



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO DUHA BIHRA INDANE GR

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

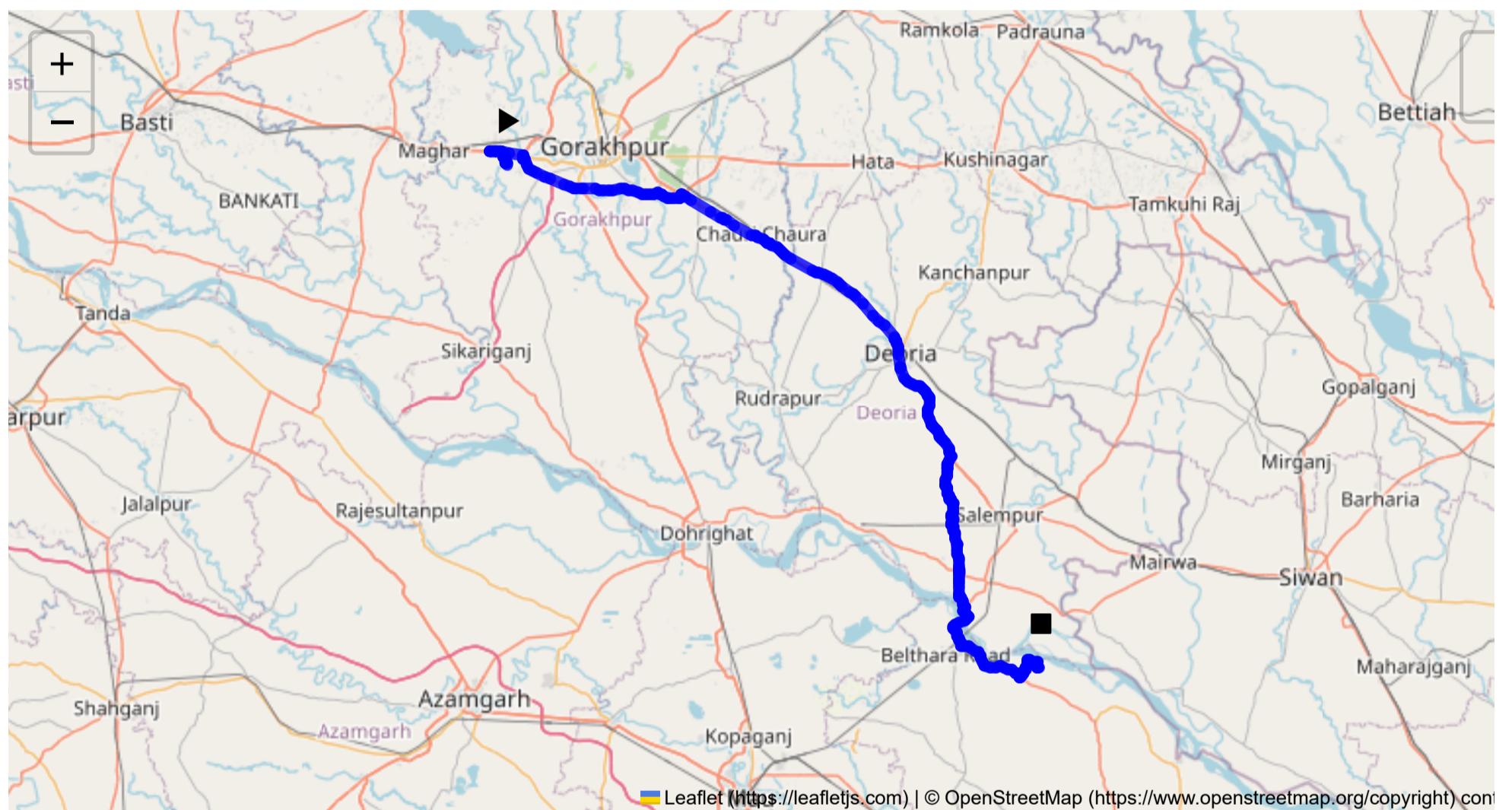
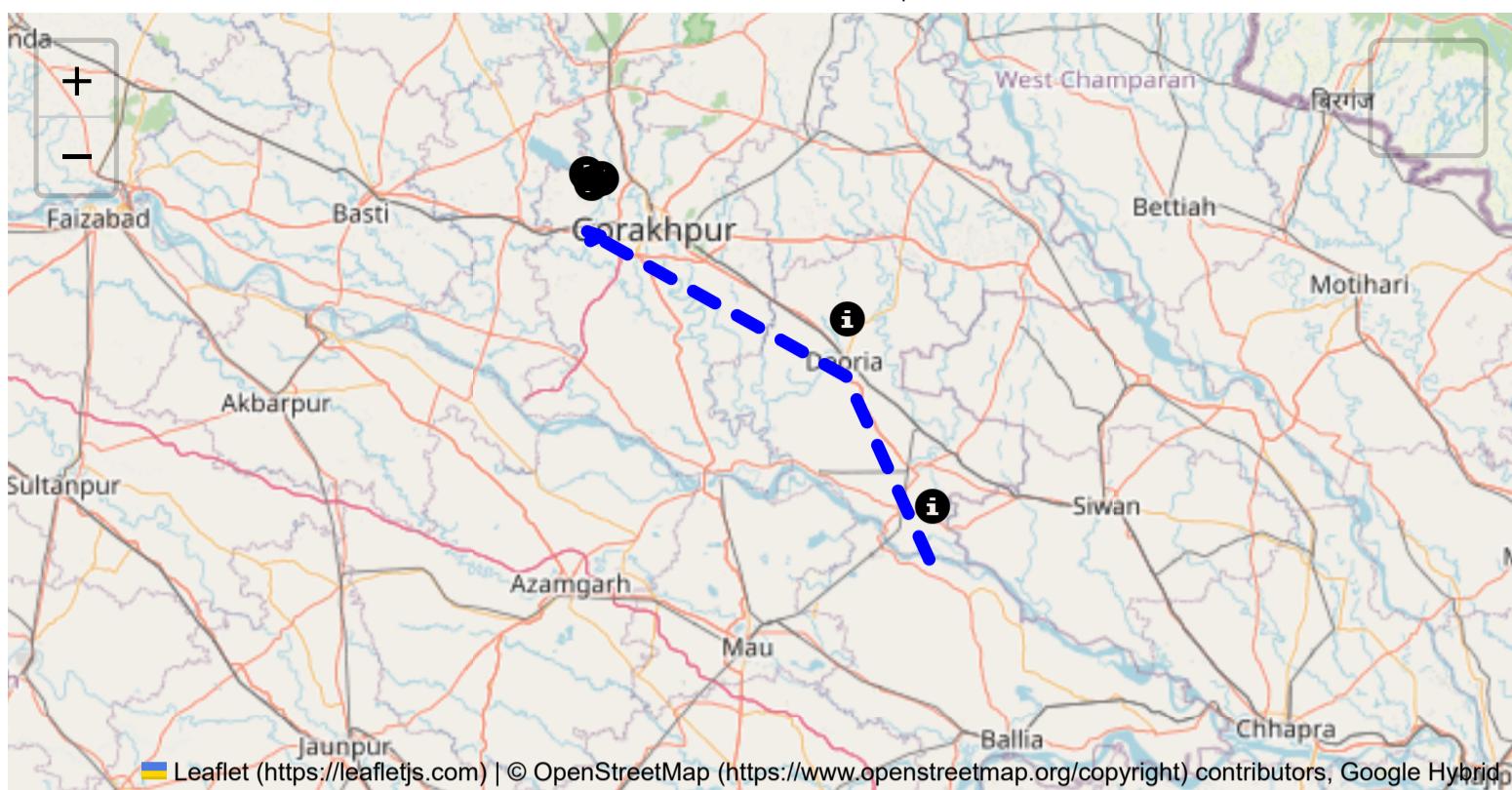
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 133.87 km
Estimated Duration: 3.1 hours
Adjusted Duration (Heavy Vehicle): 3.9 hours
Start: (26.735959, 83.229398)
End: (26.102962, 83.975475)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route travels from GIDA Industrial Area Phase 1 in Sahjanwa, passing through places like Bokta, Kalesar, Sahjanwa, Rudrapur, and Deoria, before reaching Sikandarpur. It mostly runs along regional roads and highways, which increases the risk of encountering local traffic and various types of terrain.

