



## JOURNEY RISK MANAGEMENT (JRM) STUDY

**Gorakhpur LPG BP TO KRIPA INDANE GAS SER**

### 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

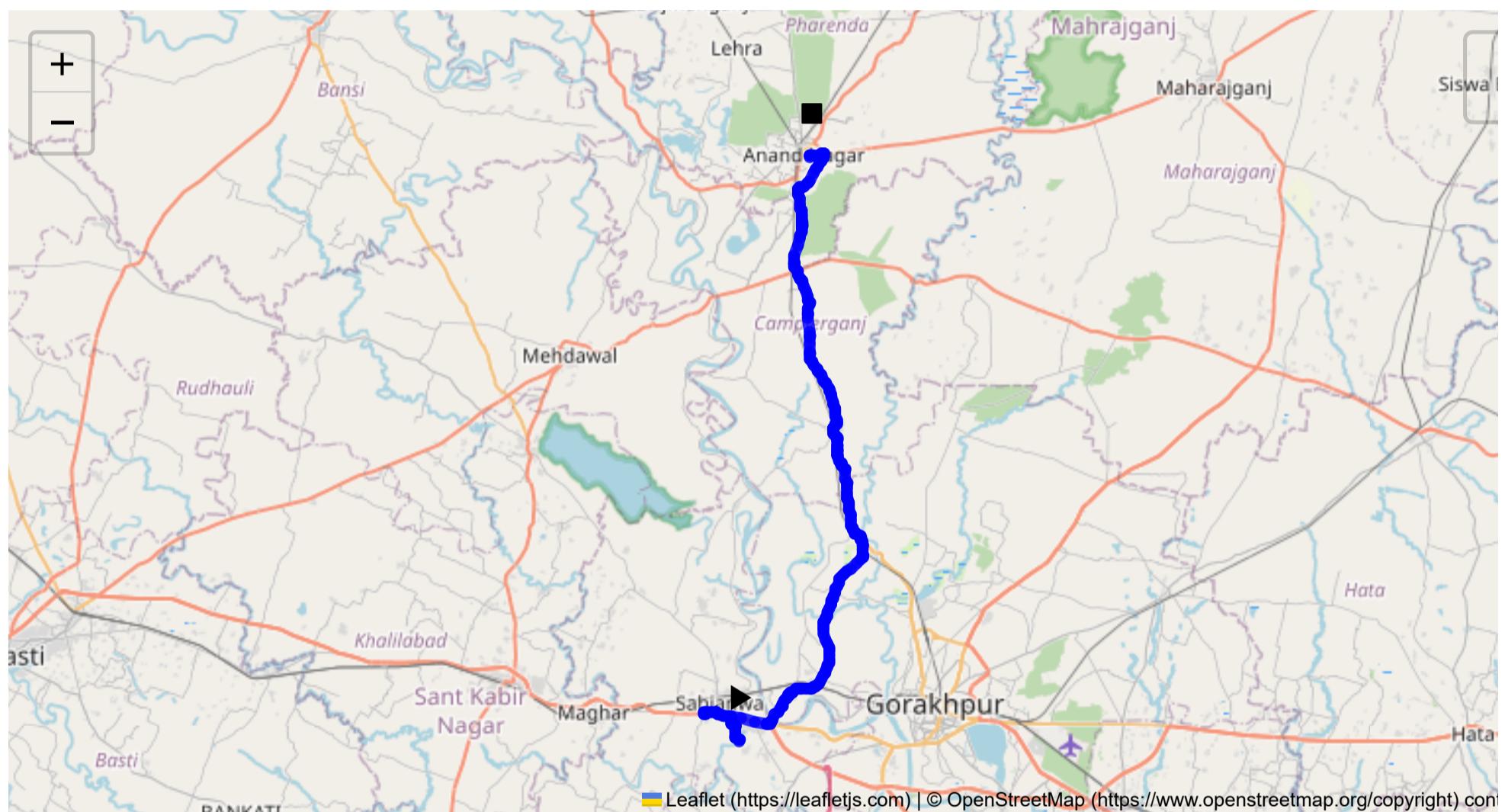
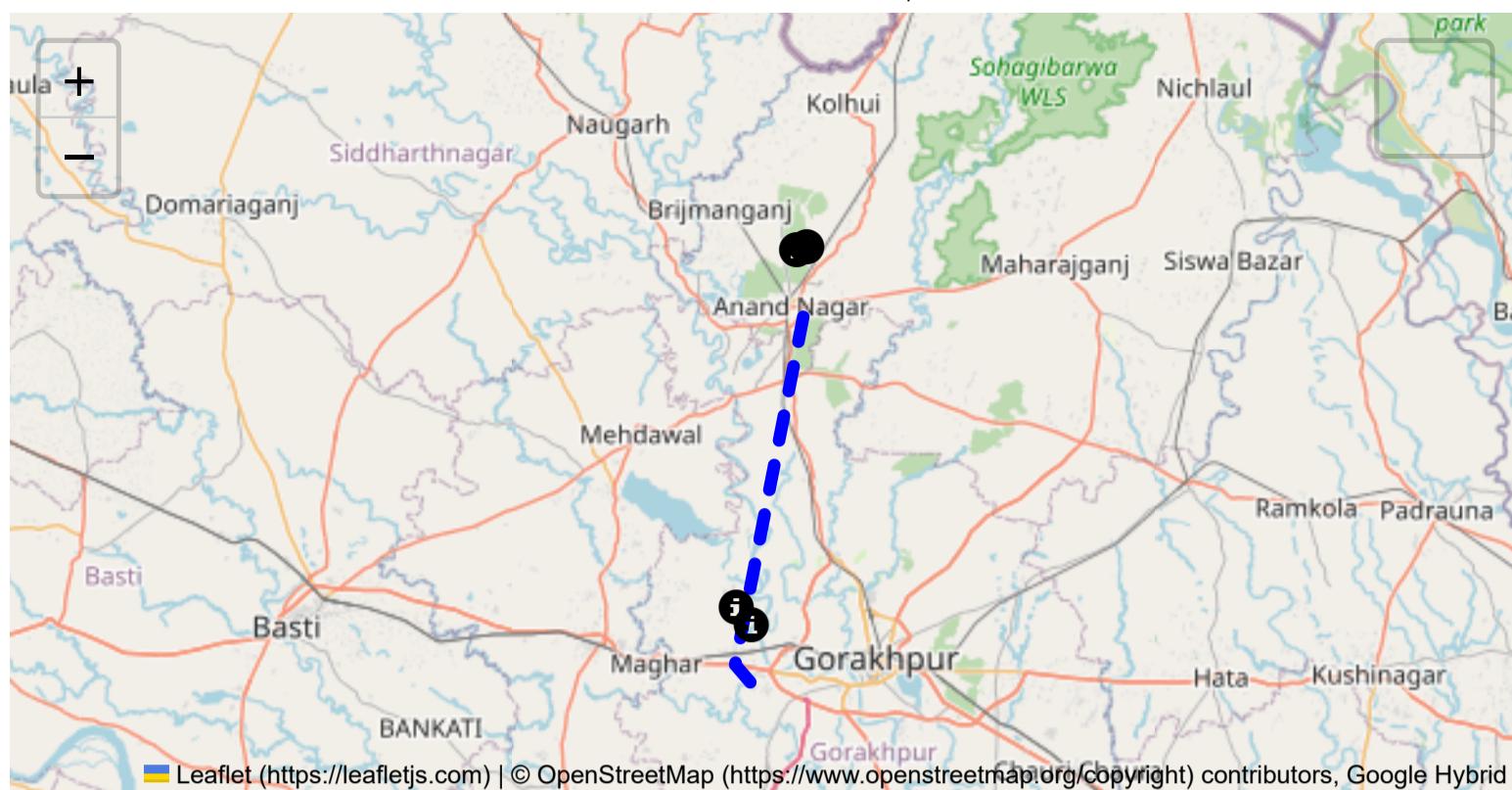
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 55.06 km**  
**Estimated Duration: 1.3 hours**  
**Adjusted Duration (Heavy Vehicle): 1.7 hours**  
**Start: (26.735959, 83.229398)**  
**End: (27.100894, 83.279776)**

