



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### Gorakhpur LPG BP TO PRIYA INDANE GRAMIN

#### Objective of the JRM Report

This JRM report is designed to ensure compliance with the Central Motor Vehicle Rules, 1989 (CMVR), AIS 140 standards, and the Road Transport Safety Policy (RTSP). It provides a comprehensive risk assessment for the transportation of hazardous materials along specified routes. By integrating these legal frameworks, the report offers a broad strategy for identifying and mitigating route-specific risks.

#### Regulatory Compliance

The report complies with the Central Motor Vehicles (Eleventh Amendment) Rules, 2022, mandating safe transportation practices for N2 and N3 category vehicles carrying hazardous materials. These rules require detailed route assessments, especially regarding road conditions, speed limits, and risk areas, to ensure safety compliance.

#### Risk Management Strategy

This report categorizes transportation routes into high-risk and medium-risk areas, with a focus on factors such as sharp turns, accident-prone regions, and elevation changes. The goal is to provide actionable recommendations to minimize these risks, including speed regulations, driver warnings for hazardous zones, and the option of alternate routes.

## Compliance with the Road Transport Safety Policy (RTSP)

The report integrates RTSP provisions, including mandatory driving hours, rest periods, and nighttime driving restrictions. It ensures that drivers follow official guidelines, such as taking prescribed rest breaks and avoiding dangerous road conditions like poor visibility, heavy crowds, or high-traffic areas during peak hours.

## Emergency Preparedness and Response

The report highlights the significance of predetermined emergency stops for refueling, rest, and overnight stays. It includes protocols for safe responses to road hazards, alternative routes, and rerouting processes if roads are closed or severe weather arises. This aligns with the RTSP emphasis on driver safety and rapid emergency response.

