JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to VIJAY LAXMI 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

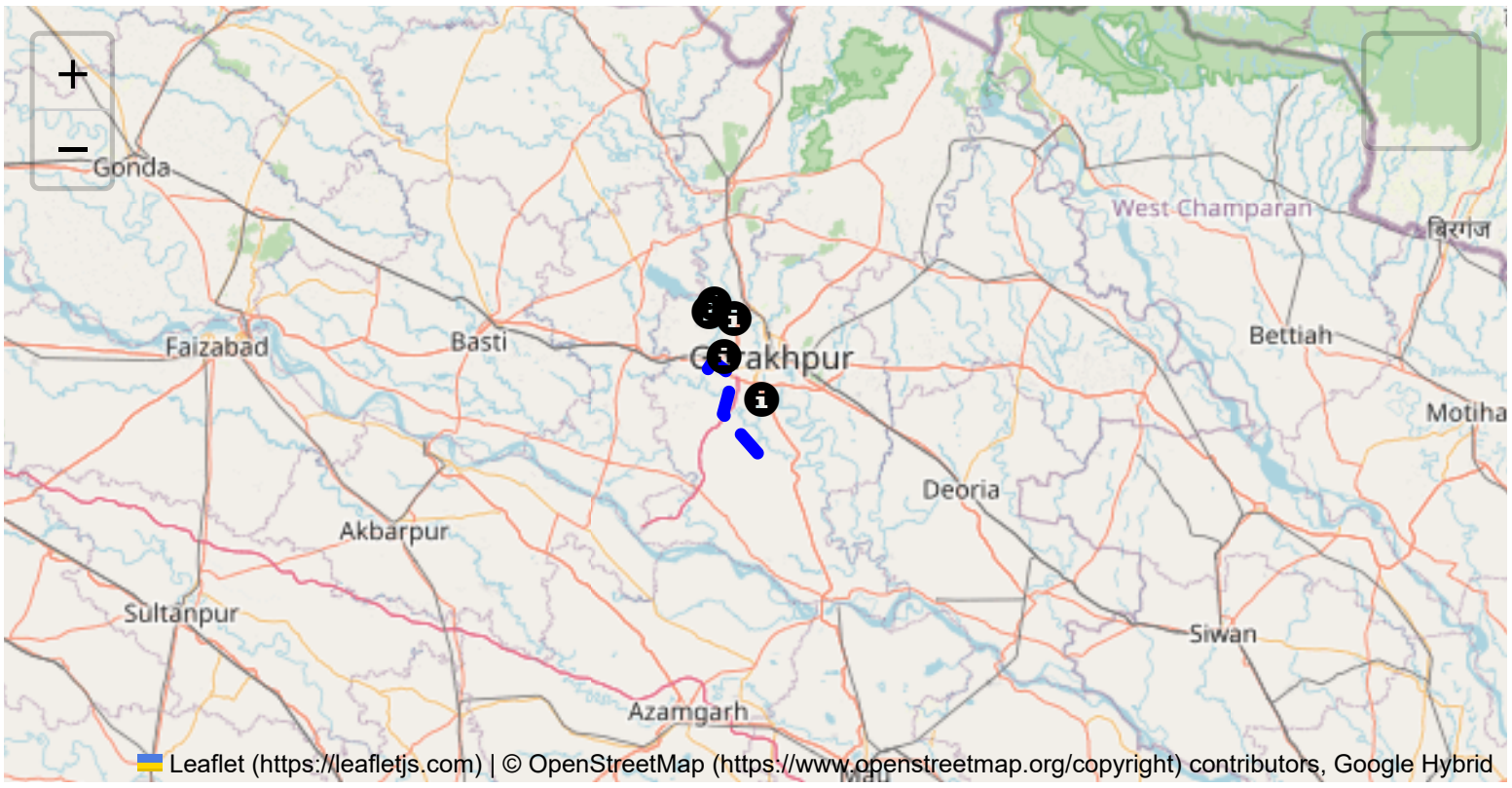
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental impacts during transport.

