



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to SHUKLA INDANE GAS SERVICE

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

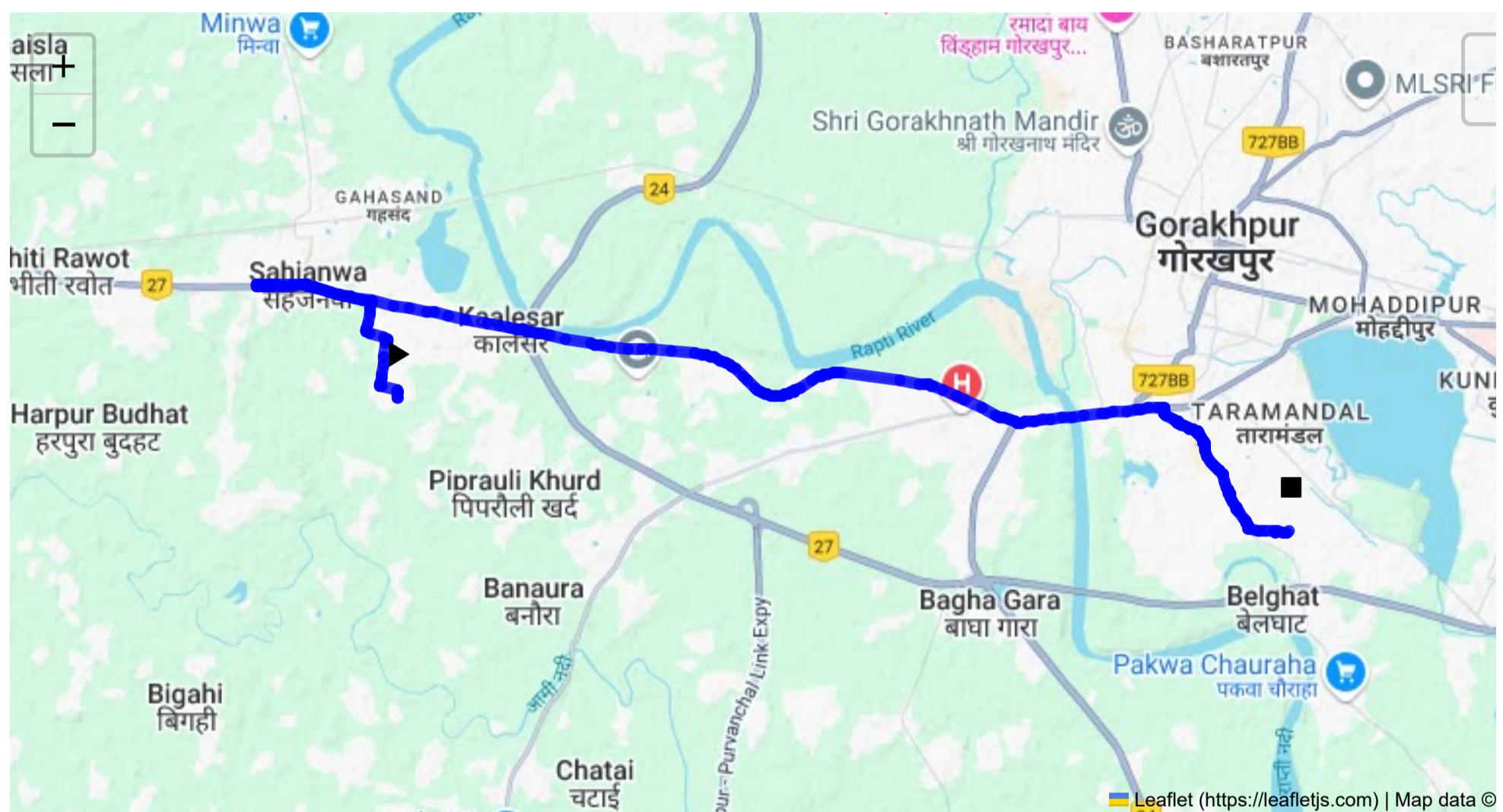
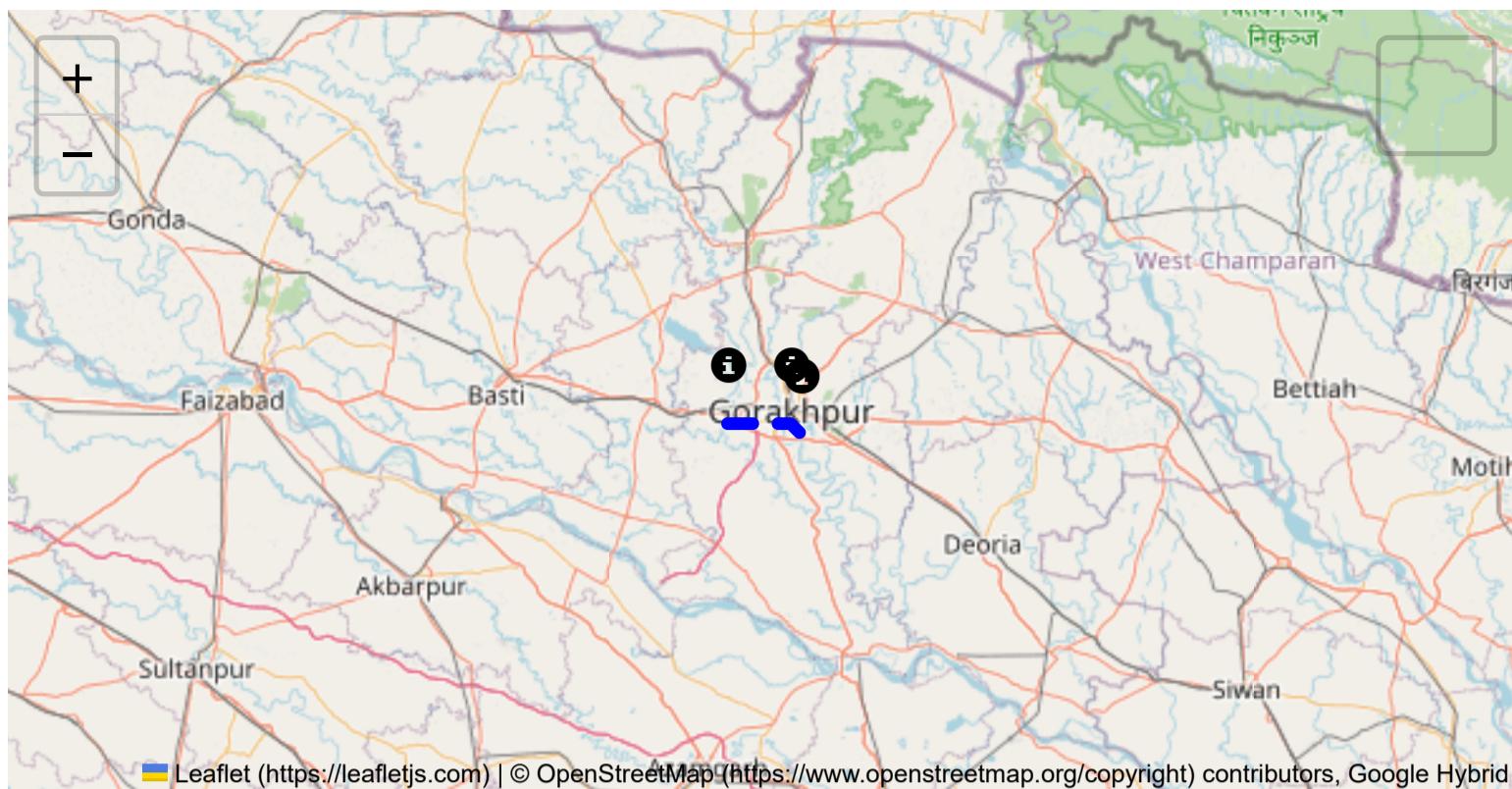
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 24.19 km
Estimated Duration: 0.7 hours
Adjusted Duration (Heavy Vehicle): 0.9 hours
Start: (26.735959, 83.229398)
End: (26.71511, 83.38593)