## Environmental Considerations

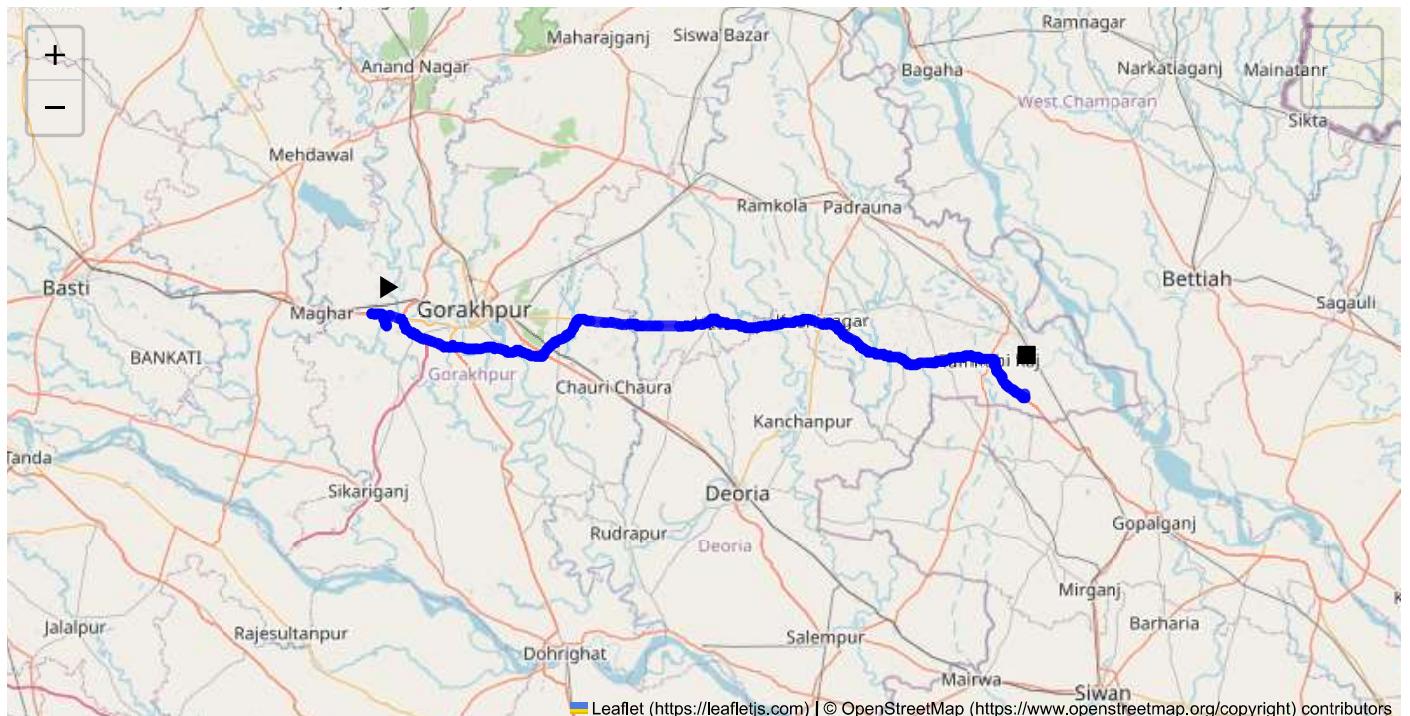
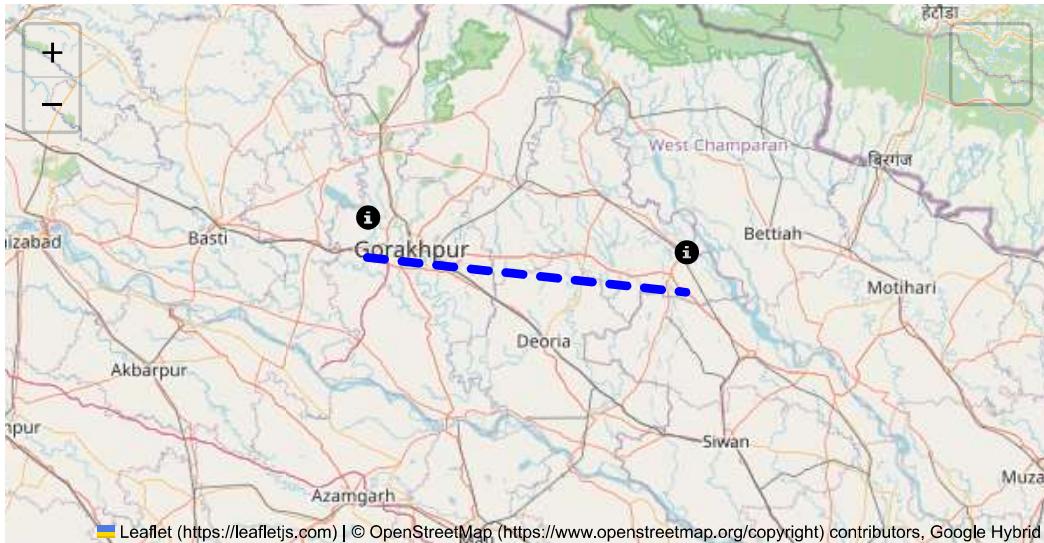
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental impacts during transport.

## Journey Risk Mitigation

The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety norms.

## Compliance with Government Directives

This report fully adheres to governmental directives regarding hazardous material transportation, implementing mandatory speed limits, nighttime driving restrictions, and comprehensive driver briefings and real-time alerts about route-related risks.



**Route Summary:**  
**Total Distance: 117.66 km**  
**Estimated Duration: 2.2 hours**  
**Adjusted Duration (Heavy Vehicle): 2.8 hours**  
**Start: (26.735959, 83.229398)**  
**End: (26.639161, 84.234083)**

## Welcome to the Journey Risk Management Study

### Route Safety Analysis Report

- Overview of the Route Map** The route from P6PH+9Q GIDA Industrial Area Phase 1, Sahjanwa to J6QM+5G8, Goraita Shri Ram, Uttar Pradesh covers approximately 117.66 kilometers, mainly traversing

state highways and rural roads typical of Uttar Pradesh. It proceeds through Gorakhpur, a regional city with significant traffic, before continuing into more rural areas.

