



IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### Gorakhpur LPG BP to MITHAURA INDANE GAS SEWA

#### 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

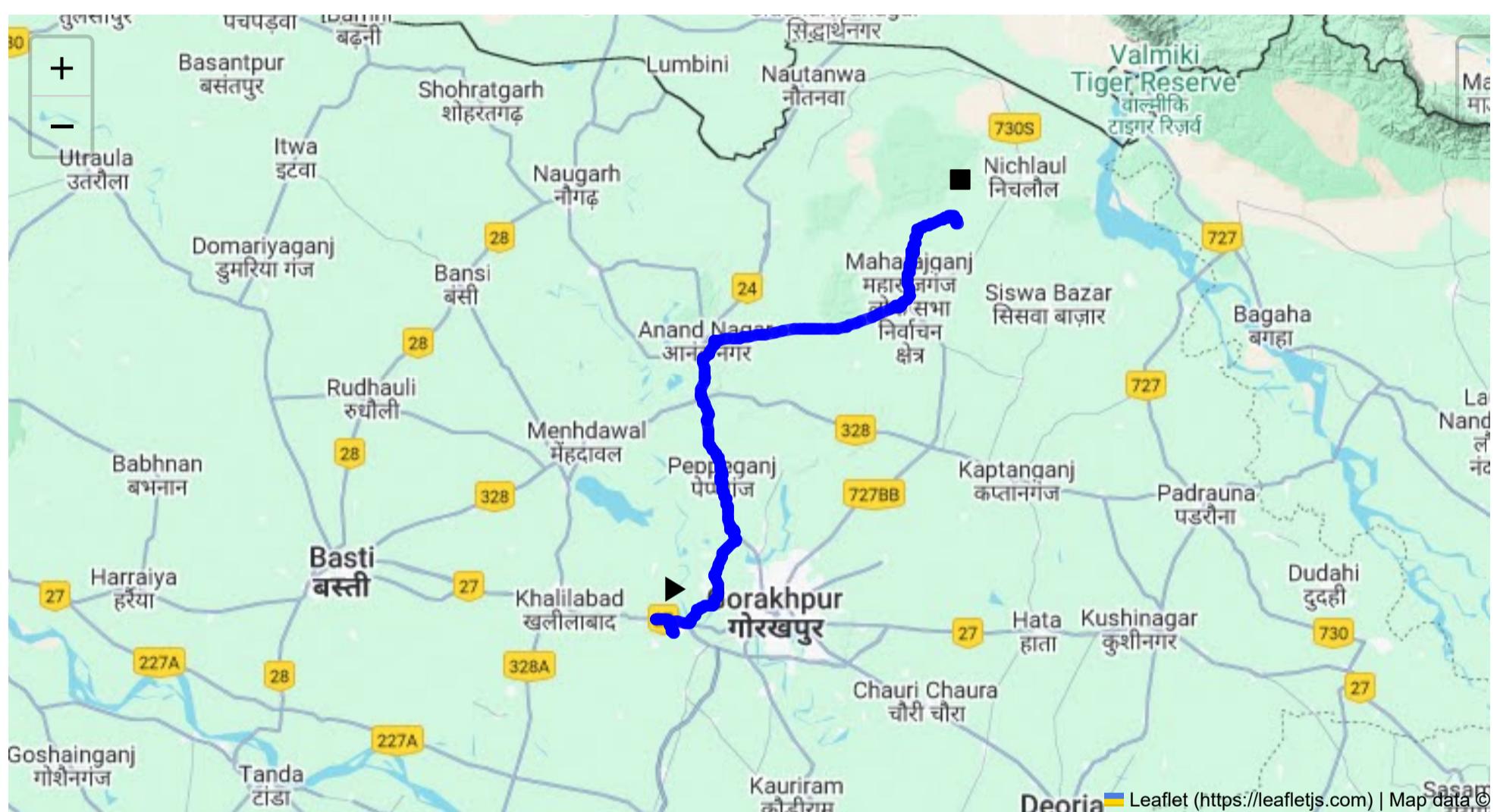
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 98.80 km**  
**Estimated Duration: 2.3 hours**  
**Adjusted Duration (Heavy Vehicle): 2.9 hours**  
**Start: (26.735959, 83.229398)**  
**End: (27.24957, 83.62946)**

## Welcome to the Journey Risk Management Study

### Route Safety Analysis Report

#### 1. Overview of the Route Map:

- The route from GIDA Industrial Area Phase 1, Sahjanwa, to Madu Bani traverses approximately 98.80 kilometers in Uttar Pradesh, India. The primary roadway links involve NH28 and potentially some

regional roads. This route is mainly rural, with urban sections near Sahjanwa and the destination point in Madu Bani.

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

- Uttar Pradesh experiences varied weather, with a hot and dry climate in summer, heavy monsoons from June to September, and cold winters. Monsoon and winter fog can severely reduce visibility, and heavy rains can lead to flooding on roads, impacting travel time and safety.

## **3. Analysis of Traffic Patterns:**

- Peak hours are typically morning (8:00 AM - 10:00 AM) and evening (6:00 PM - 8:00 PM), with increased congestion around urban areas like Sahjanwa and any major towns. Highway NH28 is generally busy, especially with commercial trucking.

## **4. Assessment of Road Quality and Infrastructure:**

- NH28 generally has good road surfaces, but there may be sections with potholes or uneven surfaces, especially after rains. Regional roads might be of varying quality with possible narrow stretches.