Welcome to the Journey Risk Management Study

Route Safety Analysis

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1 to Budh Vihar Colony via New Falmandi Chowk covers approximately 24.19 kilometers and typically takes around 0.73 hours for heavy vehicles. The journey

primarily involves regional roads passing through industrial, semi-urban, and urban areas of Gorakhpur, with the major waypoint being Transport Nagar.

2. Typical Weather Conditions and Potential Hazards

Gorakhpur experiences a subtropical climate. The monsoon season (June to September) may bring heavy rainfall, potentially leading to waterlogging and slippery roads. Winters can be foggy, reducing visibility. It's essential to prepare for these conditions, as they can affect vehicle control and increase accident risk.

3. Traffic Patterns and Congestion

- **Peak Hours:** Typically, traffic congestion is highest during the morning (8-10 AM) and evening (5-7 PM) rush hours.
- **Congestion-Prone Areas:** Transport Nagar and New Falmandi Chowk are particularly busy, with a mix of commercial and local traffic contributing to higher congestion.

4. Road Quality and Infrastructure

- **General Road Conditions:** The road quality in industrial areas may vary, with some sections experiencing wear and tear due to heavy vehicle use. Potholes and uneven surfaces may be present.
- **Infrastructure:** Road signage and lighting may be inadequate in certain areas, especially along less developed stretches.

5. Alternative Routes for Emergencies

In case of road blockages or severe weather conditions, alternative routes include:

- Via NH27, which bypasses some urban congestion but may increase the travel distance and time.

6. Local Regulations Affecting Hazardous Material Transport

Transport of hazardous materials requires adherence to local and national regulations, including documentation and safety measures. Permits may be needed, and restrictions could apply during certain hours or on specific roads.

7. Historical Incidents

There have been few notable incidents involving heavy vehicles in this region, often caused by fog, rainfall-induced slippery roads, or mechanical failures. Awareness and preventive measures can mitigate these risks.

8. Environmental Considerations and Sensitive Areas

Areas around Gorakhpur are sensitive, with agricultural zones and some wetlands. Avoiding spills and leakage is crucial to prevent environmental contamination.

9. Communication Coverage

Communication networks are generally reliable, but there may still be intermittent dead zones or signal weaknesses, particularly in semi-urban areas. Maintaining alternative communication means such as CB radio may be prudent.

10. Estimated Emergency Response Times

- **Urban Areas (e.g., Transport Nagar):** 15-20 minutes
- **Semi-Urban Areas:** 30-45 minutes due to limited accessibility and potential traffic delays.

11. Overall Summary of Risk Assessment

The route from GIDA Industrial Area Phase 1 to Budh Vihar Colony presents moderate risks primarily due to weather conditions, traffic congestion, and variable road quality. Proper planning, adherence to safety regulations, and awareness of congestion and weather patterns are vital. Alternative routes should be considered in emergencies, and preparedness for communication and emergency responses is integral to ensuring safe transport operations.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.07 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	1.30 km
6	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.32 km
7	Turn	Medium	26.74654, 83.22390	30 KM/Hr	1.69 km
8	Turn	Medium	26.74661, 83.22388	30 KM/Hr	1.70 km
9	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
10	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
11	Turn	High	26.75381, 83.20466	15 KM/Hr	4.30 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.97 km
12	Turn	High	26.73463, 83.36380	15 KM/Hr	20.70 km
13	Turn	Medium	26.73407, 83.36383	30 KM/Hr	20.77 km
14	Turn	High	26.73403, 83.36381	15 KM/Hr	20.78 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
15	Blind Spot	Blind Spot	26.73240, 83.36631	10 KM/Hr	21.08 km
16	Blind Spot	Blind Spot	26.73237, 83.36617	10 KM/Hr	21.10 km
17	Turn	High	26.73083, 83.36975	15 KM/Hr	21.51 km
18	Turn	High	26.71547, 83.37887	15 KM/Hr	23.47 km

Emergency Locations

Found: 8 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
3	hospital	Amrawati Hospital	26.7372636, 83.3626921	30 km/h	Medium	20.54 km
4	hospital	Spectra Eye Centre	26.7366834, 83.3682564	30 km/h	Medium	20.70 km
2	hospital	Sangam Eye Hospital	26.7343271, 83.3640482	30 km/h	Medium	20.75 km
0	hospital	Sanjay Fracture Clinic and Maternity Centre	26.7342168, 83.3665873	30 km/h	Medium	21.05 km
1	hospital	The Pride Hospital	26.734908, 83.3669987	30 km/h	Medium	21.05 km
5	hospital	Excel Ortho Care, Shri Hari Pathology	26.7310723, 83.3688339	30 km/h	Medium	21.41 km
6	hospital	Jagdish Hospital	26.7348828, 83.3712637	30 km/h	Medium	21.41 km
7	hospital	Medispring Hospital & Research Centre	26.7327713, 83.3700866	30 km/h	Medium	21.41 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: 4.30 km

Coordinates: 26.75381, 83.20466



Google

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Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74681, 83.25111



Google

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 20.70 km

Coordinates: 26.73463, 83.36380



Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 20.77 km

Coordinates: 26.73407, 83.36383



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 20.78 km

Coordinates: 26.73403, 83.36381



Google

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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 21.08 km

Coordinates: 26.73240, 83.36631



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 21.10 km

Coordinates: 26.73237, 83.36617



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 21.51 km

Coordinates: 26.73083, 83.36975



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 23.47 km

Coordinates: 26.71547, 83.37887

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