## 2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Weather Conditions:** The region experiences a subtropical climate with hot summers, a monsoon season, and mild winters.
- **Weather-Related Hazards:** The monsoon season from June to September can cause heavy rainfall, leading to flooding and road waterlogging. Dense fog is also a concern during December and January, reducing visibility and increasing accident risk.

## 3. Traffic Pattern Analysis

- **Peak Hours:** Morning (8 AM to 11 AM) and evening (5 PM to 8 PM) see increased traffic, particularly near Gorakhpur.
- **Congestion-Prone Areas:** The stretch through Gorakhpur can be congested due to local traffic and narrow roads. Industrial areas near GIDA may also experience traffic slowdowns during shift changes.

## 4. Assessment of Road Quality and Infrastructure

- **Road Quality:** Roads vary from well-maintained highways around urban areas to poorer rural roads with potholes and uneven surfaces, which may impact vehicle safety.
- **Infrastructure:** Limited dedicated truck lanes; bridges and drainages may pose weight restrictions, so clearance checks are necessary.

## 5. Suggestions for Alternative Routes for Emergencies

In case of road closures or severe congestion:

- Consider using NH27 after Gorakhpur as an alternate to cover a portion of the route before diverting back to local roads towards the destination.

## 6. Summary of Local Regulations Affecting Hazardous Material Transport

- Trucks carrying hazardous materials are required to follow specific routes and timings. Checkpoint-based regulations might apply, particularly near population centers like Gorakhpur.

## 7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

- **Incidents:** Historical records indicate occasional accidents involving heavy vehicles, often related to poor road conditions or driver error, particularly under poor visibility or wet road conditions during the monsoon.

## 8. Environmental Considerations and Sensitive Areas

- **Sensitive Areas:** Proximity to agricultural lands requires precaution against leaks or spills of hazardous materials.
- Avoiding routes through wildlife reserves or densely populated areas is recommended.

## 9. Analysis of Communication Coverage

- Cellular coverage is generally consistent near urban areas; however, rural segments, especially those through agricultural zones, may have sporadic dead zones impacting communication.

## 10. Estimated Emergency Response Times

- **Urban Areas:** Emergency services take approximately 15-30 minutes within Gorakhpur.
- **Rural Roads:** Response times can extend to 45-60 minutes due to distance and road conditions.

## 11. [Incorrect Numbering]

## 12. Overall Summary of Risk Assessment

The route presents several challenges:

- Weather: Monsoon rains and winter fog are significant hazards.
- Traffic: High congestion in urban areas and variable road conditions on rural stretches increase risk.
- Infrastructure: Mixed road conditions impact vehicle integrity and require careful navigation.
- Emergency Access: Prolonged emergency response times in rural areas necessitate cautious driving.
- Regulations: Adherence to hazardous transport regulations is critical.

Final Recommendation: Continuous monitoring of weather conditions and staying updated on local traffic advisories is essential. Drivers should be well-versed in alternative routes and maintain communication throughout the journey for safety. Consider future infrastructure upgrades or route alterations to mitigate existing risks.

## Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
2	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
3	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
4	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
5	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km
6	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
7	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.13 km
8	Blind Spot	Blind Spot	26.63529, 84.23346	10 KM/Hr	116.66 km
9	Turn	High	26.63608, 84.23385	15 KM/Hr	117.17 km
10	Turn	Medium	26.63639, 84.23373	30 KM/Hr	117.24 km

## Emergency Locations

Found: 2 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Star Hospital, Kushinagar	26.6831917, 84.0478785	30 km/h	Medium	95.16 km
1	hospital	Pawanagar Mahavir Hospital and Research Center	26.6832018, 84.0485296	30 km/h	Medium	95.16 km

## Crowded Spots

## Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.16 km

Coordinates: 26.75126, 83.22476



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 4.22 km

**Coordinates:** 26.75353, 83.20457



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 4.27 km

**Coordinates:** 26.75377, 83.20465



**Risk Type:** Roundabout

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 8.13 km

**Coordinates:** 26.74681, 83.25111



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 116.66 km

**Coordinates:** 26.63529, 84.23346

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