## **5. Suggestions for Alternative Routes for Emergencies:**

- Diversions via state highways and other regional roads can be considered, though these will potentially add travel time. Up-to-date maps and GPS systems should be used for quick rerouting.

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

- Uttar Pradesh requires permits for transporting hazardous materials. Regulations mandate displaying appropriate signage on vehicles and restrictions in specific urban areas. Compliance with national safety standards is essential.

## **7. Overview of Historical Incidents:**

- Past incidents on NH28 include vehicle collisions, often during adverse weather. There are fewer incidents involving hazardous materials, but precautions are needed due to traffic and weather-related risks.

## **8. Environmental Considerations and Sensitive Areas:**

- The route traverses agricultural land and near some water bodies, requiring precautions to prevent spills or contamination. Certain areas might be protected lands or sensitive ecosystems.

## **9. Analysis of Communication Coverage:**

- Major roadways like NH28 have good mobile coverage, but rural areas might have spotty signals. Known dead zones should be marked, and alternative communication methods planned, such as satellite phones or two-way radios.

## **10. Estimated Emergency Response Times:**

- Closer to urban areas, emergency services might respond within 30-45 minutes, but in rural or isolated sections, the response could extend beyond 60 minutes. Familiarity with the closest hospitals

and fire stations is crucial.

## 11. Overall Summary of Risk Assessment:

- This route poses moderate risk due to variable weather conditions, traffic congestion, and the presence of rural areas with potential communication challenges. Thorough planning, adherence to safety regulations, and preparedness for detours and emergency situations can mitigate these risks. Regular updates on road conditions and consistent communication checks are recommended to ensure safety and compliance during transport.

## 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
8	Turn	Medium	26.74700, 83.25085	30 KM/Hr	8.90 km
9	Turn	Medium	26.74715, 83.25109	30 KM/Hr	8.97 km
0	Roundabout	High	26.86209, 83.31517	15 KM/Hr	24.81 km
10	Turn	Medium	26.91497, 83.29817	30 KM/Hr	30.98 km
11	Turn	Medium	26.92539, 83.29837	30 KM/Hr	32.28 km
12	Turn	Medium	26.93475, 83.29777	30 KM/Hr	33.34 km
13	Turn	High	27.08028, 83.27122	15 KM/Hr	50.39 km
14	Blind Spot	Blind Spot	27.10269, 83.28820	10 KM/Hr	53.55 km
15	Turn	High	27.14531, 83.54942	15 KM/Hr	80.03 km
16	Turn	Medium	27.14866, 83.55038	30 KM/Hr	80.49 km
17	Turn	High	27.15895, 83.56326	15 KM/Hr	82.21 km
18	Turn	Medium	27.21348, 83.56687	30 KM/Hr	88.47 km
19	Turn	Medium	27.21383, 83.56698	30 KM/Hr	88.53 km
20	Turn	Medium	27.21404, 83.56690	30 KM/Hr	88.56 km
21	Turn	High	27.21461, 83.56572	15 KM/Hr	88.67 km
22	Turn	Medium	27.21963, 83.56830	30 KM/Hr	89.30 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
23	Turn	Medium	27.22161, 83.56756	30 KM/Hr	89.51 km
24	Turn	Medium	27.24277, 83.57349	30 KM/Hr	91.99 km
25	Turn	Medium	27.24299, 83.57370	30 KM/Hr	92.03 km
26	Blind Spot	Blind Spot	27.25862, 83.62411	10 KM/Hr	97.33 km
27	Turn	High	27.25665, 83.62421	15 KM/Hr	97.53 km
28	Turn	Medium	27.25620, 83.62500	30 KM/Hr	97.66 km
29	Turn	Medium	27.25573, 83.62524	30 KM/Hr	97.73 km
30	Turn	High	27.25466, 83.62804	15 KM/Hr	98.00 km

## Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	District Combind Hospital Maharajganj	27.1436733, 83.5395965	30 km/h	Medium	78.95 km

## Crowded Spots

## Route Photos of Risky Spots



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 2.16 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



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**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 4.27 km

**Coordinates:** 26.75377, 83.20465



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 8.90 km

**Coordinates:** 26.74700, 83.25085



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 8.97 km

**Coordinates:** 26.74715, 83.25109



**Risk Type:** Roundabout

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 24.81 km

**Coordinates:** 26.86209, 83.31517



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 30.98 km

**Coordinates:** 26.91497, 83.29817



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 32.28 km

**Coordinates:** 26.92539, 83.29837



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 33.34 km

**Coordinates:** 26.93475, 83.29777



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**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 50.39 km

**Coordinates:** 27.08028, 83.27122



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**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 53.55 km

**Coordinates:** 27.10269, 83.28820



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**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 80.03 km

**Coordinates:** 27.14531, 83.54942



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 80.49 km

**Coordinates:** 27.14866, 83.55038



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**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 82.21 km

**Coordinates:** 27.15895, 83.56326



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 88.47 km

**Coordinates:** 27.21348, 83.56687



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 88.53 km

**Coordinates:** 27.21383, 83.56698



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 88.56 km

**Coordinates:** 27.21404, 83.56690



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**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Distance from Start:** 88.67 km

**Coordinates:** 27.21461, 83.56572



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 89.30 km

**Coordinates:** 27.21963, 83.56830



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 89.51 km

**Coordinates:** 27.22161, 83.56756



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 91.99 km

**Coordinates:** 27.24277, 83.57349



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**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 92.03 km

**Coordinates:** 27.24299, 83.57370



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**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 97.33 km

**Coordinates:** 27.25862, 83.62411

## Download Reports

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