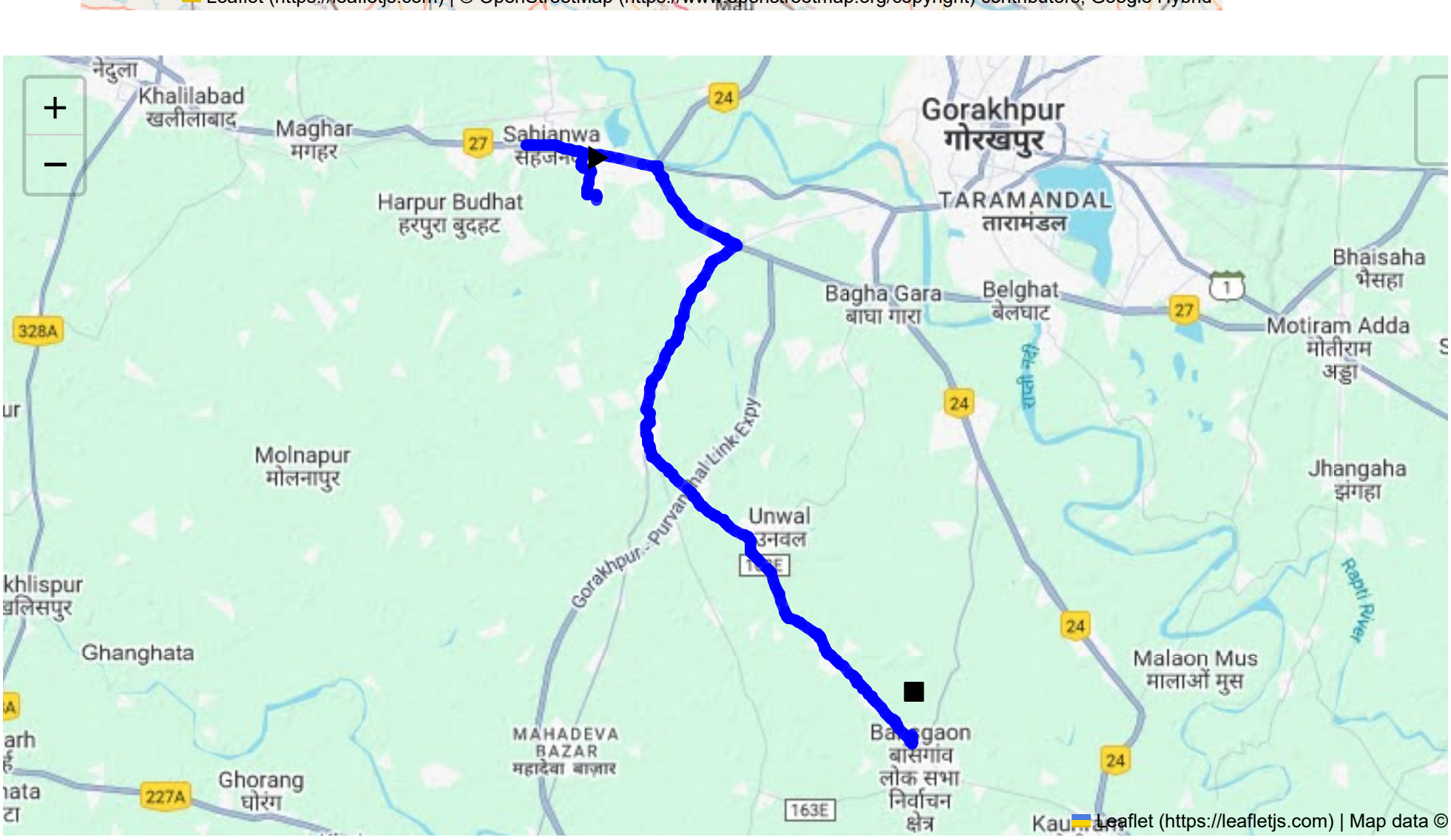
Journey Risk Mitigation

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: 36.68 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.3 hours
Start: (26.735959, 83.229398)
End: (26.56318, 83.3437)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route stretches approximately 36.68 kilometers from the GIDA Industrial Area in Sahjanwa, Uttar Pradesh to Bansgaon, Bhairopur, Uttar Pradesh, passing through key locations like Khanipur and Atra Singaree. The journey generally takes around 1.03 hours for heavy vehicles transporting hazardous materials.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Uttar Pradesh experiences a subtropical climate, featuring hot summers (April to June), a monsoon season (July to September), and mild winters (October to February). The monsoon period could present heavy rainfalls leading to waterlogging and potential road hazards such as potholes. Foggy conditions are also common during winter months, which can reduce visibility and complicate navigation.

