



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO PRAGATISHEEL GAS SER

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

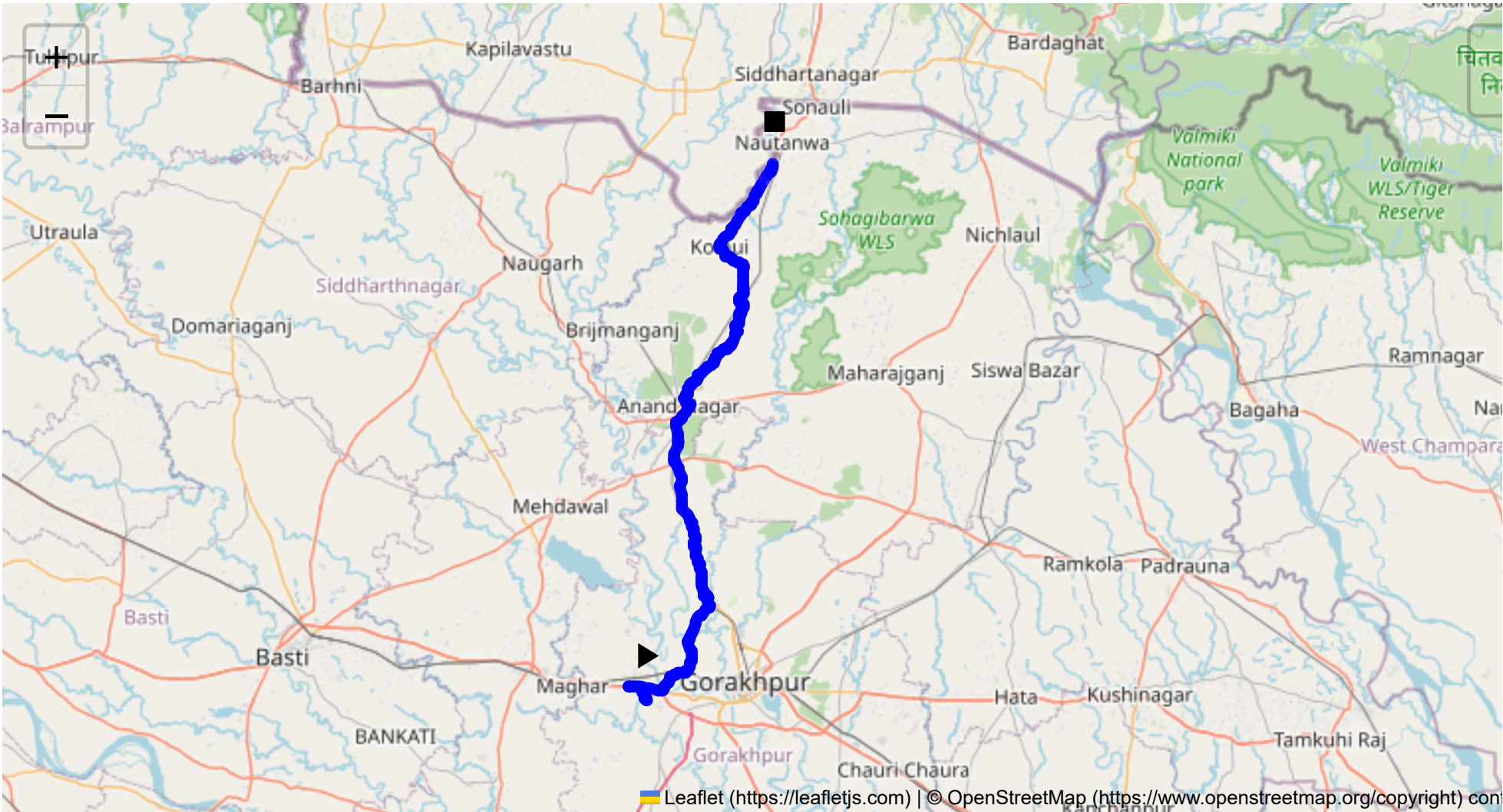
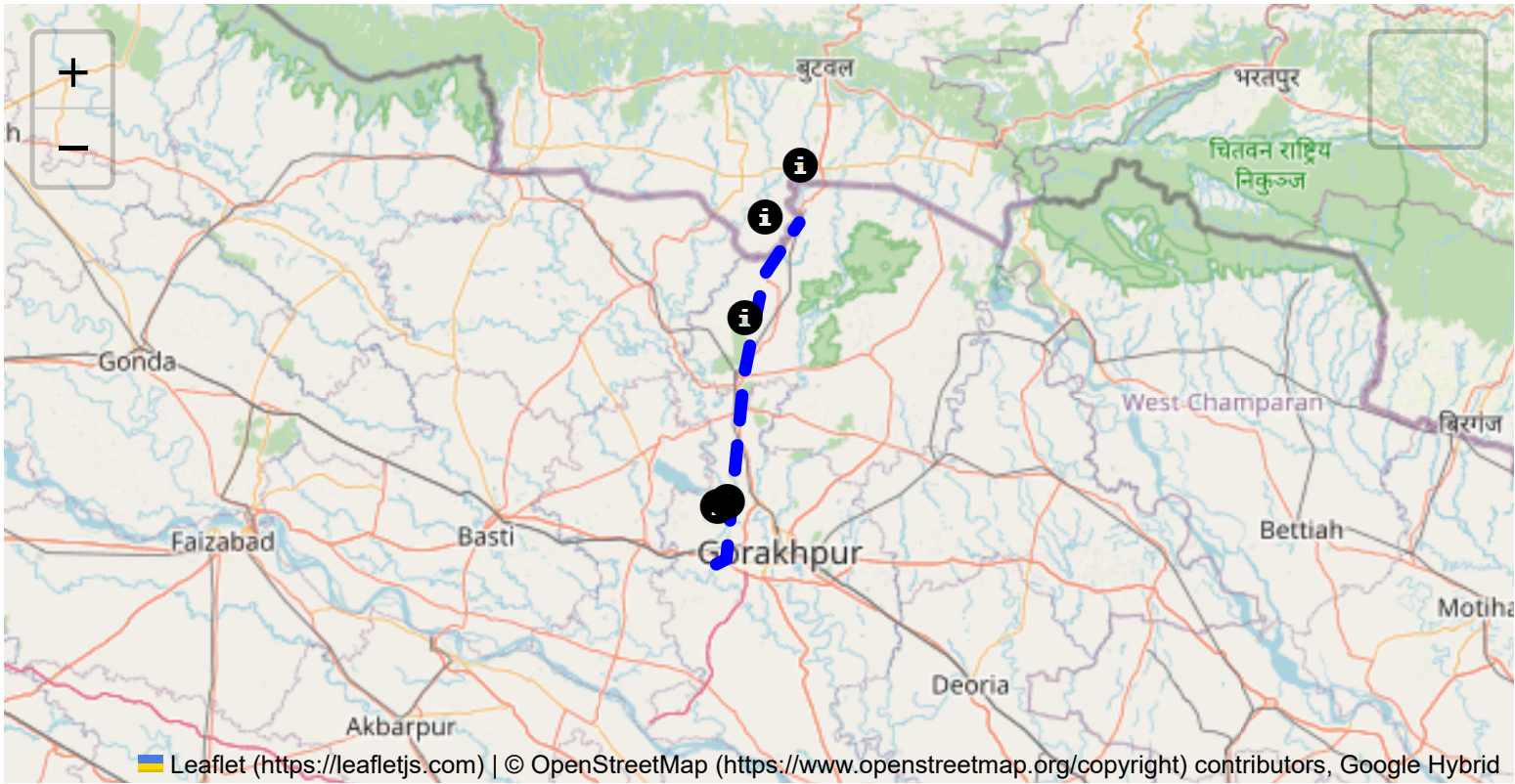
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 95.20 km
Estimated Duration: 2.3 hours
Adjusted Duration (Heavy Vehicle): 2.9 hours
Start: (26.735959, 83.229398)
End: (27.399791, 83.406197)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route spans approximately 95.20 kilometers, starting from the GIDA Industrial Area in Sahjanwa and passing through key locations like Kaalesar, Maharajganj, and Kolhui Bazar before reaching Murila. This journey typically takes around 2.5 hours for heavy vehicles. The roads are a mix of national and state highways, encompassing both urban and rural stretches with varying traffic conditions.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The region experiences a humid subtropical climate. Summers (April to June) can be very hot, with temperatures often exceeding 40°C. Monsoon season (July to September) brings heavy rainfall, which can lead to waterlogging and flooding, particularly in low-lying segments of the route. Winter (December to February) may involve fog, which can significantly reduce visibility, posing a hazard for driving.

