



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Maruthi Auto 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

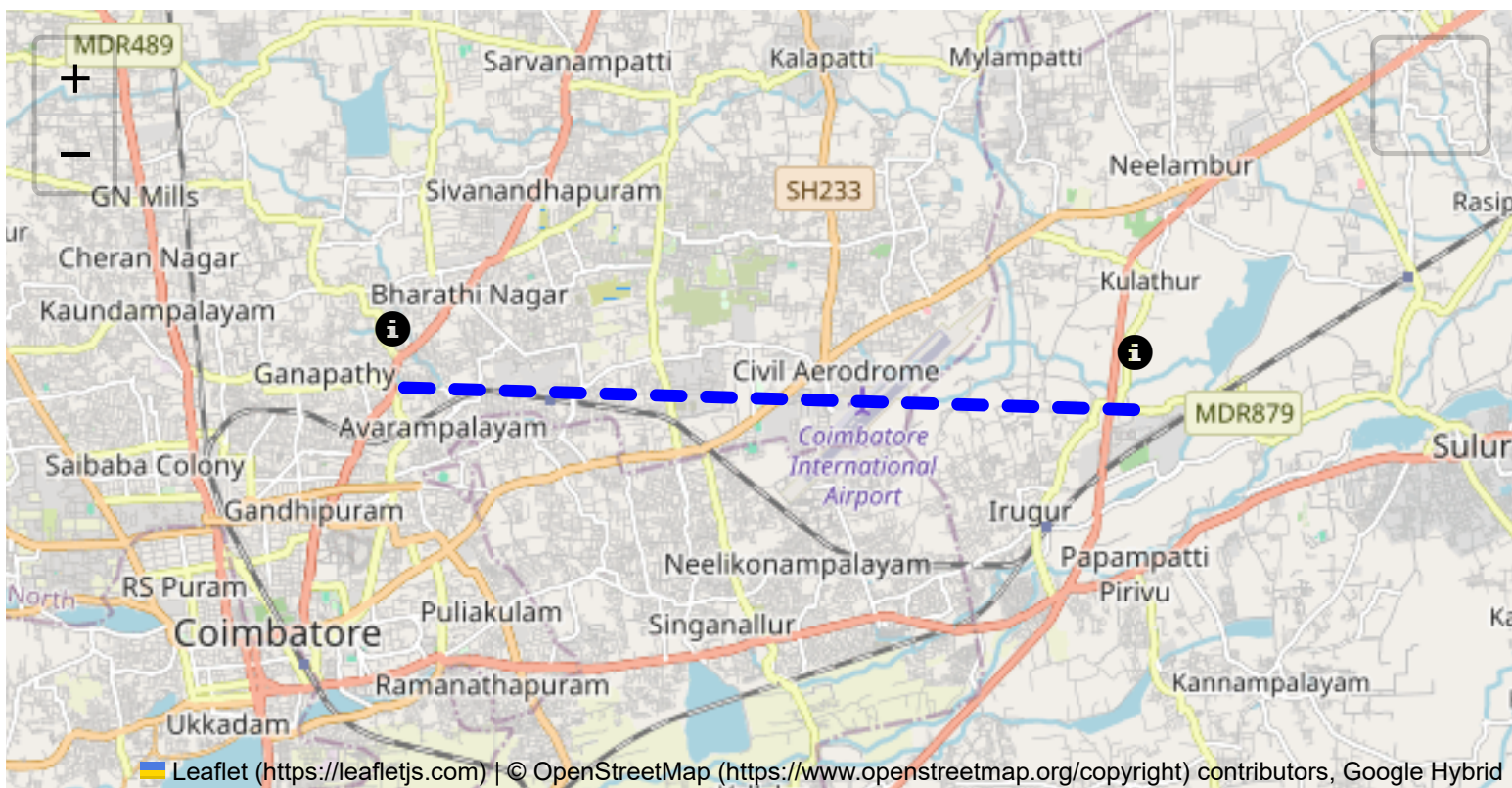
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

