Hyderabad.

# 1. Top 10 districts that have the highest number of domestic visitors overall (2016 - 2019)

```
SELECT district,  
       SUM(visitors) AS total_visitors  
  FROM domestic_visitors  
 GROUP BY district  
 ORDER BY total_visitors DESC  
LIMIT 10;
```



district	total_visitors
Hyderabad	83900960
Rajanna Sircilla	41763276
Warangal (Urban)	30726603
Yadadri Bhongir	26893080
Bhadradri Kothagudem	21600962
Medak	20542639
Jayashankar Bhoopalpally	19632865
Mahbubnagar	17180118
Nirmal	13315796
Jagtial	11303514

## Highlights

- **Hyderabad** recorded the highest number of domestic visitors at 83.9 million, followed by **Rajanna Sircilla** (41.2 million) and **Warangal Urban** (30.7 million).
- This trend highlights that Hyderabad draws visitors not only for tourism but also for education, employment, and healthcare, making it a multifaceted hub of activity.

## 2. Top 3 districts based on compounded annual growth rate (CAGR) of visitors between (2016 - 2019)

```
WITH visitor_summary AS (
    SELECT district,
        SUM(CASE WHEN year = 2016 THEN visitors ELSE 0 END) AS visitors_2016,
        SUM(CASE WHEN year = 2019 THEN visitors ELSE 0 END) AS visitors_2019
    FROM domestic_visitors
    GROUP BY district
)
SELECT district,
    visitors_2016,
    visitors_2019,
    ROUND(
        (POWER(CAST(visitors_2019 AS DECIMAL(18,4)) /
        NULLIF(visitors_2016, 0), 1.0/3) - 1) * 100, 2) AS CAGR_Percentage
FROM visitor_summary
WHERE visitors_2016 > 0
ORDER BY CAGR_Percentage DESC
LIMIT 3;
```



CAGR =  $(\text{Ending Value} / \text{Starting Value})^{(1 / \text{Number of Years})} - 1$

### Highlights

The number of visitors to Mancherial, Warangal (R), and Bhadradi Kothagudem has steadily increased from 2016 to 2019.

district	visitors_2016	visitors_2019	CAGR_Percentage
Mancherial	7802	269810	225.8
Warangal (Rural)	19400	353500	163.15
Bhadradri Kothagudem	889030	12817737	143.39

### 3. Bottom 3 districts based on compounded annual growth rate (CAGR) of visitors between (2016 - 2019)

WITH visitor\_summary AS (

```
    SELECT district,
           SUM(CASE WHEN year = 2016 THEN visitors ELSE 0 END) AS visitors_2016,
           SUM(CASE WHEN year = 2019 THEN visitors ELSE 0 END) AS visitors_2019
      FROM domestic_visitors
     GROUP BY district
)
```

```
SELECT district,
       visitors_2016,
       visitors_2019,
       ROUND(
           (POWER(CAST(visitors_2019 AS DECIMAL(18,4)) /
NULLIF(visitors_2016, 0), 1.0/3) - 1) * 100, 2) AS CAGR_Percentage
  FROM visitor_summary
 WHERE visitors_2016 > 0
 ORDER BY CAGR_Percentage ASC
LIMIT 3;
```



👉 CAGR (Compound Annual Growth Rate) represents the average annual growth rate of a value over a specific period, factoring in the impact of compounding.

#### Highlights

- Between 2016 and 2019, the number of domestic visitors in the three mentioned districts declined.
- A negative CAGR reflects this downward trend, indicating a consistent decrease rather than growth.
- This drop could be attributed to factors such as inadequate infrastructure, limited accessibility, or a lack of effective tourism initiatives in these regions.

district	visitors_2016	visitors_2019	CAGR_Percentage
Karimnagar	9167468	77491	-79.63
Nalgonda	5858461	140918	-71.13
Warangal (Urban)	25788035	1795230	-58.86