2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Weather Conditions:** The region experiences a hot semi-arid climate with very hot summers and moderate winters. The monsoon season, occurring between June and September, may bring heavy rainfall.
- **Hazards:**
 - **Monsoon Flooding:** Roads may flood, significantly affecting travel times.
 - **Fog:** Common in winter, leading to reduced visibility.
 - **Heatwaves:** Peak summer temperatures create heat-related risks for both drivers and vehicles.

3. Traffic Patterns and Congestion-Prone Areas

- **Peak Hours:** Expect higher traffic volumes during morning (8–10 AM) and evening (6–8 PM) rush hours, especially in urban areas like Sahjanwa and Deoria.
- **Congestion-Prone Areas:** Sahjanwa and regions nearing Deoria can experience traffic congestion due to narrow streets and local markets.

4. Assessment of Road Quality and Infrastructure

- **Road Quality:** Conditions vary, with some well-paved highways and poorly maintained local roads. Be cautious of potholes and uneven surfaces, particularly on regional roads.
- **Infrastructure:** Frequent intersections and railway crossings require cautious navigation, potentially slowing down travel.

5. Suggestions for Alternative Routes for Emergencies

- **Alternative Route 1:** Via NH27, although longer, may offer improved road quality and broader lanes.
- **Alternative Route 2:** Local bypass roads around Deoria can help avoid congestion.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- **Restricted Times:** Transport may be restricted during peak city traffic hours.
- **Regulatory Compliance:** Ensure proper documentation and labeling according to state and national guidelines.

7. Overview of Historical Incidents

- Past incidents may include overturned trucks due to poor road conditions or weather-related accidents such as those caused by fog or rain.

8. Environmental Considerations and Sensitive Areas

- **Protected Areas:** Be mindful of driving through designated wildlife areas; certain stretches may limit heavy vehicle usage.
- **Population Density:** Rural regions increase potential risk as pedestrians and livestock frequently use roads.

9. Analysis of Communication Coverage

- **Coverage:** Generally, there is good communication coverage along highways, but rural pockets may lack stable networks leading to potential dead zones.

10. Estimated Emergency Response Times

- **Urban Areas:** Expect faster response within Sahjanwa and Deoria, ranging from 20 to 30 minutes.
- **Rural Segments:** Could see delayed response times, ranging from 45 minutes to an hour due to limited accessibility.

12. Overall Summary of Risk Assessment

- **Risks Identified:** Weather-related delays (monsoons, fog), road conditions, congestion in urban hubs, and communication gaps.
- **Recommendations:** Plan travel during non-peak hours, ensure vehicles are well-maintained to handle road conditions, remain informed about weather forecasts, and carry a reliable communication device.
- **Conclusion:** While traversing a diverse landscape with multiple potential hazards, careful planning and adherence to local guidelines will mitigate most risks associated with transporting hazardous materials.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
2	Turn	High	26.73746, 83.22938	15 KM/Hr	0.08 km
3	Turn	High	26.73788, 83.22642	15 KM/Hr	0.32 km
4	Turn	Medium	26.73812, 83.22630	30 KM/Hr	0.48 km
5	Turn	High	26.74524, 83.22746	15 KM/Hr	1.14 km
6	Turn	High	26.74679, 83.22391	15 KM/Hr	1.64 km
7	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.13 km
8	Blind Spot	Blind Spot	26.75377, 83.20465	10 KM/Hr	4.19 km
9	Turn	Medium	26.75378, 83.21338	30 KM/Hr	5.07 km
10	Turn	High	26.75386, 83.21352	15 KM/Hr	5.10 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.92 km
11	Turn	Medium	26.69638, 83.47492	30 KM/Hr	32.94 km
12	Turn	High	26.69713, 83.47549	15 KM/Hr	33.12 km
13	Blind Spot	Blind Spot	26.69844, 83.47473	10 KM/Hr	33.32 km
1	U-Turn	High	26.698439, 83.4747268	10 KM/Hr	33.32 km
14	Turn	Medium	26.40178, 83.83509	30 KM/Hr	84.89 km
15	Turn	High	26.37013, 83.85263	15 KM/Hr	88.86 km
16	Turn	Medium	26.36083, 83.84701	30 KM/Hr	90.06 km
17	Turn	High	26.33300, 83.84429	15 KM/Hr	93.36 km
18	Turn	High	26.31045, 83.85594	15 KM/Hr	96.20 km
19	Turn	Medium	26.22502, 83.86504	30 KM/Hr	105.92 km
20	Turn	Medium	26.22127, 83.86421	30 KM/Hr	106.32 km
21	Turn	Medium	26.21794, 83.86499	30 KM/Hr	106.58 km
22	Turn	Medium	26.17930, 83.87162	30 KM/Hr	111.18 km
23	Turn	High	26.17562, 83.87046	15 KM/Hr	111.51 km
24	Turn	Medium	26.17042, 83.87580	30 KM/Hr	112.32 km
25	Turn	Medium	26.16878, 83.87657	30 KM/Hr	112.55 km
26	Turn	Medium	26.16704, 83.87627	30 KM/Hr	112.75 km
27	Turn	Medium	26.15728, 83.85762	30 KM/Hr	114.62 km
28	Turn	Medium	26.15414, 83.85627	30 KM/Hr	115.28 km
29	Turn	High	26.13148, 83.86717	15 KM/Hr	117.93 km
30	Turn	Medium	26.12256, 83.89175	30 KM/Hr	120.73 km
31	Turn	Medium	26.10584, 83.90120	30 KM/Hr	122.85 km
32	Turn	Medium	26.10291, 83.91581	30 KM/Hr	124.10 km
33	Turn	Medium	26.10503, 83.92261	30 KM/Hr	124.81 km
34	Turn	Medium	26.09649, 83.94520	30 KM/Hr	127.55 km
35	Blind Spot	Blind Spot	26.09189, 83.94838	10 KM/Hr	128.19 km
36	Turn	Medium	26.09223, 83.94874	30 KM/Hr	128.28 km
37	Turn	High	26.09232, 83.94906	15 KM/Hr	128.31 km
38	Turn	Medium	26.09418, 83.94974	30 KM/Hr	128.46 km
39	Turn	High	26.09482, 83.95148	15 KM/Hr	128.69 km
40	Turn	Medium	26.09565, 83.95195	30 KM/Hr	128.78 km
41	Turn	High	26.09977, 83.95482	15 KM/Hr	129.37 km
42	Turn	High	26.09984, 83.95571	15 KM/Hr	129.43 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
43	Blind Spot	Blind Spot	26.11313, 83.96074	10 KM/Hr	131.01 km
44	Turn	Medium	26.11278, 83.96248	30 KM/Hr	131.15 km
45	Turn	Medium	26.11260, 83.96266	30 KM/Hr	131.26 km
46	Turn	High	26.11107, 83.97274	15 KM/Hr	132.26 km
47	Turn	High	26.10807, 83.97472	15 KM/Hr	132.52 km
48	Turn	High	26.10486, 83.97409	15 KM/Hr	132.98 km
49	Turn	High	26.10475, 83.97419	15 KM/Hr	133.06 km
50	Blind Spot	Blind Spot	26.10325, 83.97384	10 KM/Hr	133.21 km