## Welcome to the Journey Risk Management Study

### Route Overview

The route from GIDA Industrial Area Phase 1, Sahjanwa, to Anand Nagar spans approximately 55.06 kilometers and takes around 1.33 hours for heavy vehicles carrying hazardous materials. The route passes through several towns and involves traversing local roads and highways.

## Weather Conditions and Hazards

- **Typical Weather:** The region experiences a humid subtropical climate, with hot summers and mild winters.
- **Potential Hazards:** During the monsoon season (June to September), heavy rainfall can lead to flooding and reduced road visibility, increasing the risk of accidents. Fog is a common issue in winter months, particularly from December to February, which can significantly affect visibility.

## Traffic Patterns

- **Peak Hours and Congestion:** Traffic is generally heavier during morning (8:00 AM - 10:00 AM) and evening (5:00 PM - 7:00 PM) peaks, particularly near urban areas and industrial zones.
- **Congestion-Prone Areas:** The stretches passing through town centers or near industrial areas like GIDA might experience delays due to local traffic and commercial activities.

## Road Quality and Infrastructure

- **Road Conditions:** The condition of the roads varies. Main highways might be well-maintained, but local roads could have potholes and uneven surfaces, posing risks to heavy vehicles.
- **Infrastructure:** Limited signage and poor lighting in rural areas can be a concern. Bridges and narrow passages require careful navigation, especially during adverse weather.

## Alternative Routes

- For emergencies, consider using national highways (NH) that offer better infrastructure and emergency services. Detouring onto NH 27 where possible could provide a more straightforward path, though it may extend travel time slightly.

