



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO BHENOLNATH INDANE GAS

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

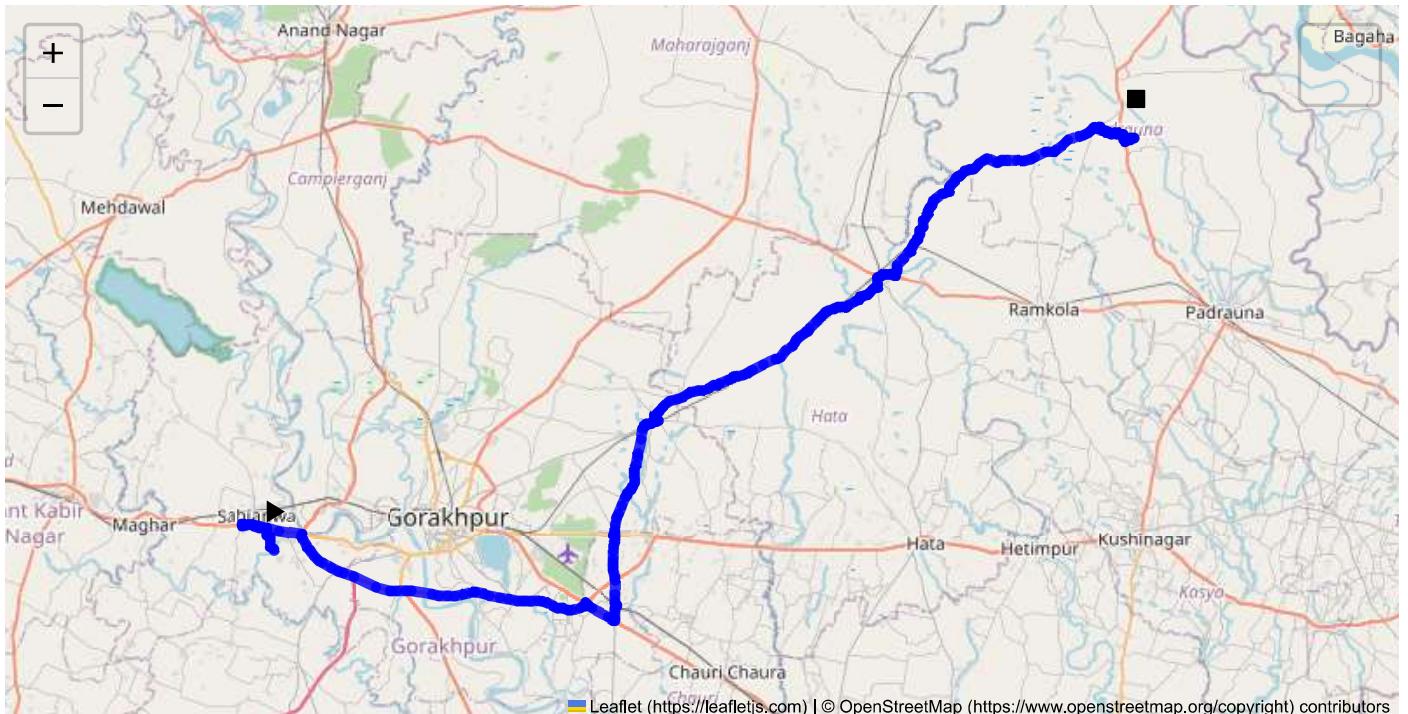
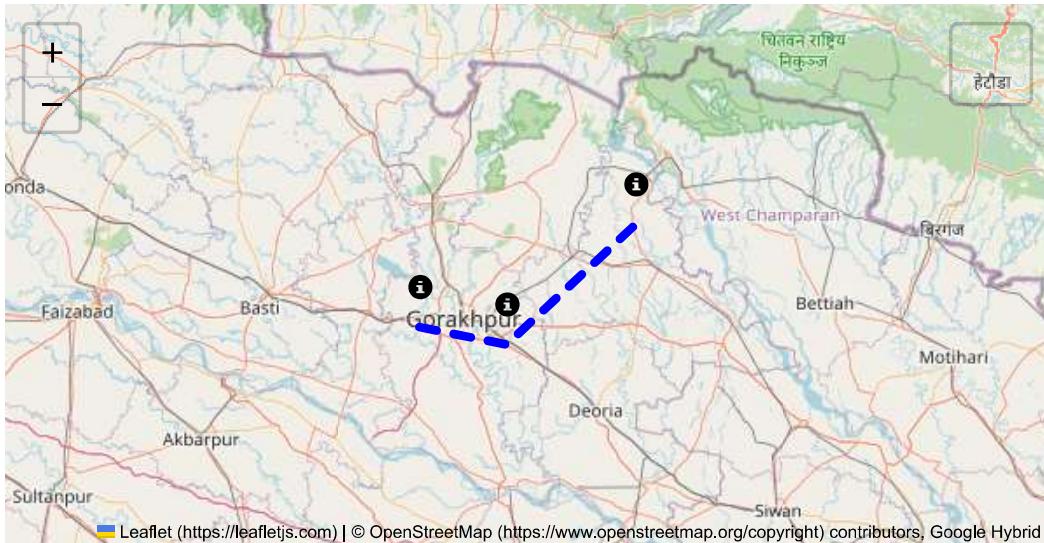
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 102.38 km

