



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to NILANSH 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

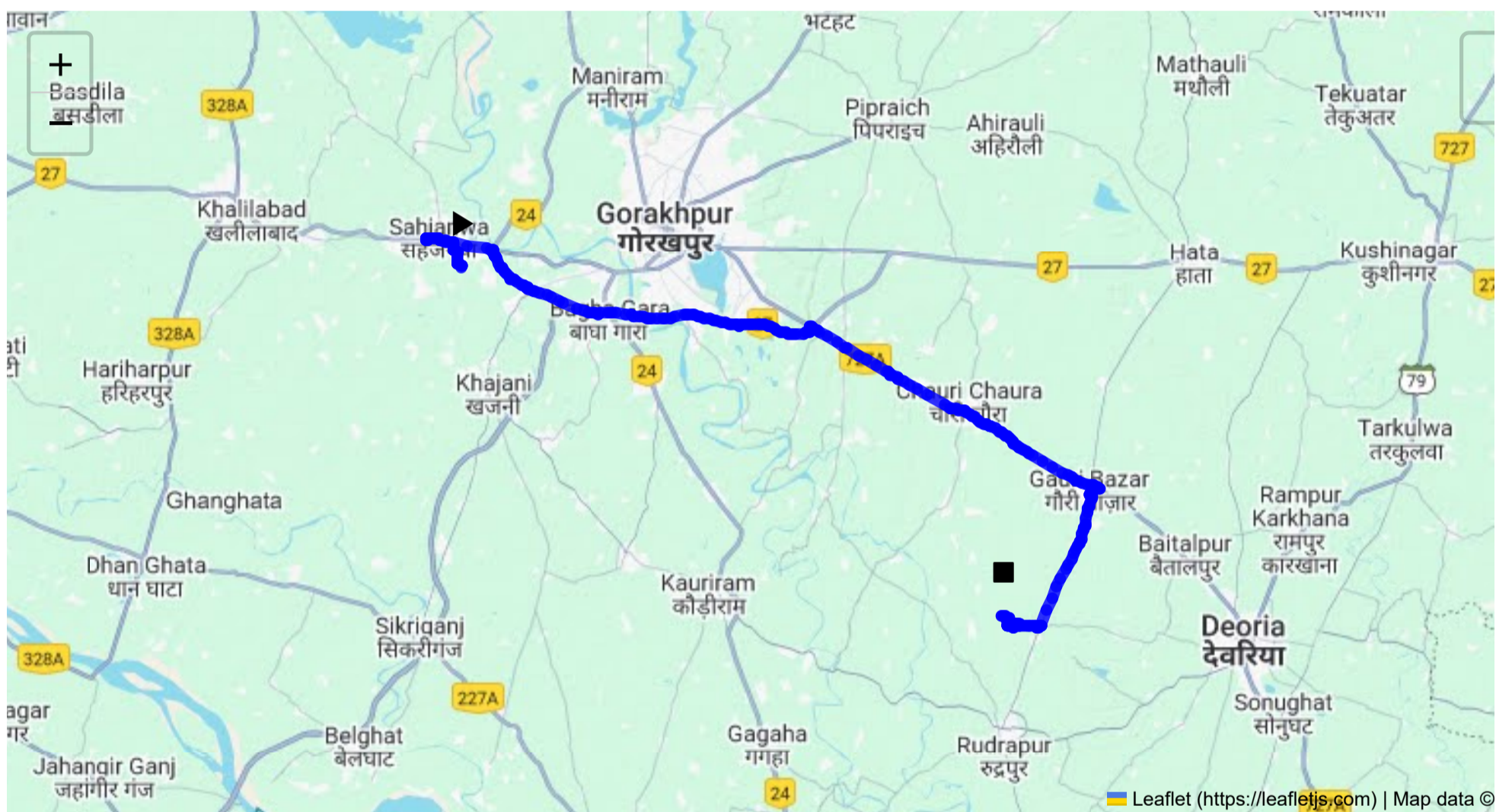
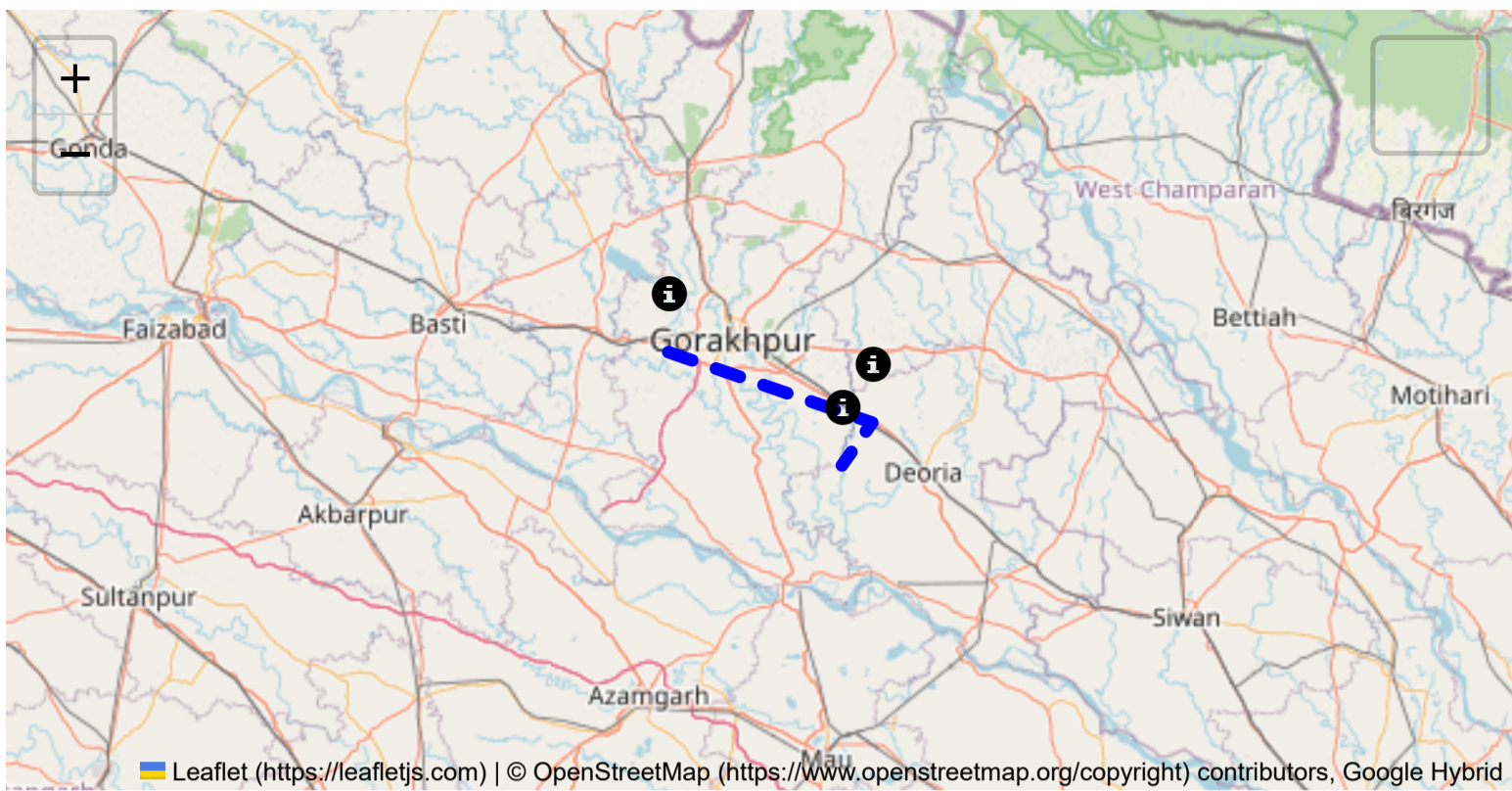
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 71.58 km
Estimated Duration: 1.6 hours
Adjusted Duration (Heavy Vehicle): 2.0 hours
Start: (26.735959, 83.229398)
End: (26.51707, 83.60869)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins in the GIDA Industrial Area, Sahjanwa, proceeding to Surajpur with a waypoint at Gauri Bazar. This pathway traverses rural and semi-urban regions, primarily following Rudrapur Gauribazar Road. The journey covers approximately 71.58 kilometers, taking around 1.63 hours, depending on road and traffic conditions.