#### 4. Peak and low season months for Hyderabad based on the data from 2016 to 2019 for Hyderabad district

Peak months for domestic visitors:

```
SELECT
    month,
    SUM(visitors) AS total_visitors
FROM domestic_visitors
WHERE district = 'Hyderabad'
GROUP BY month
ORDER BY total_visitors DESC
LIMIT 3;
```



month	total_visitors
June	16897783
December	9338637
October	6552397

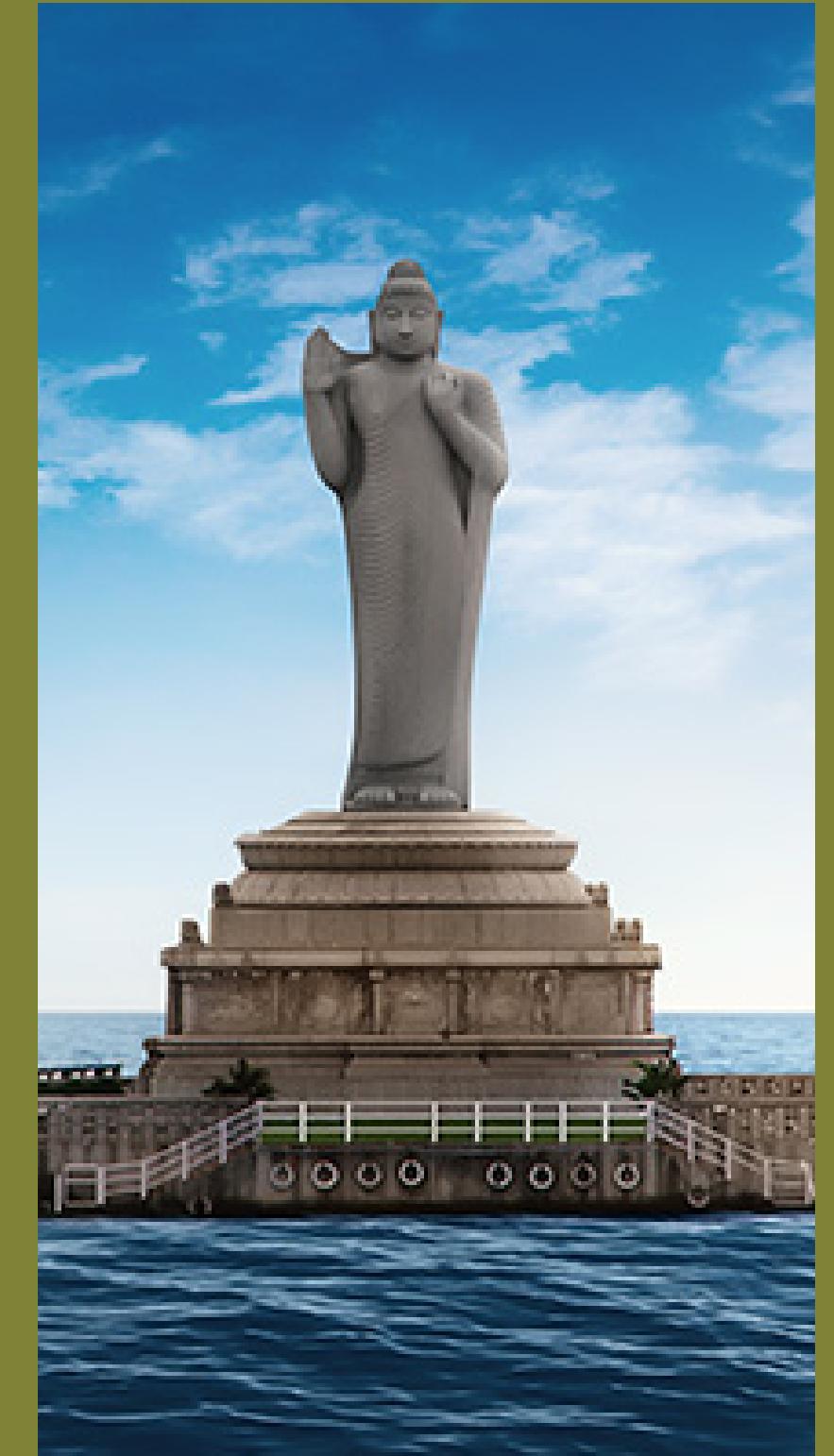
##### Highlights

###### 1. June (Summer Holidays & Local Tourism Spike):

- School and college holidays –** Families often plan vacations during this time.
- Local and regional tourists –** Many from nearby states like Telangana, Andhra Pradesh, and Maharashtra visit Hyderabad due to its rich history and attractions.

###### 2. December & October (Winter Break & Festive Season):

- Pleasant winter weather –** Ideal for sightseeing and outdoor tourism.
- Christmas and New Year holidays –** Increased travel and tourism during this festive break.