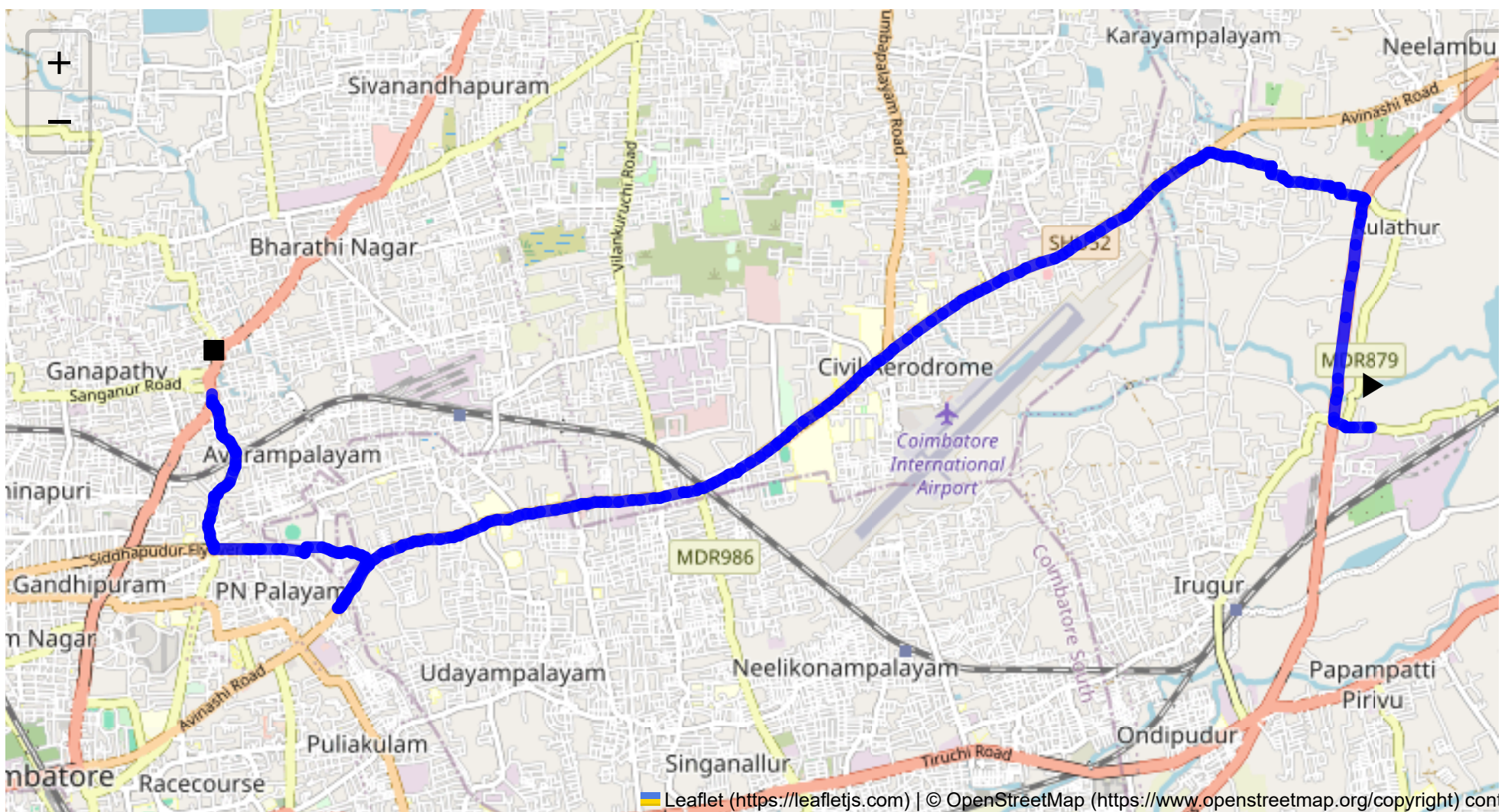
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 17.54 km
Estimated Duration: 0.6 hours
Adjusted Duration (Heavy Vehicle): 0.8 hours
Start: (11.0315, 77.0797)
End: (11.034556472723072, 76.97842197280623)



Welcome to the Journey Risk Management Study

To provide a comprehensive safety analysis for the route from Athappagoundenpudur to Ganapathy in Coimbatore, Tamil Nadu, here's a detailed breakdown based on available data and standard safety considerations:

1. Overview of the Route Map:

- The route begins at Athappagoundenpudur and travels approximately 17.54 kilometers to Ganapathy via NH948 and Sathy Road. The journey typically involves major roads that connect suburban and urban areas of Coimbatore.