3. Analysis of Traffic Patterns

Traffic congestion is notably higher in urban sections like Maharajganj, especially during peak hours (8:00-10:00 AM and 5:00-7:00 PM). The rural sections near Kolhui Bazar and Karu Ambla generally experience lighter traffic but may have slow-moving agricultural vehicles. Major intersections and market areas are prone to slow traffic.

4. Assessment of Road Quality and Infrastructure

While national highways in the region are generally well-maintained, certain rural and state roads may have potholes, uneven surfaces, and lack of proper signage. Construction and road repair works can also cause temporary disruptions. Lighting at night may be inadequate in rural zones, increasing the risk of accidents.

5. Suggestions for Alternative Routes for Emergencies

In case of road blockages or emergencies, consider rerouting via NH27 to avoid lengthy delays. Local roads connecting to NH29 can also serve as viable alternatives, though they may add extra distance.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Trucks carrying hazardous materials must comply with the Motor Vehicles Act of India, which mandates proper labeling, safety equipment, and adherence to prescribed routes and times. Nighttime travel might be restricted for hazardous materials in some areas for safety reasons.

7. Overview of Historical Incidents

Historically, there have been few reported incidents specific to this route involving heavy vehicles or hazardous materials. However, minor accidents and overturns are not uncommon due to rural road conditions and driving habits.