Low season months for domestic visitors:

```
SELECT
    month,
    SUM(visitors) AS total_visitors
FROM domestic_visitors
WHERE district = 'Hyderabad'
GROUP BY month
ORDER BY total_visitors ASC
LIMIT 3;
```



month	total_visitors
February	5014430
March	5227626
September	5312283

## Highlights

### 1. End or Start of School Terms:

- These months fall outside of major school vacation periods, so families with children are less likely to travel.

### 2. Weather Transitions:

- **February & March:** Beginning of summer in India, with rising temperatures that can discourage travel.



Peak months for Foreign visitors:

```
SELECT
    month,
    SUM(visitors) AS total_visitors
FROM foreign_visitors
WHERE district = 'Hyderabad'
GROUP BY month
ORDER BY total_visitors DESC
LIMIT 3;
```



month	total_visitors
December	119995
January	106450
February	103778

## Highlights

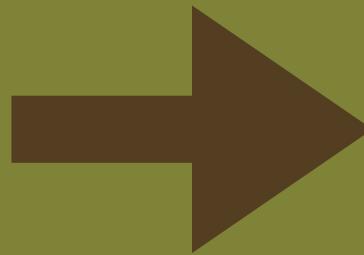
### December, January and February

- Pleasant Weather:** These months offer comfortable temperatures ideal for travel and sightseeing in Telangana.
- International Holiday Season:** Coincides with Christmas, New Year, and winter breaks in many countries—making it a popular time to visit.
- Cultural Attractions:** Festivals like Sankranti in January attract tourists interested in local traditions.



## Low season months for foreign visitors:

```
SELECT  
    month,  
    SUM(visitors) AS total_visitors  
FROM foreign_visitors  
WHERE district = 'Hyderabad'  
GROUP BY month  
ORDER BY total_visitors ASC  
LIMIT 3;
```



month	total_visitors
May	60376
April	60495
June	67524

### Highlights

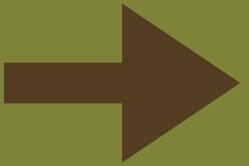
- **April** – Very hot weather begins, fewer tourists.
- **May** – Peak summer; uncomfortable for travel.
- **June** – Start of monsoon; not ideal for sightseeing.

### Insights on Peak and Off-Season Trends:

Understanding the peak and off-season months helps the government allocate resources more efficiently, manage tourist flow, and enhance visitor experience during busy periods. During low seasons, targeted campaigns, cultural festivals, and promotional events can help attract more tourists and ensure consistent economic benefits year-round.

## 5. Top & bottom 3 districts with high domestic to foreign tourist ratio

```
WITH DomesticTotals AS (
    SELECT district, SUM(visitors) AS domestic_visitors
    FROM domestic_visitors
    GROUP BY district
),
ForeignTotals AS (
    SELECT district, SUM(visitors) AS foreign_visitors
    FROM foreign_visitors
    GROUP BY district
),
RatioCTE AS (
    SELECT
        d.district,
        d.domestic_visitors,
        f.foreign_visitors,
        ROUND(d.domestic_visitors / NULLIF(f.foreign_visitors, 0), 2)
    AS domestic_foreign_ratio
    FROM DomesticTotals d
    LEFT JOIN ForeignTotals f ON d.district = f.district
)
SELECT *
FROM RatioCTE
ORDER BY domestic_foreign_ratio DESC LIMIT 3;
```



### Top 3 districts:

district	domestic_visitors	foreign_visitors	domestic_foreign_ratio
Nirmal	13315796	2	6657898.00
Jangaon	826280	2	413140.00
Adilabad	7321575	32	228799.22



### Highlights

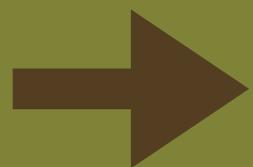
- Nirmal** – Popular for local crafts and nature; lacks international promotion.
- Jangaon** – Attracts domestic pilgrims; limited foreign appeal and infrastructure.
- Adilabad** – Known for nature spots; poor connectivity reduces foreign visits.