Emergency Locations

Found: 2 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
2	hospital	K D Hospital, Deoria	26.4826171, 83.7821031	30 km/h	Medium	72.80 km
1	hospital	Sanjeevani Hospital, Deoria	26.4796329, 83.780432	30 km/h	Medium	73.79 km

Crowded Spots

Found: 1 college(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	college	BRD PG college	26.5161416, 83.7720277	30 km/h	Medium	69.69 km

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.13 km

Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.19 km

Coordinates: 26.75377, 83.20465



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 5.07 km**Coordinates:** 26.75378, 83.21338

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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 5.10 km**Coordinates:** 26.75386, 83.21352



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.92 km

Coordinates: 26.74681, 83.25111



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 32.94 km

Coordinates: 26.69638, 83.47492



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 33.12 km****Coordinates: 26.69713, 83.47549**

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Risk Type: Blind Spot**Risk Level: Blind Spot****Speed Limit: 10 KM/Hr****Distance from Start: 33.32 km****Coordinates: 26.69844, 83.47473**



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Risk Type: U-Turn**Risk Level: High****Speed Limit: 10 KM/Hr****Distance from Start: 33.32 km****Coordinates: 26.698439, 83.4747268**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 84.89 km****Coordinates: 26.40178, 83.83509**



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 93.36 km

Coordinates: 26.33300, 83.84429



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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 96.20 km

Coordinates: 26.31045, 83.85594



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 105.92 km**Coordinates:** 26.22502, 83.86504

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 106.32 km**Coordinates:** 26.22127, 83.86421



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 106.58 km

Coordinates: 26.21794, 83.86499



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 111.18 km

Coordinates: 26.17930, 83.87162



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 111.51 km

Coordinates: 26.17562, 83.87046



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 112.32 km

Coordinates: 26.17042, 83.87580



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 112.55 km

Coordinates: 26.16878, 83.87657



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 112.75 km

Coordinates: 26.16704, 83.87627



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 114.62 km**Coordinates:** 26.15728, 83.85762

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 115.28 km**Coordinates:** 26.15414, 83.85627



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 117.93 km****Coordinates: 26.13148, 83.86717**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 120.73 km****Coordinates: 26.12256, 83.89175**



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 122.85 km**Coordinates:** 26.10584, 83.90120

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 124.10 km**Coordinates:** 26.10291, 83.91581



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 124.81 km

Coordinates: 26.10503, 83.92261



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 127.55 km

Coordinates: 26.09649, 83.94520



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 128.19 km**Coordinates:** 26.09189, 83.94838

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 128.28 km**Coordinates:** 26.09223, 83.94874



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 128.31 km****Coordinates: 26.09232, 83.94906**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 128.46 km****Coordinates: 26.09418, 83.94974**