2. Typical Weather Conditions and Potential Weather-related Hazards

The region experiences a humid subtropical climate with three main seasons: summer (March to June), monsoon (July to September), and winter (October to February). Summers are hot with temperatures reaching up to 40°C, posing a risk of vehicle overheating. The monsoon season brings heavy rains, potentially leading to water-logged roads and reduced visibility. Winters are mild but can bring occasional fog, especially in the early morning and late evening, which can reduce visibility significantly.

3. Analysis of Traffic Patterns

Traffic is generally moderate with heavier congestion during the morning (8:00-10:00 AM) and evening (5:00-7:00 PM) peak hours, especially near urban centers like Sahjanwa and Gauri Bazar. Expect slow-moving vehicles and occasional bottlenecks, particularly in markets and town centers.

4. Assessment of Road Quality and Infrastructure

The roads range from fair to poor quality, with some sections having potholes and uneven surfaces, especially during or following the monsoon season. Road signs may be insufficient or weathered in rural stretches. While major intersections are generally marked, drivers should be cautious of unmarked smaller road crossings.

5. Suggestions for Alternative Routes for Emergencies

An alternative route involves taking NH27 from Sahjanwa towards Gorakhpur, then transitioning to NH29 towards Surajpur. Although longer, this route benefits from better-maintained roads and infrastructure, making it more suitable in case of major roadblocks or unsafe conditions along the primary route.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transport of hazardous materials in Uttar Pradesh requires adherence to the Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, with stringent restrictions on movement through urban areas during peak hours. Proper documentation and labeling, along with safety protocols, are mandatory.