3. Traffic Patterns, Highlighting Peak Hours and Congestion-Prone Areas

The route might experience congestion, particularly near market areas and town centers, especially during morning (8:00–10:00 AM) and evening (5:00–7:00 PM) rush hours. Industrial areas such as GIDA might also influence traffic patterns due to the operation timings of factories, leading to increased heavy vehicle movement.

4. Assessment of Road Quality and Infrastructure

Road conditions can vary, with certain stretches having well-maintained surfaces, while others may be subject to wear and tear due to weather or heavy vehicle usage. Patches with poor maintenance may include potholes or uneven surfaces, especially noticeable after the monsoon season.

5. Suggestions for Alternative Routes for Emergencies

In emergencies, alternative routes could include using other state highways or secondary roads that connect to the main towns along the primary route. Local road networks offering detours are advisable to familiarize with in case of roadblocks or traffic diversions.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transporting hazardous materials requires compliance with local transport regulations, including appropriate labeling of materials, securing loads properly, and adhering to safety-check inspections. Drivers must hold the necessary permissions and certifications to carry hazardous loads.

7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

While specific incidents may not be well-documented, regional occurrences can include accidents due to poor visibility, road quality, or driver negligence. Regular review of local transport authority reports is recommended for updates on safety records.

8. Environmental Considerations and Sensitive Areas

The route may traverse areas close to agricultural land or settlements, requiring careful navigation to prevent pollution or disturbance, especially during the transport of hazardous materials. Adherence to

designated routes minimizes environmental impact.

9. Analysis of Communication Coverage, Noting Potential Dead Zones

Mobile network coverage is generally reliable along major roads but might be inconsistent in less developed or remote sections. Drivers should be equipped with alternative communication devices or plan device check-ins to ensure connectivity.

10. Estimated Emergency Response Times for Different Route Segments

Emergency response times can vary due to factors like traffic, road conditions, and proximity to urban centers. Urban areas might offer quicker response times, typically under 30 minutes, while rural stretches could extend beyond 45 minutes due to accessibility concerns.

12. Overall Summary of Risk Assessment

The route from GIDA Industrial Area to Bansgaon is primarily navigable but requires cautious driving, especially under adverse weather conditions and during peak traffic hours. Preparation for potential delays due to infrastructure issues or roadblocks is necessary. Given the presence of agricultural and residential zones, environmentally-sensitive transportation practices are essential. Proper documentation and compliance with local safety regulations are crucial for the transport of hazardous materials.

By addressing the hazards and adopting proactive safety and compliance measures, navigation of this route can be managed efficiently. Regular updates and real-time information checks are encouraged to maintain awareness and adapt to any changes or emergencies during transit.

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	1.30 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	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

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
10	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
11	Turn	Medium	26.74658, 83.25155	30 KM/Hr	9.05 km
12	Turn	Medium	26.74646, 83.25151	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	9.50 km
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	Medium	26.66804, 83.24781	30 KM/Hr	20.25 km
19	Turn	Medium	26.66699, 83.24879	30 KM/Hr	20.41 km
20	Turn	Medium	26.66414, 83.24872	30 KM/Hr	20.72 km
21	Turn	Medium	26.66335, 83.24775	30 KM/Hr	20.85 km
22	Blind Spot	Blind Spot	26.56048, 83.34356	10 KM/Hr	36.33 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Government. hospital khajni	26.6652993, 83.2497154	30 km/h	Medium	20.53 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: 4.30 km

Coordinates: 26.75381, 83.20466

Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74681, 83.25111

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.05 km

Coordinates: 26.74658, 83.25155

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.07 km

Coordinates: 26.74646, 83.25151

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: 9.50 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

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 20.25 km

Coordinates: 26.66804, 83.24781

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 20.41 km

Coordinates: 26.66699, 83.24879

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 20.85 km

Coordinates: 26.66335, 83.24775

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 36.33 km

Coordinates: 26.56048, 83.34356

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