Estimated Duration: 2.5 hours

Adjusted Duration (Heavy Vehicle): 3.2 hours

Start: (26.735959, 83.229398)

End: (27.026212, 83.907942)

Welcome to the Journey Risk Management Study

Route Safety Analysis Report

- Overview of the Route Map:** The route from GIDA Industrial Area Phase 1, Sahjanwa, to Sarang Chhapra, via Kusumhi Rd, covers a distance of approximately 102.38 kilometers, typically taking around

2.54 hours for heavy vehicles carrying hazardous materials. It traverses rural and semi-urban areas in the state of Uttar Pradesh, India, with a mix of state highways and local roads.

2. Weather Conditions and Potential Hazards: The region typically experiences three major seasons: summer (hot and dry), monsoon (heavy rains), and winter (cool). During the monsoon season (June to September), roads can become slippery and even flooded. Fog can be a concern in winter (December to February), particularly in the early morning and late at night, reducing visibility significantly.

3. Traffic Patterns: Traffic tends to be heavier during morning hours (7 AM to 10 AM) and evening hours (5 PM to 8 PM) due to commuter movement. The areas around Motiram Adda and Rampur could witness elevated congestion levels, especially near market areas and intersections.

4. Road Quality and Infrastructure: Road conditions vary significantly along the route. Larger segments along the state highways are generally well-maintained, but smaller roads may suffer from potholes and inadequate signage. These rural roads may lack proper lighting, posing additional risks during night travel.

5. Alternative Routes for Emergencies:

- **Option 1:** From Sahjanwa, take the NH27 as an alternative to reach destinations quicker due to better road quality.
- **Option 2:** Utilize local roads via Gorakhpur city for additional service facilities and connectivity options. These routes should be pre-checked for any maintenance or weather-related issues.

6. Local Regulations for Hazardous Material Transport: Operators must adhere to the Explosives Act, 1884, and Motor Vehicles Act, 1988, which regulate hazardous materials transit. Ensure proper labeling and secure the load as per legal norms to avoid fines and ensure safety.

7. Historical Incidents: There have been sporadic reports of accidents, particularly during adverse weather conditions. Overloading and improper securing of hazardous materials have been identified as significant causes. Awareness and adherence to safety guidelines are critical.

8. Environmental Considerations: There are several environmentally sensitive areas, including small water bodies and agriculturally active zones. Care must be taken to avoid contamination or spillage, especially in proximity to these areas.

9. Communication Coverage: The coverage along the route is generally reliable in urban and semi-urban areas, but dead spots are frequent in rural segments. Drivers should ensure their communication devices are fully charged and use mapping services that offer offline functionality.

10. Emergency Response Times: Response times can vary:

- **Urban Areas:** 20 – 30 minutes.
- **Rural Segments:** 45 minutes to 1 hour or more, depending on accessibility. Nearby towns and cities such as Gorakhpur may offer faster response options.

12. Overall Risk Assessment: The route presents a moderate level of risk to heavy vehicles transporting hazardous materials. Main risks include weather conditions, variable road quality, and communication

dead zones. Proactive planning, including checking weather forecasts, preparing alternative routes, and understanding local regulations, can mitigate these risks significantly.