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 128.69 km****Coordinates: 26.09482, 83.95148**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 128.78 km****Coordinates: 26.09565, 83.95195**



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 129.37 km****Coordinates: 26.09977, 83.95482**

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 129.43 km****Coordinates: 26.09984, 83.95571**



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 131.01 km**Coordinates:** 26.11313, 83.96074

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 131.15 km**Coordinates:** 26.11278, 83.96248



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 131.26 km

Coordinates: 26.11260, 83.96266



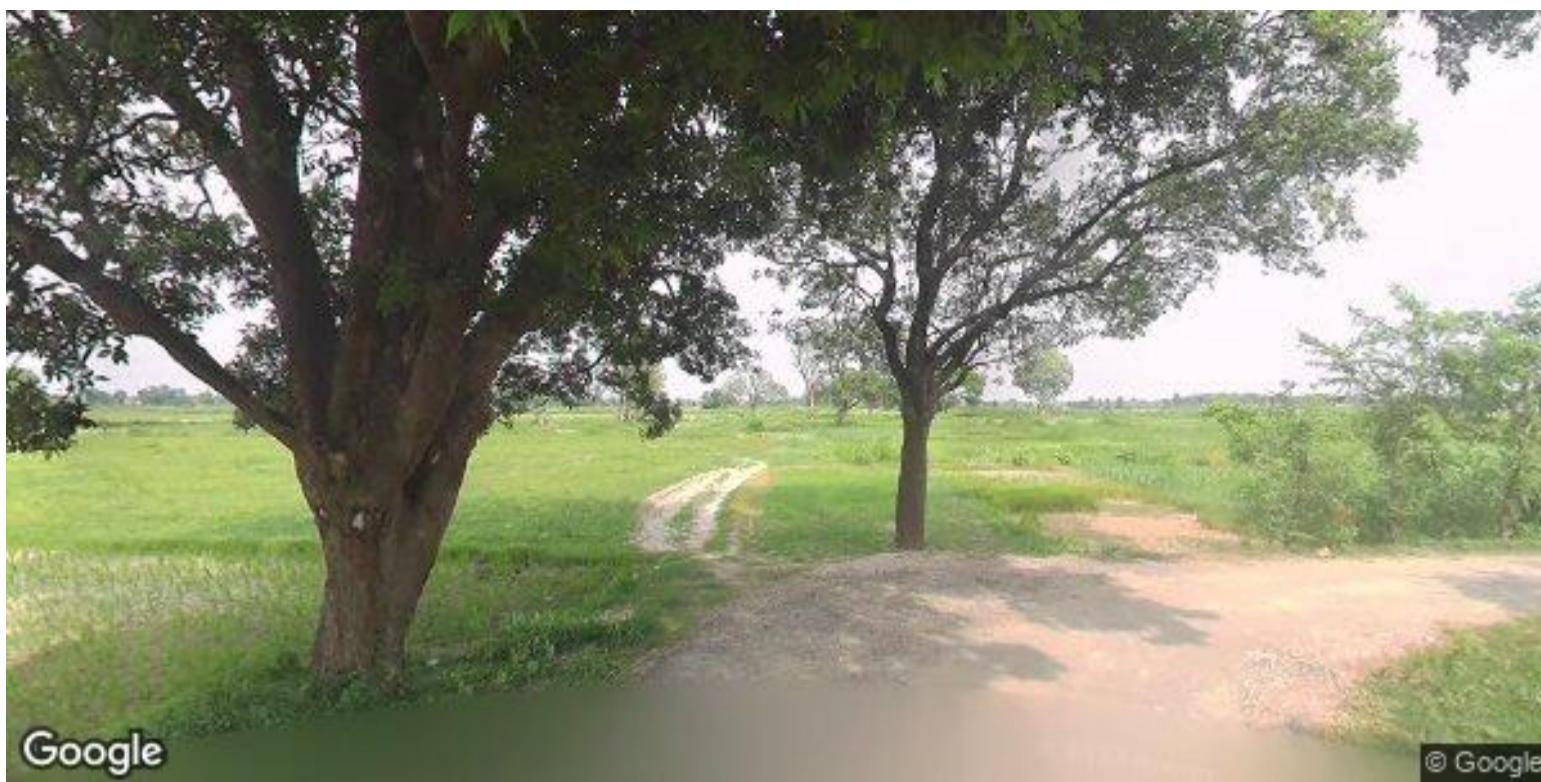
Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 132.52 km

Coordinates: 26.10807, 83.97472



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 132.98 km****Coordinates: 26.10486, 83.97409**

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 133.06 km****Coordinates: 26.10475, 83.97419**



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 133.21 km**Coordinates:** 26.10325, 83.97384

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