



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO LALA CHAPRA INDANE G

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

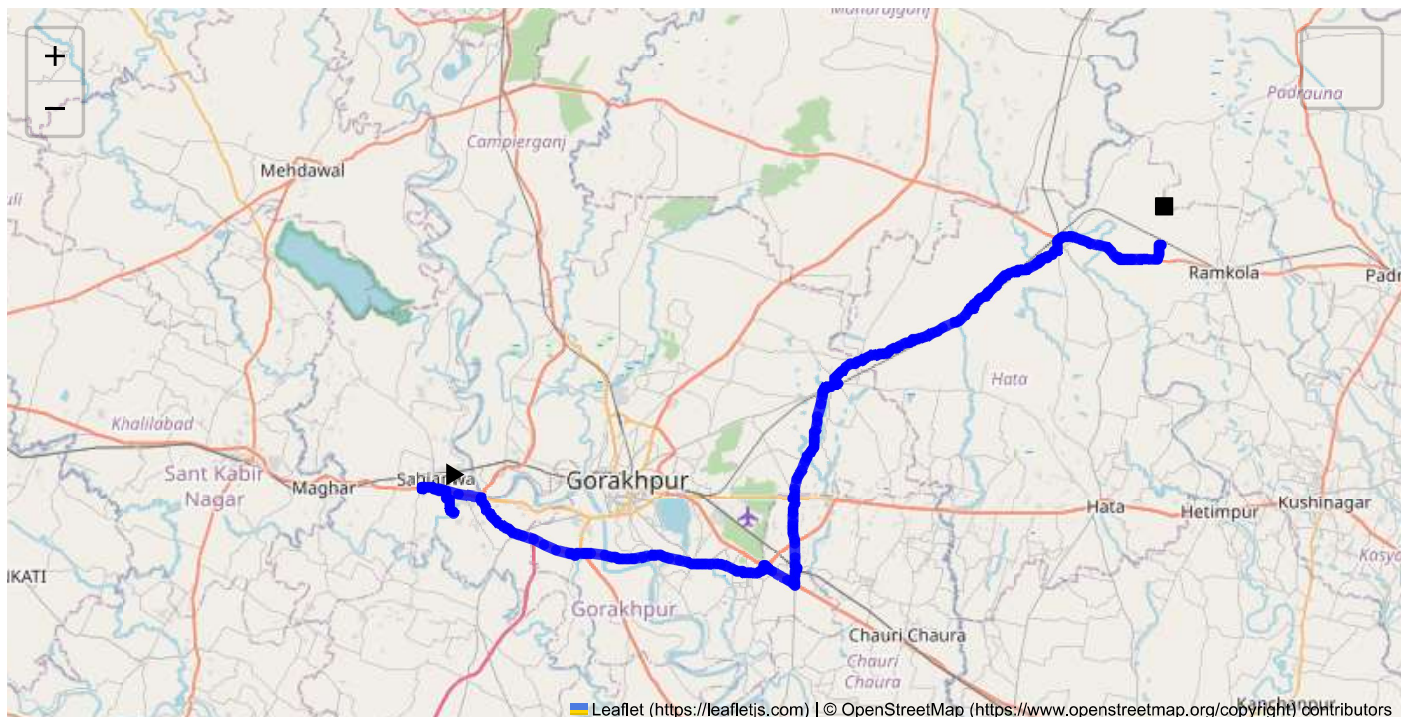
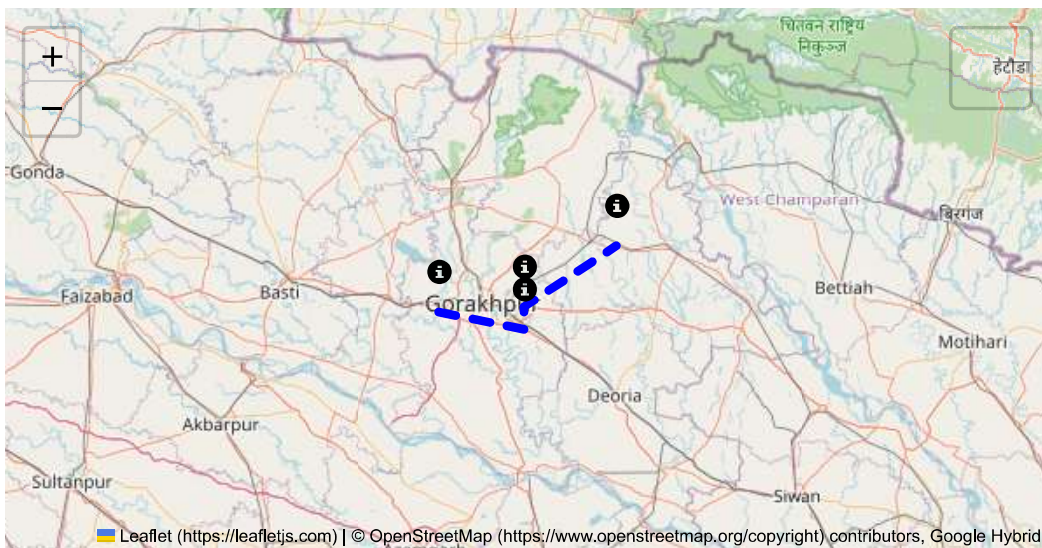
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 85.09 km