This analysis provides a comprehensive view of the anticipated challenges and risks along the specified route, equipping truck drivers and logistics planners with the information needed for a safe and compliant journey.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.08 km
3	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
4	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
5	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
6	Turn	High	26.74654, 83.22390	15 KM/Hr	1.63 km
7	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.15 km
8	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.21 km
9	Turn	High	26.75377, 83.20465	15 KM/Hr	4.26 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.12 km
10	Turn	Medium	26.69652, 83.47508	30 KM/Hr	33.10 km
11	Turn	High	26.69741, 83.47552	15 KM/Hr	33.19 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.38 km
12	Blind Spot	Blind Spot	26.69857, 83.47481	10 KM/Hr	33.38 km
13	Blind Spot	Blind Spot	26.68622, 83.49880	10 KM/Hr	36.06 km
14	Turn	Medium	26.69511, 83.49893	30 KM/Hr	37.02 km
15	Turn	High	26.69722, 83.50035	15 KM/Hr	37.36 km
16	Turn	Medium	26.69873, 83.49920	30 KM/Hr	37.51 km
17	Blind Spot	Blind Spot	26.74662, 83.49914	10 KM/Hr	42.92 km
18	Blind Spot	Blind Spot	26.74659, 83.49782	10 KM/Hr	43.03 km
19	Turn	Medium	26.78350, 83.51397	30 KM/Hr	47.40 km
20	Turn	High	26.82411, 83.52193	15 KM/Hr	52.07 km
21	Blind Spot	Blind Spot	26.82741, 83.53262	10 KM/Hr	53.19 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
22	Turn	High	26.82760, 83.53150	15 KM/Hr	53.37 km
23	Turn	High	26.83147, 83.53004	15 KM/Hr	53.86 km
24	Turn	Medium	26.85247, 83.57721	30 KM/Hr	58.99 km
25	Turn	Medium	26.85675, 83.59150	30 KM/Hr	60.66 km
26	Turn	Medium	26.88053, 83.63827	30 KM/Hr	65.84 km
27	Turn	High	26.88071, 83.63931	15 KM/Hr	66.22 km
28	Turn	Medium	26.90785, 83.67813	30 KM/Hr	71.18 km
29	Turn	Medium	26.91254, 83.69143	30 KM/Hr	72.59 km
30	Turn	High	26.92141, 83.70571	15 KM/Hr	74.42 km
31	Turn	High	26.92858, 83.70590	15 KM/Hr	75.26 km
32	Turn	High	26.92985, 83.71941	15 KM/Hr	76.62 km
33	Turn	Medium	26.97854, 83.74937	30 KM/Hr	82.87 km
34	Turn	Medium	26.98347, 83.75148	30 KM/Hr	83.50 km
35	Turn	Medium	26.98769, 83.76131	30 KM/Hr	84.53 km
36	Turn	Medium	26.98811, 83.76189	30 KM/Hr	84.73 km
37	Turn	Medium	26.99805, 83.76788	30 KM/Hr	85.90 km
38	Turn	Medium	27.00258, 83.77501	30 KM/Hr	86.75 km
39	Turn	Medium	27.00413, 83.78206	30 KM/Hr	87.58 km
40	Turn	Medium	27.03285, 83.87591	30 KM/Hr	97.91 km
41	Turn	Medium	27.03266, 83.87978	30 KM/Hr	98.28 km
42	Blind Spot	Blind Spot	27.03347, 83.88122	10 KM/Hr	98.55 km
43	Turn	Medium	27.03153, 83.88393	30 KM/Hr	98.86 km
44	Turn	Medium	27.03117, 83.88410	30 KM/Hr	98.97 km
45	Turn	Medium	27.03050, 83.88548	30 KM/Hr	99.07 km
46	Turn	High	27.03024, 83.88564	15 KM/Hr	99.17 km
47	Turn	Medium	27.02931, 83.89296	30 KM/Hr	99.81 km
48	Turn	Medium	27.02884, 83.89410	30 KM/Hr	99.99 km
49	Turn	High	27.02902, 83.89913	15 KM/Hr	100.54 km
50	Turn	High	27.02383, 83.90079	15 KM/Hr	101.10 km
51	Turn	Medium	27.02432, 83.90358	30 KM/Hr	101.35 km
52	Turn	Medium	27.02495, 83.90404	30 KM/Hr	101.49 km
53	Turn	Medium	27.02510, 83.90441	30 KM/Hr	101.55 km
54	Turn	High	27.02496, 83.90558	15 KM/Hr	101.63 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
55	Turn	Medium	27.02626, 83.90657	30 KM/Hr	101.81 km
56	Turn	High	27.02654, 83.90721	15 KM/Hr	101.90 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	33.95 km