7. Overview of Historical Incidents

There have been few reported incidents involving heavy vehicles on this route, primarily related to overturned trucks due to poor road conditions or excessive speed during wet conditions. No major hazardous material incidents have been documented recently.

8. Environmental Considerations and Sensitive Areas

The route passes near agricultural lands, where chemical spills could have severe implications on crop viability and soil condition. Drivers should exercise extreme caution to prevent any spillage. Gauri Bazar

and nearby small water bodies should be navigated with care to avoid contamination.

9. Analysis of Communication Coverage

The route generally maintains good mobile coverage, but rural stretches between Gauri Bazar and Surajpur may experience occasional network interruptions. It's advisable for drivers to have a secondary means of communication.

10. Estimated Emergency Response Times

Emergency services in urban areas like Sahjanwa are relatively fast, estimated at 15-30 minutes. However, response times in rural areas may extend to 45 minutes to an hour due to limited resources and distance from service centers.

12. Overall Summary of Risk Assessment

This route presents moderate risk mainly due to road quality, weather conditions, and traffic congestion during peak hours. Key recommendations include using alternate major highways for hazardous materials whenever possible, avoiding travel during severe weather, and ensuring compliance with local regulations to minimize risks. Emergency plans should be in place considering potential delays in rural areas. Frequent communication checks and prudent driving practices will enhance safety along this route.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
3	Turn	High	26.73690, 83.22947	15 KM/Hr	0.05 km
4	Turn	High	26.73697, 83.22939	15 KM/Hr	0.11 km
5	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
6	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.48 km
7	Turn	Medium	26.74524, 83.22746	30 KM/Hr	1.16 km
8	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.31 km
9	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
10	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
11	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
12	Turn	High	26.75377, 83.20465	15 KM/Hr	4.28 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.95 km
13	Turn	Medium	26.74656, 83.25154	30 KM/Hr	9.04 km
14	Turn	Medium	26.74648, 83.25152	30 KM/Hr	9.06 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
15	Turn	High	26.69632, 83.47492	15 KM/Hr	33.13 km
16	Turn	High	26.69639, 83.47492	15 KM/Hr	33.16 km
17	Blind Spot	Blind Spot	26.69844, 83.47473	10 KM/Hr	33.43 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.43 km
18	Turn	High	26.69857, 83.47481	15 KM/Hr	33.44 km
19	Turn	Medium	26.63752, 83.59723	30 KM/Hr	47.42 km
2	U-Turn	High	26.5969341, 83.6777448	10 KM/Hr	56.60 km
20	Blind Spot	Blind Spot	26.59693, 83.67774	10 KM/Hr	56.60 km
21	Turn	High	26.59686, 83.67769	15 KM/Hr	56.72 km
22	Blind Spot	Blind Spot	26.59905, 83.67225	10 KM/Hr	57.29 km
23	Turn	High	26.51146, 83.63643	15 KM/Hr	67.78 km
24	Turn	High	26.51186, 83.62141	15 KM/Hr	69.36 km
25	Turn	Medium	26.51154, 83.62125	30 KM/Hr	69.40 km
26	Turn	Medium	26.51147, 83.62112	30 KM/Hr	69.42 km
27	Turn	Medium	26.51198, 83.61850	30 KM/Hr	69.65 km
28	Turn	Medium	26.51193, 83.61833	30 KM/Hr	69.71 km
29	Turn	Medium	26.51062, 83.61763	30 KM/Hr	69.85 km
30	Turn	Medium	26.51104, 83.61416	30 KM/Hr	70.22 km
31	Blind Spot	Blind Spot	26.51085, 83.61233	10 KM/Hr	70.42 km
32	Blind Spot	Blind Spot	26.51589, 83.61374	10 KM/Hr	70.91 km
33	Turn	Medium	26.51678, 83.61090	30 KM/Hr	71.29 km
34	Turn	Medium	26.51718, 83.60882	30 KM/Hr	71.49 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	34.10 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



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.28 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.95 km

Coordinates: 26.74681, 83.25111



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.04 km

Coordinates: 26.74656, 83.25154



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.06 km

Coordinates: 26.74648, 83.25152



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 33.13 km

Coordinates: 26.69632, 83.47492



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 33.16 km

Coordinates: 26.69639, 83.47492



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 33.43 km

Coordinates: 26.69844, 83.47473



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 33.43 km

Coordinates: 26.698439, 83.4747268



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 33.44 km

Coordinates: 26.69857, 83.47481



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 47.42 km

Coordinates: 26.63752, 83.59723



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 56.60 km

Coordinates: 26.5969341, 83.6777448



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 56.60 km

Coordinates: 26.59693, 83.67774



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 56.72 km

Coordinates: 26.59686, 83.67769



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 57.29 km

Coordinates: 26.59905, 83.67225

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