👉 These districts need better promotion, infrastructure, and transport to attract foreign tourists.

```

WITH DomesticTotals AS (
  SELECT district, SUM(visitors) AS domestic_visitors
  FROM domestic_visitors
  GROUP BY district
),
ForeignTotals AS (
  SELECT district, SUM(visitors) AS foreign_visitors
  FROM foreign_visitors
  GROUP BY district
),
RatioCTE AS (
  SELECT
    d.district,
    d.domestic_visitors,
    f.foreign_visitors,
    ROUND(d.domestic_visitors / NULLIF(f.foreign_visitors, 0), 2)
  AS domestic_foreign_ratio
  FROM DomesticTotals d
  LEFT JOIN ForeignTotals f ON d.district = f.district
)
SELECT *
FROM RatioCTE
WHERE foreign_visitors > 0
ORDER BY domestic_foreign_ratio ASC LIMIT 3;

```



### Bottom 3 districts:

district	domestic_visitors	foreign_visitors	domestic_foreign_ratio
Hyderabad	83900960	1044898	80.30
Warangal (Rural)	819162	306	2677.00
Mulugu	1819800	575	3164.87



### Highlights

- Hyderabad** – Strong international presence due to its global connectivity, business hubs, and medical tourism.
- Warangal Rural** – Heritage sites like Ramappa attract both domestic and foreign tourists.
- Mulugu** – Nature and historical attractions draw foreign tourists interested in offbeat destinations.

👉 These districts have a balanced or higher share of foreign visitors due to better visibility, heritage appeal, and accessibility.

## 6. Top & bottom 5 districts based on 'population to tourist footfall ratio' in 2019

```
SELECT
    p.district,
    p.Est_population_2019,
    COALESCE(d.total Domestic, 0) AS domestic_visitors,
    COALESCE(f.total Foreign, 0) AS foreign_visitors,
    (COALESCE(d.total Domestic, 0) + COALESCE(f.total Foreign, 0)) AS total_visitors,
    ROUND((COALESCE(d.total Domestic, 0) + COALESCE(f.total Foreign, 0)) / p.Est_population_2019, 2) AS
    footfall_ratio
FROM
    district_population p
LEFT JOIN
    (SELECT district, SUM(visitors) AS total Domestic
     FROM domestic_visitors
     WHERE year = 2019
     GROUP BY district) d ON p.district = d.district
LEFT JOIN
    (SELECT district, SUM(visitors) AS total Foreign
     FROM foreign_visitors
     WHERE year = 2019
     GROUP BY district) f ON p.district = f.district
ORDER BY
    footfall_ratio DESC LIMIT 5;
```

Tourist Footfall Ratio =  
Total Visitors / Total  
Residents Population

Top 5 districts:



district	Est_population_2019	domestic_visitors	foreign_visitors	total_visitors	footfall_ratio
Mulugu	274240	1819800	575	1820375	6.64
Nirmal	754821	3816778	0	3816778	5.06
Hyderabad	4195696	13802362	319300	14121662	3.37
Siddipet	1076837	2987864	0	2987864	2.77
Adilabad	754346	775895	6	775901	1.03

```

SELECT
    p.district,
    p.Est_population_2019,
    COALESCE(d.total Domestic, 0) AS domestic_visitors,
    COALESCE(f.total Foreign, 0) AS foreign_visitors,
    (COALESCE(d.total Domestic, 0) + COALESCE(f.total Foreign, 0)) AS total_visitors,
    ROUND((COALESCE(d.total Domestic, 0) + COALESCE(f.total Foreign, 0)) / p.Est_population_2019, 2) AS footfall_ratio
FROM
    district_population p
LEFT JOIN
    (SELECT district, SUM(visitors) AS total Domestic
        FROM domestic_visitors
        WHERE year = 2019
        GROUP BY district) d ON p.district = d.district
LEFT JOIN
    (SELECT district, SUM(visitors) AS total Foreign
        FROM foreign_visitors
        WHERE year = 2019
        GROUP BY district) f ON p.district = f.district
ORDER BY
    footfall_ratio ASC LIMIT 5;

```



### Bottom 5 districts:

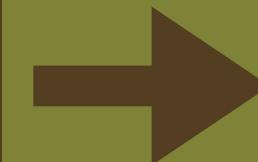
district	Est_population_2019	domestic_visitors	foreign_visitors	total_visitors	footfall_ratio
Yadadri Bhuvanagiri	786773	0	0	0	0.00
Bhadradri Kothagudem	1137694	0	0	0	0.00
Nagarkurnool	950480	0	0	0	0.00
Jagital	1048484	0	0	0	0.00
Jangaon	602624	0	0	0	0.00

### Insights

Bottom districts like Yadadri Bhuvanagiri, Bhadradri Kothagudem, Nagar Kurnool, Jagityala, and Janagaon have low tourist visits compared to their population. This shows they have room to grow in tourism. Improving infrastructure, promoting local attractions, and better marketing can help attract more visitors and boost the local economy.

