



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to NANDANI INDANE GRAMIN
VITRAK

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

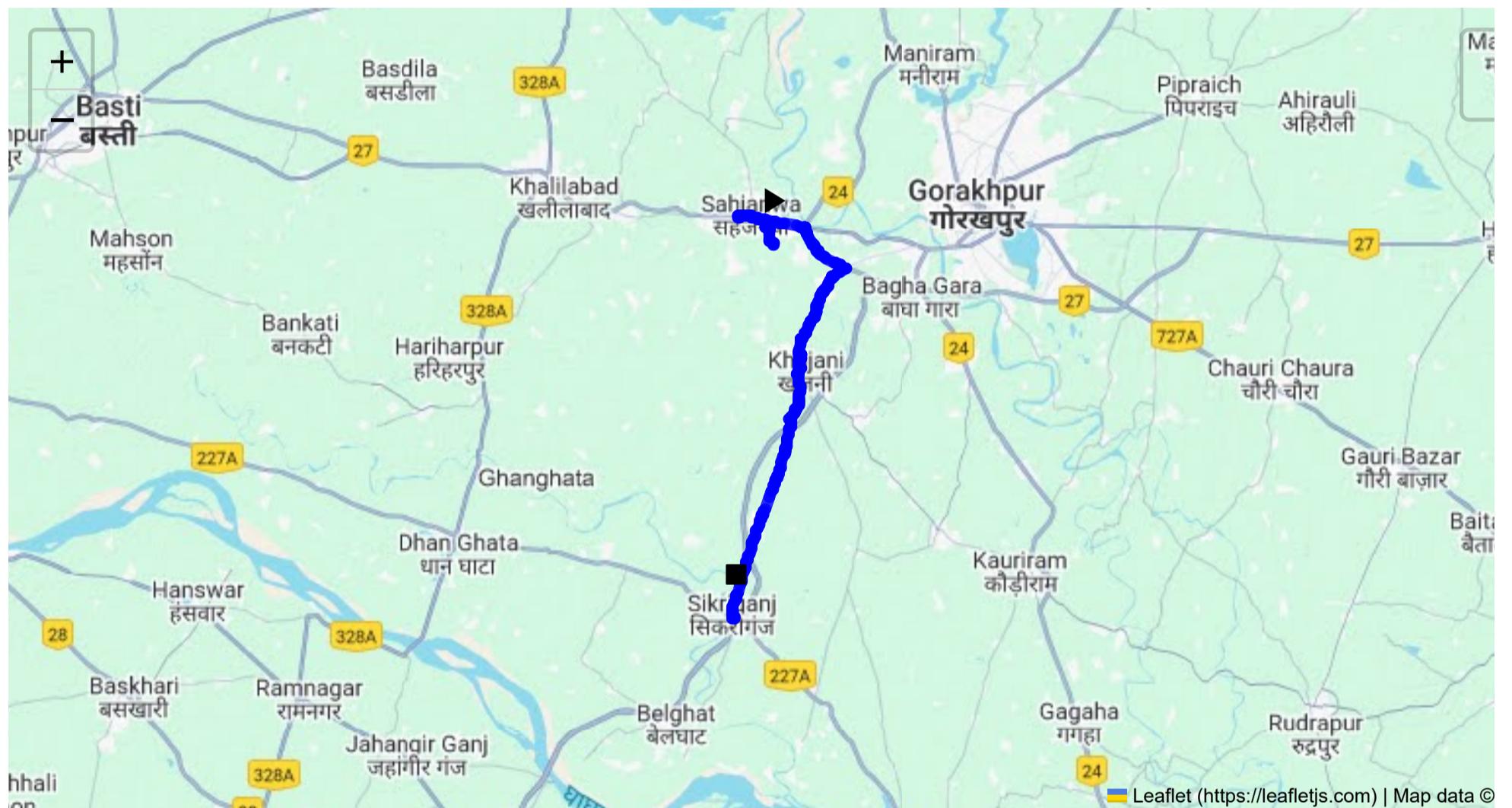
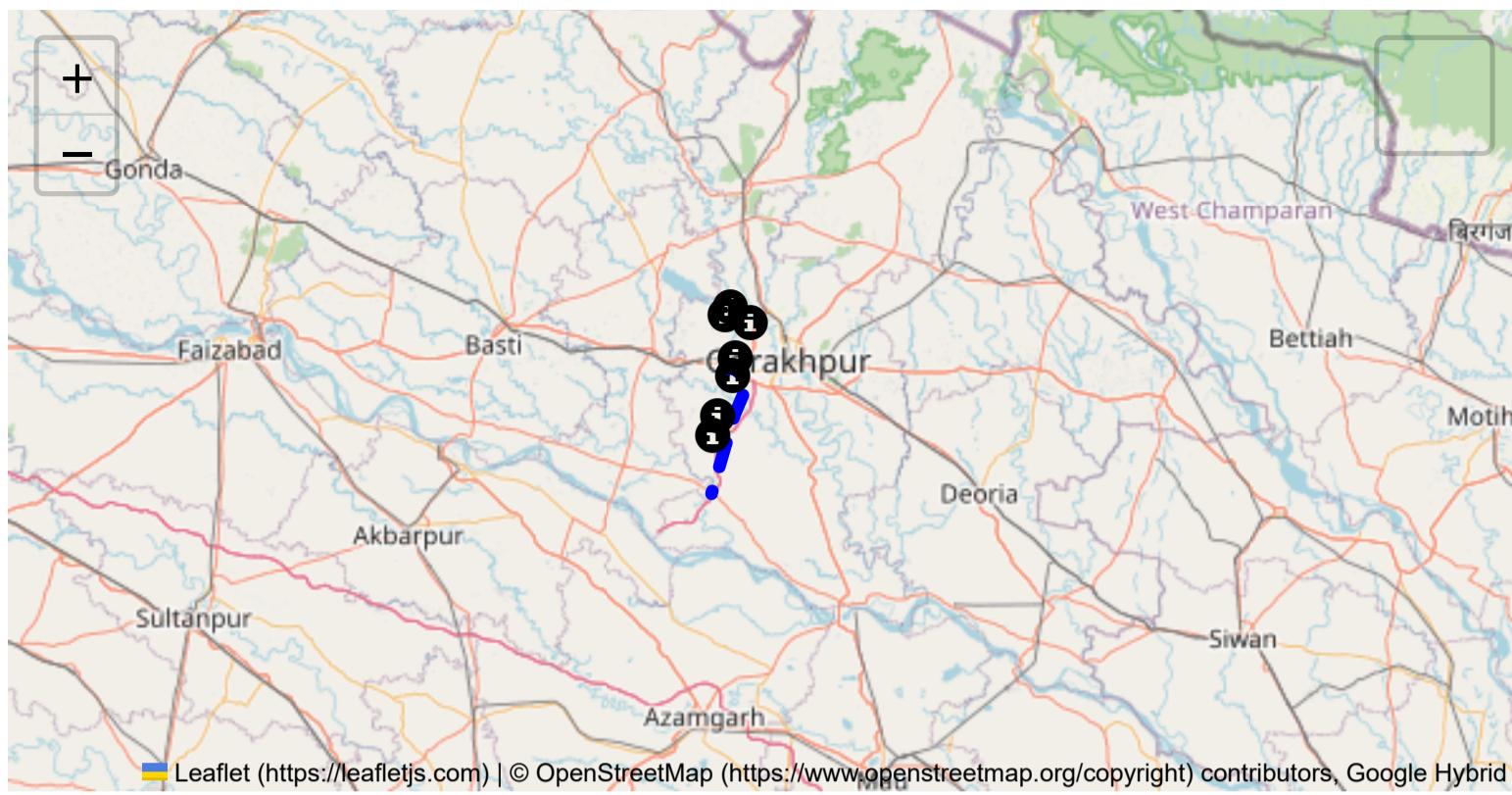
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 39.89 km
Estimated Duration: 1.2 hours
Adjusted Duration (Heavy Vehicle): 1.5 hours
Start: (26.735959, 83.229398)
End: (26.50069, 83.20219)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1, Sahjanwa to Jhaua Bujurg covers approximately 39.89 kilometers, traversing through urban and semi-urban areas of Uttar Pradesh. The journey includes multiple waypoints: Khanipur and Bareebandari, primarily following local roads and the Khajni-Sikri Ganj-Rajesultanpur Road.

