



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO BEV MUSTAKHAM INDANE

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

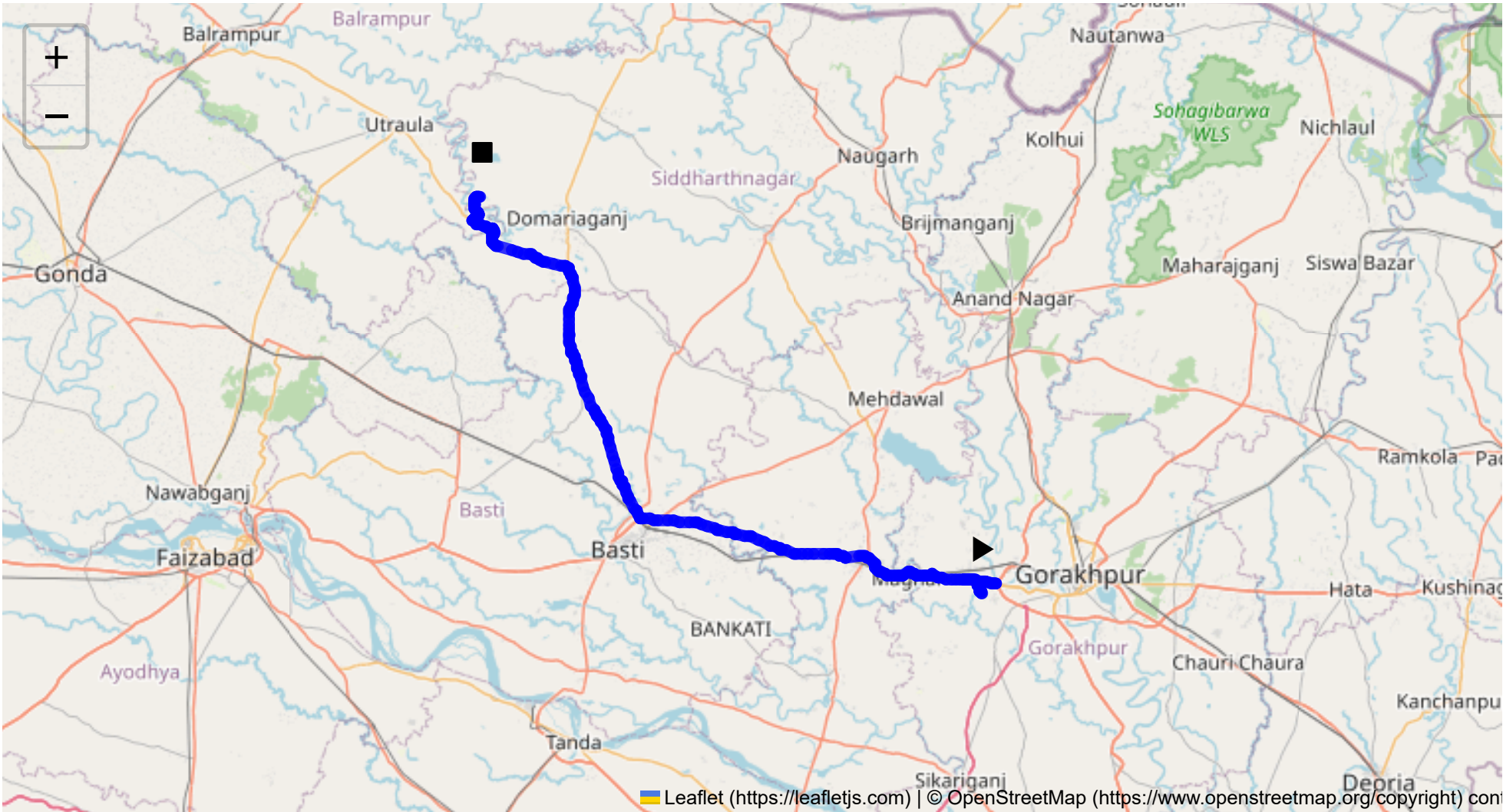
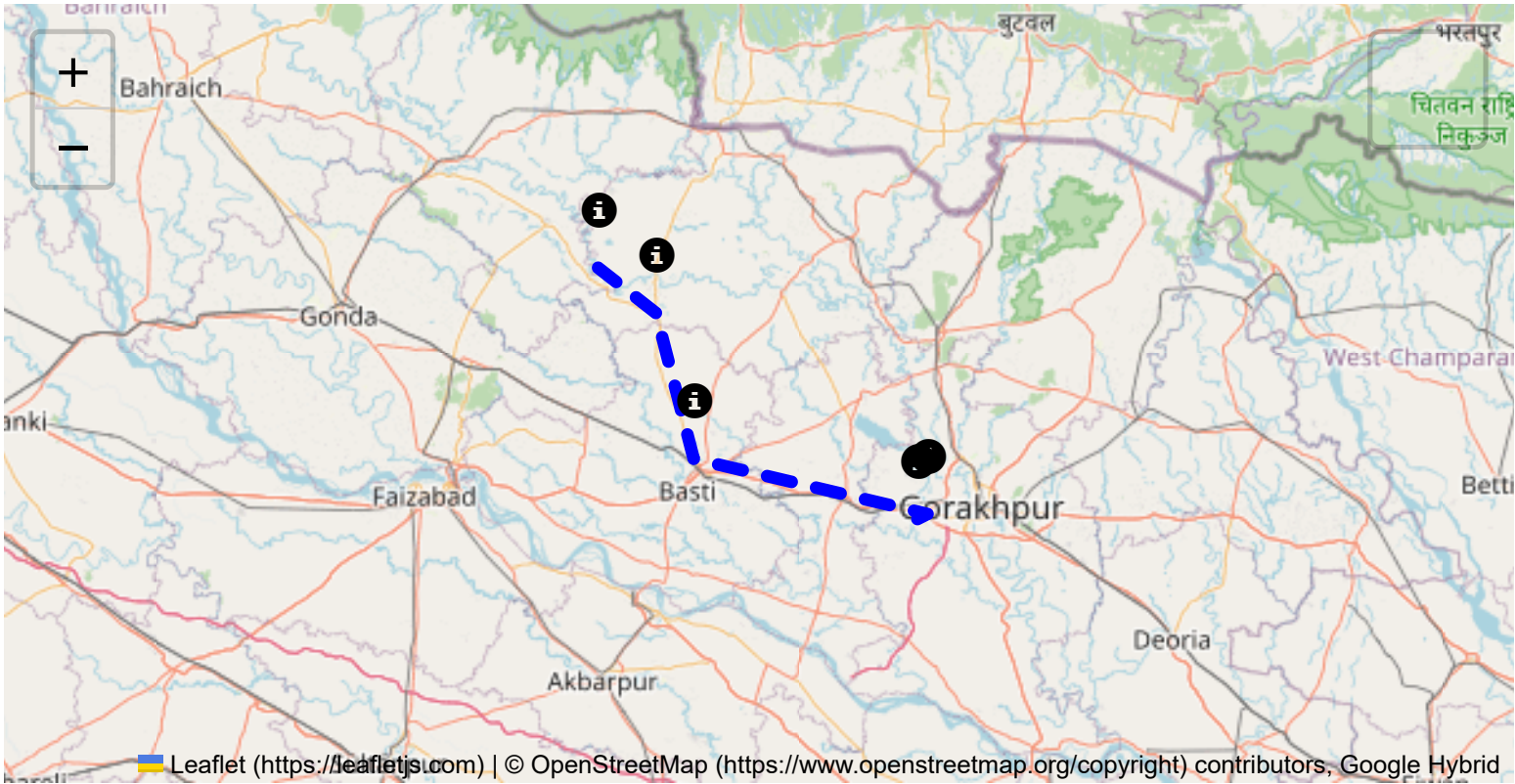
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 118.26 km
Estimated Duration: 2.8 hours
Adjusted Duration (Heavy Vehicle): 3.5 hours
Start: (26.735959, 83.229398)
End: (27.226741, 82.531879)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route stretches approximately 118.26 kilometers from GIDA Industrial Area Phase 1, Sahjanwa to Masjidia, passing through crucial waypoints including Zero Point, Kaalesar, Bhitiya Khurd, and Bewa Husain, Fatehpur. It primarily follows local and state highways with mixed traffic conditions and variable road infrastructures.