8. Environmental Considerations and Sensitive Areas

The route does not pass through any major protected environmental zones; however, local farmlands and water bodies near the route should be preserved from contamination due to spills.

9. Analysis of Communication Coverage

Communication coverage is generally reliable near urban centers, but rural stretches, particularly around Kolhui Bazar, may have sporadic network coverage, leading to potential dead zones.

10. Estimated Emergency Response Times

Emergency response times vary:

- Urban areas like Maharajganj: approximately 15-30 minutes.
- Rural sections, particularly remote areas: 45-60 minutes or potentially longer depending on conditions.

12. Overall Summary of Risk Assessment

The journey from GIDA Industrial Area to Murila poses several risks that require careful management. Weather, especially during monsoon and winter, can be a significant hazard. Traffic congestion and road conditions vary; the former peaks in urban centers while the latter needs caution in rural areas. Emergency and communication services, while generally functional, could face delays in less accessible regions. Complying with transport regulations is crucial to ensure safety and mitigate risks associated with carrying hazardous materials. Pre-trip planning and monitoring real-time traffic and weather updates are advisable to minimize potential disruptions.

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 |
| 9 | Turn | High | 26.74707, 83.25103 | 15 KM/Hr | 8.89 km |
| 0 | Roundabout | High | 26.86209, 83.31517 | 15 KM/Hr | 24.78 km |
| 10 | Turn | Medium | 26.91482, 83.29822 | 30 KM/Hr | 30.94 km |
| 11 | Turn | Medium | 26.92527, 83.29842 | 30 KM/Hr | 32.23 km |
| 12 | Turn | Medium | 26.93461, 83.29771 | 30 KM/Hr | 33.30 km |
| 13 | Turn | Medium | 27.01029, 83.27850 | 30 KM/Hr | 42.27 km |

| | Risk Type | Risk Level | Coordinates | Speed Limit | Distance from Start |
|----|------------|------------|--------------------|-------------|---------------------|
| 14 | Turn | Medium | 27.08029, 83.27113 | 30 KM/Hr | 50.37 km |
| 15 | Turn | Medium | 27.08069, 83.27132 | 30 KM/Hr | 50.49 km |
| 16 | Turn | High | 27.10269, 83.28820 | 15 KM/Hr | 53.50 km |
| 18 | Turn | High | 27.10269, 83.28820 | 15 KM/Hr | 53.50 km |
| 17 | Blind Spot | Blind Spot | 27.10277, 83.28936 | 10 KM/Hr | 53.66 km |
| 19 | Turn | Medium | 27.10969, 83.28282 | 30 KM/Hr | 54.68 km |
| 20 | Turn | Medium | 27.11110, 83.28294 | 30 KM/Hr | 54.83 km |
| 21 | Turn | Medium | 27.17234, 83.34277 | 30 KM/Hr | 64.14 km |
| 22 | Turn | Medium | 27.17797, 83.34725 | 30 KM/Hr | 65.06 km |
| 23 | Turn | Medium | 27.17830, 83.34804 | 30 KM/Hr | 65.16 km |
| 24 | Turn | Medium | 27.20026, 83.35409 | 30 KM/Hr | 67.71 km |
| 25 | Turn | Medium | 27.29659, 83.33155 | 30 KM/Hr | 80.98 km |
| 26 | Turn | High | 27.29885, 83.32998 | 15 KM/Hr | 81.31 km |

Emergency Locations

Found: 1 hospital(s)

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|---|----------|---------------------------------|------------------------|-------------|------------|---------------------|
| 1 | hospital | Government Hospital Babupaisiya | 27.3655301, 83.3844656 | 30 km/h | Medium | 90.32 km |

Crowded Spots

Found: 1 school(s)

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|---|--------|---------------------------|------------------------|-------------|------------|---------------------|
| 0 | school | Nav Jeevan Mission School | 27.1125489, 83.2814738 | 30 km/h | Medium | 54.97 km |

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: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 8.89 km
Coordinates: 26.74707, 83.25103



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 24.78 km

Coordinates: 26.86209, 83.31517



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 30.94 km

Coordinates: 26.91482, 83.29822



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 32.23 km

Coordinates: 26.92527, 83.29842



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.30 km

Coordinates: 26.93461, 83.29771



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 50.37 km
Coordinates: 27.08029, 83.27113



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 50.49 km
Coordinates: 27.08069, 83.27132



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 53.50 km
Coordinates: 27.10269, 83.28820



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 53.50 km
Coordinates: 27.10269, 83.28820



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 53.66 km
Coordinates: 27.10277, 83.28936



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 54.68 km
Coordinates: 27.10969, 83.28282



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 54.83 km
Coordinates: 27.11110, 83.28294



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 64.14 km
Coordinates: 27.17234, 83.34277



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 65.06 km

Coordinates: 27.17797, 83.34725



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 65.16 km

Coordinates: 27.17830, 83.34804



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 67.71 km
Coordinates: 27.20026, 83.35409



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Distance from Start: 80.98 km
Coordinates: 27.29659, 83.33155



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 81.31 km

Coordinates: 27.29885, 83.32998

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