## 7 & 8 . Projected numbers of domestic and foreign tourists in Hyderabad for 2025 based on past growth rates, and projected revenue for Hyderabad in 2025 considering the average spend per tourist

```
WITH cte AS (
    SELECT
        district,
        SUM(CASE WHEN year = 2016 THEN visitors ELSE 0 END) AS
    visitors_2016,
        SUM(CASE WHEN year = 2019 THEN visitors ELSE 0 END) AS
    visitors_2019
    FROM domestic_visitors
    WHERE district = 'Hyderabad'
    GROUP BY district
),
cte2 AS (
    SELECT
        visitors_2019,
        POWER(visitors_2019 / NULLIF(visitors_2016, 0), 1.0 / 3) - 1 AS CAGR
    FROM cte
)
SELECT
    visitors_2019 AS dom_visitors_2019,
    visitors_2019 * 1200 AS rev_dom_visitors_2019,
    ROUND(visitors_2019 * POWER(1 + AGR, 6)) AS dom_visitors_2025,
    ROUND(visitors_2019 * POWER(1 + AGR, 6)) * 1200 AS
    rev_dom_visitors_2025 FROM cte2;
```



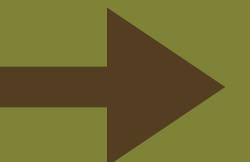
Domestic Visitors:

dom_visitors_2019	rev_dom_visitors_2019	dom_visitors_2025	rev_dom_visitors_2025
13802362	16562834400	4804244	5765092800

```

WITH cte AS (
    SELECT district,
        SUM(CASE WHEN year = 2016 THEN visitors ELSE 0 END) AS
    visitors_2016,
        SUM(CASE WHEN year = 2019 THEN visitors ELSE 0 END) AS
    visitors_2019
    FROM foreign_visitors
    GROUP BY district
    HAVING district = "Hyderabad"
),
cte2 AS (
    SELECT
        visitors_2019 AS for_visitors_2019,
        (POWER((visitors_2019 / visitors_2016), 1.0/3) - 1) AS CAGR
    FROM cte
)
SELECT
    for_visitors_2019,
    for_visitors_2019 * 5600 AS rev_for_visitors_2019,
    ROUND(for_visitors_2019 * POWER((1 + AGR), 6)) AS
    for_visitors_2025,
    ROUND(for_visitors_2019 * POWER((1 + AGR), 6)) * 5600 AS
    rev_for_visitors_2025
    FROM cte2;

```



Foreign Visitors:

for_visitors_2019	rev_for_visitors_2019	for_visitors_2025	rev_for_visitors_2025
319300	1788080000	1215810	6808536000

## 9. Districts with highest potential and government actions for growth

### 1. Hyderabad

#### Reason for Potential:

- Highest footfall of domestic and foreign tourists.
- Rich heritage (Charminar, Golconda Fort), IT hub, medical tourism, shopping destinations.

#### Recommended Government Actions:

- Expand infrastructure (roads, public transport).
- Promote night tourism and cultural walks.
- Improve airport connectivity and multilingual guides.



### 2. Warangal Urban

#### Reason for Potential:

- Historical sites like Warangal Fort, Thousand Pillar Temple.
- Fast-growing CAGR of visitors.

#### Recommended Government Actions:

- Develop eco-tourism around lakes and forests.
- Digital ticketing and AR/VR experiences at heritage sites.
- Tie-ups with travel platforms for wider promotion.



### **3. Rajanna Sircilla**

#### **Reason for Potential:**

- Known for textile and handloom industry.
- Attracts domestic visitors interested in craft and culture.

#### **Recommended Government Actions:**

- Develop "Handloom Tourism Circuits".
- Organize weaving demonstrations and cultural stays.
- Launch a state-supported e-commerce platform for local crafts.