## Local Regulations for Hazardous Material Transport

- Vehicles carrying hazardous materials must follow specific routes designated by local authorities when applicable. Drivers should ensure adherence to speed limits, proper documentation, and display of hazard placards.

## Historical Incidents

- While specific data on this exact route might not be available, the region has experienced incidents involving heavy vehicles primarily due to poor road conditions and adverse weather. Awareness and caution are advised.

## Environmental Considerations

- The route passes through rural areas; care should be taken to minimize disturbance to local ecosystems. Specific attention needs to be given near water bodies to prevent contamination from hazardous materials.

## Communication Coverage

- Cellular coverage can vary, with potential dead zones in rural segments of the route. Communication devices should be checked, and alternative methods like radios should be considered for these areas.

## Emergency Response Times

- Emergency service coverage is more robust near urban centers. In rural areas, response times may extend beyond 30 minutes. Familiarity with the location of the nearest hospitals and emergency services is crucial.

## Risk Assessment Summary

- Overall Risk:** Medium-High due to varied road quality, potential for adverse weather, and dense traffic in certain areas.
- Key Recommendations:** Enhanced driver training for adverse conditions, ensuring robust communication and emergency planning, considering alternative routes during emergencies or severe weather.

By considering these factors, comprehensive preparation and caution can help mitigate potential hazards along the route.

### Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.05 km
2	Turn	High	26.73697, 83.22939	15 KM/Hr	0.11 km
3	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
4	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.48 km
5	Turn	Medium	26.74524, 83.22746	30 KM/Hr	1.16 km
6	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.31 km
7	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
8	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
9	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
10	Turn	High	26.75377, 83.20465	15 KM/Hr	4.28 km
13	Turn	High	26.75377, 83.21355	15 KM/Hr	5.17 km
11	Blind Spot	Blind Spot	26.75377, 83.21355	10 KM/Hr	5.17 km
12	Blind Spot	Blind Spot	26.75407, 83.21347	10 KM/Hr	5.20 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
14	Turn	Medium	26.74709, 83.24930	30 KM/Hr	8.86 km
15	Turn	Medium	26.74700, 83.25085	30 KM/Hr	8.98 km
16	Turn	Medium	26.74715, 83.25109	30 KM/Hr	9.05 km
17	Turn	Medium	26.74767, 83.25139	30 KM/Hr	9.11 km
18	Turn	High	26.74769, 83.25146	15 KM/Hr	9.13 km
0	Roundabout	High	26.86209, 83.31517	15 KM/Hr	24.93 km
19	Turn	Medium	27.03462, 83.26753	30 KM/Hr	45.38 km
20	Turn	Medium	27.08074, 83.27136	30 KM/Hr	50.63 km
21	Blind Spot	Blind Spot	27.10269, 83.28820	10 KM/Hr	53.67 km
22	Blind Spot	Blind Spot	27.10277, 83.28936	10 KM/Hr	53.76 km
23	Turn	High	27.10161, 83.27902	15 KM/Hr	54.54 km
24	Blind Spot	Blind Spot	27.10154, 83.27902	10 KM/Hr	54.84 km
25	Blind Spot	Blind Spot	27.10165, 83.27992	10 KM/Hr	54.89 km

## Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Gov. Hospital Campierganj, Gorakhpur	27.0232049, 83.2676768	30 km/h	Medium	44.26 km

## Crowded Spots

## Route Photos of Risky Spots



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 2.17 km

**Coordinates:** 26.75126, 83.22476



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 4.23 km

**Coordinates:** 26.75353, 83.20457



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**Risk Type: Turn****Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 4.28 km****Coordinates: 26.75377, 83.20465**

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**Risk Type: Turn****Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 5.17 km****Coordinates: 26.75377, 83.21355**



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 5.17 km

**Coordinates:** 26.75377, 83.21355



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Distance from Start:** 5.20 km

**Coordinates:** 26.75407, 83.21347



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 8.86 km

**Coordinates:** 26.74709, 83.24930



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Distance from Start:** 8.98 km

**Coordinates:** 26.74700, 83.25085



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**Risk Type:** Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 9.05 km**Coordinates:** 26.74715, 83.25109

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**Risk Type:** Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 9.11 km**Coordinates:** 26.74767, 83.25139



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**Risk Type: Turn****Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 9.13 km****Coordinates: 26.74769, 83.25146**

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**Risk Type: Roundabout****Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 24.93 km****Coordinates: 26.86209, 83.31517**



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**Risk Type:** Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 50.63 km**Coordinates:** 27.08074, 83.27136

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**Risk Type:** Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 53.67 km**Coordinates:** 27.10269, 83.28820



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**Risk Type:** Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 53.76 km**Coordinates:** 27.10277, 83.28936

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**Risk Type:** Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 54.54 km**Coordinates:** 27.10161, 83.27902



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**Risk Type:** Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 54.84 km**Coordinates:** 27.10154, 83.27902

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**Risk Type:** Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 54.89 km**Coordinates:** 27.10165, 83.27992

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