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.15 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.21 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.26 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 8.12 km
Coordinates: 26.74681, 83.25111



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 33.10 km
Coordinates: 26.69652, 83.47508



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 33.19 km**Coordinates:** 26.69741, 83.47552

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Risk Type: U-Turn**Risk Level:** High**Speed Limit:** 10 KM/Hr**Distance from Start:** 33.38 km**Coordinates:** 26.698439, 83.4747268



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 33.38 km**Coordinates:** 26.69857, 83.47481

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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 36.06 km**Coordinates:** 26.68622, 83.49880



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 37.02 km

Coordinates: 26.69511, 83.49893



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 37.36 km

Coordinates: 26.69722, 83.50035



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 37.51 km

Coordinates: 26.69873, 83.49920



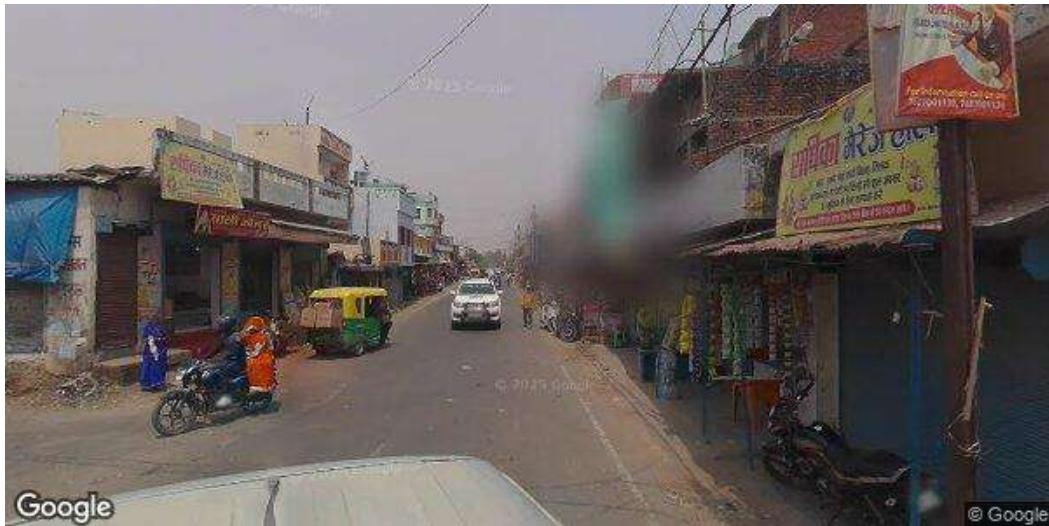
Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 42.92 km

Coordinates: 26.74662, 83.49914



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 43.03 km

Coordinates: 26.74659, 83.49782



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 47.40 km

Coordinates: 26.78350, 83.51397



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57.2023, 83.560916

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 52.07 km****Coordinates: 26.82411, 83.52193**

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Risk Type: Blind Spot**Risk Level: Blind Spot****Speed Limit: 10 KM/Hr****Distance from Start: 53.19 km****Coordinates: 26.82741, 83.53262**



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.37 km

Coordinates: 26.82760, 83.53150



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 53.86 km

Coordinates: 26.83147, 83.53004



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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 71.18 km****Coordinates: 26.90785, 83.67813**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 72.59 km****Coordinates: 26.91254, 83.69143**



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 74.42 km

Coordinates: 26.92141, 83.70571



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 75.26 km

Coordinates: 26.92858, 83.70590



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 84.53 km

Coordinates: 26.98769, 83.76131



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 84.73 km

Coordinates: 26.98811, 83.76189



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 87.58 km

Coordinates: 27.00413, 83.78206

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