2. Typical Weather Conditions and Potential Hazards

Uttar Pradesh experiences hot summers (March to June), a monsoon season (July to September), and mild winters (November to February). Monsoon rains can cause flooding and road washouts, while fog is a concern in winter. These conditions can lead to reduced visibility and potential road hazards.

3. Analysis of Traffic Patterns

Traffic congestion is typically higher in the morning (8-10 AM) and evening (5-7 PM) due to local commuter traffic. Urban and market areas, especially around Sahjanwa and Khajni, witness heavy congestion. Being aware of village market timings is crucial, as these can cause unexpected delays.

4. Assessment of Road Quality and Infrastructure

The road quality along the route varies:

- **GIDA Industrial Area:** Generally well-maintained, though heavy vehicular traffic can lead to wear and tear.
- **Khajni-Sikriganj-Rajesultanpur Road:** Mixed conditions with some sections needing repairs. Potholes and uneven surfaces are common, especially post-monsoon.

5. Suggestions for Alternative Routes

In case of emergencies, consider:

- **Via NH27:** A national highway offering a more stable infrastructure.
- **Local bypasses:** Can be considered through villages but usually not recommended for heavy vehicles due to narrower roads.

6. Local Regulations for Hazardous Material Transport

Transporting hazardous materials mandates strict adherence to Indian safety standards, including proper labeling, secured loading, and permits. Night-time transport may be restricted to minimize public risk.

7. Historical Incidents with Heavy Vehicles

Records indicate occasional rollovers and spillage due to road conditions and driver error, particularly in monsoon season. Awareness and adherence to safe driving practices are crucial.

8. Environmental Considerations

The route passes near agricultural lands and small water bodies. It is essential to avoid spillage and ensure secure transport of hazardous materials to prevent contamination.

9. Communication Coverage

Major mobile networks have good coverage in urban areas, but there may be weak signals or dead zones in agricultural and remote areas. Satellite communication options could be considered for comprehensive coverage.

10. Estimated Emergency Response Times

Emergency response can vary:

- **Urban Areas:** 15-30 minutes.
- **Rural Areas:** 45 minutes to over an hour, depending heavily on road access and weather conditions.

11. Overall Summary of Risk Assessment

This route involves a moderate level of risk due to varied road conditions, potential weather challenges, and congestion. Proper planning, awareness of local conditions, strict adherence to safety protocols, and maintaining communication are essential for minimizing risks. The use of alternative routes should be limited to emergencies, and drivers should be adequately prepared for potential delays and hazards.

Regular updates on weather forecasts and real-time traffic conditions are recommended to adjust the route plan effectively.

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	High	26.74654, 83.22390	15 KM/Hr	1.65 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	8.99 km
12	Turn	Medium	26.74644, 83.25150	30 KM/Hr	9.07 km
13	Turn	Medium	26.74310, 83.25343	30 KM/Hr	9.49 km
14	Turn	Medium	26.74298, 83.25343	30 KM/Hr	9.51 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
15	Turn	High	26.72312, 83.27632	15 KM/Hr	12.75 km
16	Turn	High	26.72324, 83.27640	15 KM/Hr	12.78 km
17	Blind Spot	Blind Spot	26.72125, 83.28059	10 KM/Hr	13.22 km
18	Turn	High	26.65810, 83.24834	15 KM/Hr	21.46 km
19	Turn	Medium	26.65807, 83.24830	30 KM/Hr	21.47 km
20	Turn	High	26.50631, 83.20027	15 KM/Hr	39.18 km
21	Turn	Medium	26.50629, 83.20031	30 KM/Hr	39.24 km
22	Blind Spot	Blind Spot	26.50186, 83.20184	10 KM/Hr	39.76 km
23	Turn	High	26.50184, 83.20171	15 KM/Hr	39.77 km

Emergency Locations

Found: 1 hospital(s), 1 police(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Government. hospital khajni	26.6652993, 83.2497154	30 km/h	Medium	20.56 km
1	police	Sikriganj Police Station	26.5030254, 83.2004017	30 km/h	Medium	39.53 km

Crowded Spots

Route Photos of Risky Spots



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 km

Coordinates: 26.75126, 83.22476



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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



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Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.99 km

Coordinates: 26.74681, 83.25111



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.07 km

Coordinates: 26.74644, 83.25150



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.49 km

Coordinates: 26.74310, 83.25343



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.51 km

Coordinates: 26.74298, 83.25343



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 12.75 km

Coordinates: 26.72312, 83.27632



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 12.78 km

Coordinates: 26.72324, 83.27640



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 13.22 km

Coordinates: 26.72125, 83.28059



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 21.46 km

Coordinates: 26.65810, 83.24834



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 21.47 km

Coordinates: 26.65807, 83.24830



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 39.18 km

Coordinates: 26.50631, 83.20027



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Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 39.24 km

Coordinates: 26.50629, 83.20031



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 39.76 km

Coordinates: 26.50186, 83.20184



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 39.77 km

Coordinates: 26.50184, 83.20171

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