### **4. Adilabad**

#### **Reason for Potential:**

- Eco-tourism and tribal tourism opportunities.
- Sites: Kuntala Waterfalls, Kawal Tiger Reserve, tribal villages.

#### **Recommended Government Actions:**

- Create eco-tourism packages and promote forest trails.
- Build basic tourist infrastructure (eco-lodges, signage).
- Train tribal youth as tourist guides.



## 10. Cultural / Corporate Events to Boost Tourism

### a) Suggested Events

These are designed to enhance tourism based on data-driven insights:

- **Cultural Fairs** – Traditional arts, folk music, dance (for districts with low CAGR).
- **Religious Pilgrimages** – Spiritual gatherings and yatras (for high potential spiritual sites).
- **Crafts & Food Expos** – Regional cuisines and handloom exhibitions (in districts with high domestic footfall).
- **Tech Conferences / Corporate Summits** – Business hubs like Hyderabad.

### b) Ideal Months (Based on Visitor Trends)

**Peak Months:**

- **December, January, February** – Good climate, high foreign tourist flow.
- **Ideal for:** International events, corporate expos, food & cultural fests.

**Low/Off Months:**

- **May, April, June** – Hot summer months with low visitors.
- **Ideal for:** Boosting visits through indoor expos, summer festivals, and special discounts.

### C) Targeted Districts

- **Hyderabad** – Ideal for corporate events, international summits, and cultural exhibitions.
- **Warangal** – Best for heritage & cultural fests (forts, temples).
- **Yadadri Bhuvanagiri** – Temple festivals, spiritual tourism campaigns.
- **Mulugu** – For tribal fairs like Medaram Jatara and eco-tourism events.



## **11. Dubai has made itself a business hub and enjoys massive business tourism. Can Hyderabad emulate the Dubai model?**

Yes, Hyderabad can emulate aspects of Dubai's model by leveraging its existing strengths and implementing focused strategies.

### **Insights & Recommendations:**

#### **Strong IT & Corporate Base:**

- Hyderabad already hosts global IT companies and a thriving startup ecosystem (e.g., HITEC City, T-Hub) – a strong foundation for business tourism.

#### **World-Class Infrastructure:**

- The city boasts an international airport, convention centers (HICC), metro connectivity, and premium hotels – aligning with Dubai's infrastructure model.

#### **Cultural Heritage + Modern Facilities:**

- Unlike Dubai's purely modern appeal, Hyderabad blends heritage (Charminar, Chowmahalla Palace) with modern business parks – unique selling point for cultural-corporate fusion events.

#### **Government Support Needed:**

To compete globally, Telangana government can:

- Host annual international expos and tech summits.
- Offer business-friendly tourism policies (visa ease, event incentives).
- Market Hyderabad as India's MICE (Meetings, Incentives, Conferences, Exhibitions) capital.



## 12. Recommendations to Boost Telangana Tourism (Particularly Hyderabad)

### 1. Improve Infrastructure:

- Develop last-mile connectivity to tourist spots (e.g., shuttle buses, e-rickshaws).

### 2. Promote Lesser-Known Destinations:

- Highlight emerging spots like Medak Fort, Bogatha Waterfalls, Laknavaram Lake.

### 3. Introduce Thematic Tourism Circuits:

- Heritage Circuit (Hyderabad – Warangal – Bhadrachalam)
- Temple Circuit (Yadadri – Vemulawada – Kondagattu)

### 4. Host Cultural & Corporate Events Year-Round:

- Annual Sufi music fests, literary festivals, international food fairs, and business conclaves.
- Use Hyderabad's event venues like HICC and Ravindra Bharathi effectively.

### 5. Focus on Cleanliness and Safety:

- Partner with Swachh Bharat for regular cleanliness audits.
- Install more CCTV, tourist helplines, and multilingual help desks.

### 6. Boost Medical & Wellness Tourism:

- Package check-ups, treatments with heritage site tours.

### 7. Encourage Homestays and Local Experiences:

- Incentivize locals to host tourists and promote authentic Telangana cuisine and culture.

### 8. Public-Private Partnerships (PPP):

- Collaborate with private firms to develop sustainable resorts, ropeways, and eco-parks.

### 9. Eco-Tourism and Adventure Sports:

- Develop trekking trails, boating activities, and nature camps around Nagarjuna Sagar, Pocharam, and Pakhal.



**THANK YOU!**