Estimated Duration: 2.1 hours

Adjusted Duration (Heavy Vehicle): 2.7 hours

Start: (26.735959, 83.229398)

End: (26.92411, 83.787932)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins at GIDA Industrial Area Phase 1 in Sahjanwa, traveling through Motiram Adda and Emilia Urf Bijhara before reaching its destination in Laxmiganj, Bagaha Khurd. The path includes major highways

and local roads, totaling about 85.09 kilometers. This journey typically takes around 2.15 hours for heavy vehicles.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Uttar Pradesh generally experiences a subtropical climate with three distinct seasons: summer, monsoon, and winter. During the monsoon season (July to September), heavy rainfall can lead to flooding and reduced visibility, affecting driving conditions. In summer (April to June), high temperatures can lead to road surface issues such as expansion and softening of asphalt.

3. Analysis of Traffic Patterns

Peak Hours: Typically, traffic increases during early morning (7-10 AM) and late afternoon (5-8 PM) due to commuting patterns. **Congestion-Prone Areas:**

- Gorakhpur - Deoria Highway is known for congestion, particularly around market areas and intersections.
- In Gorakhpur and nearby towns, local traffic might slow down movement.

4. Assessment of Road Quality and Infrastructure

- **Condition:** The major highways are generally well-maintained, but local roads may have potholes and uneven surfaces.
- **Infrastructure:** The presence of adequate signage and street lighting is inconsistent, especially on rural roads.

5. Suggestions for Alternative Routes for Emergencies

In case of roadblocks or emergencies, diversion through local roads connecting MFPX+CGF and PFXX+675 may be used. However, these roads might not be suitable for heavy vehicles and should be evaluated cautiously.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transporting hazardous materials requires adherence to regulations set by the Petroleum and Explosives Safety Organisation (PESO) and the Motor Vehicles Act. Permit checks and route restrictions in urban areas may apply. Ensure all necessary documentation is up to date.

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

- Incidents in this region often involve overturning due to overloading or sharp turns, particularly during adverse weather.
- Historical data shows few major accidents involving hazardous materials; however, caution is advised when passing through densely populated areas.

8. Environmental Considerations and Sensitive Areas

This route passes near agricultural land where pesticide contamination is a risk. Avoid leaks and spills at all costs. No major protected environmental reserves directly on this route, but maintaining a no-spill protocol is essential.

9. Analysis of Communication Coverage

Cellular coverage is generally reliable along the main highways but may have dead zones in rural sections, particularly between Motiram Adda and Bagaha Khurd.

10. Estimated Emergency Response Times

- **Urban Areas (Gorakhpur):** Approximately 15-20 minutes for emergency response.
- **Rural Areas:** Response times can vary from 30 minutes to over an hour, depending on the proximity to major towns.