2. Typical Weather Conditions and Potential Weather-Related Hazards

In Uttar Pradesh, the weather can vary significantly:

- **Summer (March to June):** High temperatures, often exceeding 40°C, increasing the risk of tire blowouts and engine overheating.
- **Monsoon (July to September):** Heavy rains can lead to poor visibility, slippery roads, and flooding, particularly on rural pathways.
- **Winter (December to February):** Fog is common, particularly in the mornings, which can reduce visibility significantly.

3. Analysis of Traffic Patterns

- **Peak Hours:** Typically from 8-10 AM and 5-7 PM. Congestion is more likely near urban intersections and market areas.
- **Congestion-Prone Areas:** Watch for congestion near town centers, such as during market days or festival times.

4. Assessment of Road Quality and Infrastructure

- **GIDA to Zero Point:** Generally well-paved but crowded.
- **Zero Point to Bhitiya Khurd:** Mixed surface quality with occasional potholes, particularly after heavy rains.
- **Bhitiya Khurd to Bewa Husain:** Narrower roads that may lack proper signage and lighting.
- **Bewa Husain to Masjidia:** Fairly maintained, but local traffic and livestock crossings can be a concern.

5. Suggestions for Alternative Routes for Emergencies

In case of road closures or severe congestion:

- **Alternate Route 1:** Detour via NH27 if heading towards Gorakhpur, which is better maintained.
- **Alternate Route 2:** Use local roads bypassing dense village areas to avoid potential disruptions.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- Required to adhere to standard operating hours for cargo vehicles, typically restricted at night.
- Checkpoints may enforce regulations regarding the transport of hazardous materials, requiring proper documentation and safety measures.

7. Overview of Historical Incidents

- These routes have seen incidents predominantly during the monsoon season due to poor road conditions. Overturned vehicles and spills have been reported largely near Bhitiya Khurd.

8. Environmental Considerations and Sensitive Areas

- Areas around Bhitiya Khurd and Bewa Husain have local wildlife that may venture onto roads.
- Sensitive environments around any water bodies should be considered for containment in the event of a spill.

9. Analysis of Communication Coverage

Most major towns and villages have decent mobile coverage, but expect potential dead zones in rural stretches. Carrying a satellite phone or two-way radio is recommended.

10. Estimated Emergency Response Times

- **GIDA to Zero Point:** ~20-30 minutes due to urban proximity.
- **Zero Point to Bhitiya Khurd:** ~45-60 minutes, factoring in rural response capabilities.
- **Bhitiya Khurd to Masjidia:** Up to 1-1.5 hours due to more remote locations.

11. An Overall Summary of Risk Assessment

This route presents moderate to high risk due to weather patterns, infrastructure quality, and traffic congestion. Proper planning, including timing for off-peak travel, regular weather checks, and maintaining communication capabilities, are crucial for safely transporting hazardous materials. Integrating alternative routes and preparedness for environmental sensitivity at vulnerable points will further mitigate potential risks.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.14 km
2	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
3	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
4	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
5	Turn	High	26.74654, 83.22390	15 KM/Hr	1.63 km
6	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.15 km
7	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.21 km
8	Turn	High	26.75377, 83.20465	15 KM/Hr	4.26 km
0	U-Turn	High	26.7471208, 83.2490873	10 KM/Hr	8.74 km
9	Blind Spot	Blind Spot	26.74712, 83.24909	10 KM/Hr	8.74 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
10	Blind Spot	Blind Spot	26.82853, 82.75360	10 KM/Hr	60.42 km
11	Turn	Medium	26.83823, 82.74869	30 KM/Hr	61.63 km
12	Turn	High	27.19794, 82.52228	15 KM/Hr	113.37 km
13	Turn	Medium	27.20154, 82.52411	30 KM/Hr	113.74 km
14	Turn	Medium	27.20169, 82.52431	30 KM/Hr	113.88 km
15	Turn	High	27.20092, 82.52671	15 KM/Hr	114.13 km
16	Turn	Medium	27.20564, 82.52919	30 KM/Hr	114.61 km
17	Turn	High	27.20611, 82.52913	15 KM/Hr	114.76 km
18	Turn	Medium	27.20630, 82.52884	30 KM/Hr	114.79 km
19	Turn	Medium	27.21771, 82.52246	30 KM/Hr	116.21 km
20	Turn	Medium	27.22121, 82.52384	30 KM/Hr	116.62 km
21	Turn	Medium	27.22339, 82.52346	30 KM/Hr	116.83 km
22	Turn	High	27.22867, 82.52709	15 KM/Hr	117.58 km

Emergency Locations

Found: 2 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Lucknow Dental Hospital	26.8274245, 82.7828821	30 km/h	Medium	57.19 km
1	hospital	Surya Hospital	26.8377761, 82.7492317	30 km/h	Medium	61.30 km

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 2.15 km
Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 4.21 km
Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.26 km

Coordinates: 26.75377, 83.20465



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Distance from Start: 8.74 km

Coordinates: 26.7471208, 83.2490873



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 8.74 km
Coordinates: 26.74712, 83.24909



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 60.42 km
Coordinates: 26.82853, 82.75360



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 61.63 km
Coordinates: 26.83823, 82.74869



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 113.37 km
Coordinates: 27.19794, 82.52228



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 116.21 km
Coordinates: 27.21771, 82.52246



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 117.58 km
Coordinates: 27.22867, 82.52709

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