12. Overall Summary of Risk Assessment

This route is moderately challenging due to traffic congestion in urban zones and variable road quality in rural stretches. Weather conditions, especially during monsoons, pose significant risks. Strict adherence to regulations and vigilant driving practices are paramount. Communication may be interrupted in remote sections, necessitating strategic planning and readiness. Proper route planning, awareness of local conditions, and preparation for emergencies will mitigate most risks associated with transporting hazardous materials along this route.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
3	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
4	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
5	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
6	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
7	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
8	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
9	Turn	Medium	26.69741, 83.47552	30 KM/Hr	33.25 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.41 km
10	Blind Spot	Blind Spot	26.69844, 83.47473	10 KM/Hr	33.41 km
11	Turn	High	26.69857, 83.47481	15 KM/Hr	33.43 km
12	Blind Spot	Blind Spot	26.68607, 83.49881	10 KM/Hr	36.11 km
13	Turn	Medium	26.69511, 83.49893	30 KM/Hr	37.09 km
14	Turn	High	26.69722, 83.50035	15 KM/Hr	37.42 km
15	Turn	Medium	26.69913, 83.49898	30 KM/Hr	37.70 km
16	Blind Spot	Blind Spot	26.74662, 83.49914	10 KM/Hr	42.98 km
17	Blind Spot	Blind Spot	26.74659, 83.49782	10 KM/Hr	43.10 km
18	Turn	Medium	26.78331, 83.51396	30 KM/Hr	47.53 km
19	Turn	High	26.82411, 83.52193	15 KM/Hr	52.17 km
20	Turn	Medium	26.82505, 83.52428	30 KM/Hr	52.46 km
21	Turn	Medium	26.82476, 83.52706	30 KM/Hr	52.71 km
22	Blind Spot	Blind Spot	26.82741, 83.53262	10 KM/Hr	53.37 km
23	Turn	High	26.82760, 83.53150	15 KM/Hr	53.48 km
24	Turn	High	26.83139, 83.52997	15 KM/Hr	53.93 km
25	Turn	Medium	26.88048, 83.63813	30 KM/Hr	66.15 km
26	Turn	Medium	26.88064, 83.63915	30 KM/Hr	66.31 km
27	Turn	Medium	26.90718, 83.67550	30 KM/Hr	71.10 km
28	Turn	High	26.90703, 83.67575	15 KM/Hr	71.13 km
29	Turn	Medium	26.91435, 83.69301	30 KM/Hr	73.12 km
30	Turn	High	26.92140, 83.70568	15 KM/Hr	74.54 km
31	Blind Spot	Blind Spot	26.92872, 83.70591	10 KM/Hr	75.43 km
32	Turn	High	26.91455, 83.78398	15 KM/Hr	83.67 km
33	Turn	High	26.92442, 83.78664	15 KM/Hr	84.84 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Prakash Hospital	26.6957341, 83.4807387	30 km/h	Medium	33.99 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: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 33.25 km
Coordinates: 26.69741, 83.47552



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 33.41 km

Coordinates: 26.698439, 83.4747268



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 33.41 km

Coordinates: 26.69844, 83.47473



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 33.43 km

Coordinates: 26.69857, 83.47481



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 36.11 km

Coordinates: 26.68607, 83.49881



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 37.09 km

Coordinates: 26.69511, 83.49893



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 37.42 km

Coordinates: 26.69722, 83.50035



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 37.70 km

Coordinates: 26.69913, 83.49898



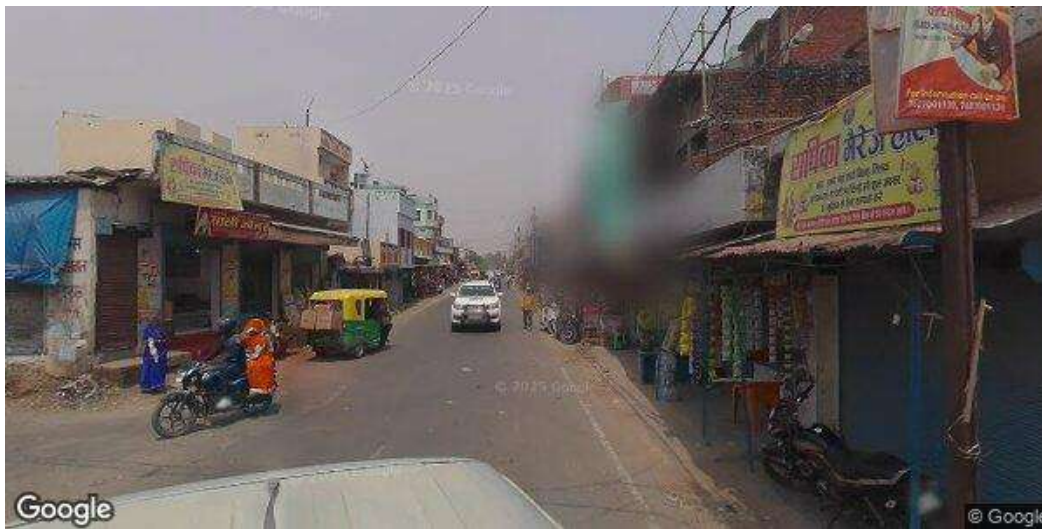
Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 42.98 km

Coordinates: 26.74662, 83.49914



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 43.10 km

Coordinates: 26.74659, 83.49782



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 47.53 km

Coordinates: 26.78331, 83.51396



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 52.17 km

Coordinates: 26.82411, 83.52193



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 52.46 km

Coordinates: 26.82505, 83.52428



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 52.71 km

Coordinates: 26.82476, 83.52706



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 53.37 km

Coordinates: 26.82741, 83.53262



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.48 km

Coordinates: 26.82760, 83.53150



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.93 km

Coordinates: 26.83139, 83.52997



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 71.10 km

Coordinates: 26.90718, 83.67550



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 71.13 km

Coordinates: 26.90703, 83.67575



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 73.12 km

Coordinates: 26.91435, 83.69301



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 74.54 km

Coordinates: 26.92140, 83.70568



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 75.43 km
Coordinates: 26.92872, 83.70591



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 83.67 km
Coordinates: 26.91455, 83.78398



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 84.84 km

Coordinates: 26.92442, 83.78664

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