2. Typical Weather Conditions and Hazards:

- Coimbatore experiences a tropical wet and dry climate. The monsoon season (June to September) can bring heavy rains, leading to potential flooding and slippery roads. Dry seasons reduce this risk but increase the chance of dust storms, especially on open stretches.

3. Traffic Patterns and Congestion Areas:

- Peak hours generally occur between 8-10 AM and 5-8 PM. Sathy Road, being a key thoroughfare, can experience significant congestion, particularly near markets, schools, and during city events.

4. Assessment of Road Quality and Infrastructure:

- NH948 and Sathy Road are generally well-maintained, but urban sections may have potholes and uneven surfaces, which can affect heavy vehicles. Adequate signage and barriers are present in most places, but vigilance is required in transitioning areas from rural to urban zones.

5. Alternative Routes for Emergencies:

- In case of emergencies, alternative routes include minor roads connecting through local villages, though these should be used with caution due to potential infrastructure limitations. Maps and GPS navigation tools are recommended to explore real-time viable alternatives.

6. Local Regulations on Hazardous Material Transport:

- Vehicles transporting hazardous materials must comply with restrictions on residential areas and speed limits specific to such cargo. Specific permits might be required, especially for large or particularly dangerous goods.

7. Historical Incidents Involving Heavy Vehicles:

- Incidents involving heavy vehicles typically include collisions due to tight urban turns and congestion. Historically, there have been few major incidents directly linked to hazardous materials but maintaining updated safety protocols is essential.

8. Environmental Considerations:

- The route passes near agricultural lands and residential areas, necessitating caution due to potential interactions with local people and pollution concerns. It is crucial to avoid spillage and take measures to reduce emissions and noise pollution.

9. Communication Coverage:

- The route benefits from good mobile network coverage in most parts due to proximity to Coimbatore city. Dead zones are minimal but can occur in rural stretches.

10. Estimated Emergency Response Times:

- Urban areas like Ganapathy generally have an emergency response time of 10-20 minutes. Remote or less accessible areas along NH948 might experience extended response times, potentially up to 30-40 minutes.

11. Overall Summary of Risk Assessment:

- Traveling this route requires awareness of weather-related risks during the monsoon, potential delays due to traffic congestion, and adherence to safety regulations concerning hazardous cargo. The infrastructure generally supports heavy vehicle travel, but urban sections pose a higher risk for accidents. Environmental and communication factors are favorable, yet the operator should be prepared with contingency plans for unforeseen situations. Regular monitoring of road conditions and updates from local authorities are advisable for those transporting hazardous materials.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	11.0161282, 76.9896128	10 KM/Hr
1	Turn	High	11.03211, 77.07640	15 KM/Hr
2	Turn	High	11.05129, 77.07919	15 KM/Hr
3	Turn	Medium	11.05181, 77.07696	30 KM/Hr
4	Turn	High	11.05222, 77.07690	15 KM/Hr
5	Turn	Medium	11.05343, 77.07106	30 KM/Hr
6	Turn	Medium	11.05351, 77.07099	30 KM/Hr
7	Turn	Medium	11.05411, 77.07097	30 KM/Hr
8	Turn	High	11.05529, 77.06566	15 KM/Hr
9	Turn	High	11.01613, 76.98961	15 KM/Hr
10	Blind Spot	Blind Spot	11.01618, 76.98951	10 KM/Hr
11	Turn	High	11.02014, 76.99212	15 KM/Hr
12	Turn	Medium	11.02051, 76.99177	30 KM/Hr
13	Turn	Medium	11.02137, 76.98673	30 KM/Hr
14	Turn	High	11.02097, 76.98650	15 KM/Hr
15	Turn	Medium	11.02095, 76.98644	30 KM/Hr
16	Turn	High	11.02119, 76.97860	15 KM/Hr
17	Turn	Medium	11.03370, 76.97857	30 KM/Hr
18	Blind Spot	Blind Spot	11.03374, 76.97843	10 KM/Hr
19	Turn	Medium	11.03378, 76.97845	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinnampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinnampalayam Venkateshwara Hospital	11.0545152, 77.0652106	30 km/h	Medium
3	hospital	R V Hospital, Coimbatore	11.0546916, 77.0639178	30 km/h	Medium
5	hospital	Kovai Medical Centre,Coimbatore	11.0426077, 77.0406074	30 km/h	Medium
6	hospital	Lotus Eye Care Hospital Ltd, Coimbatore	11.0406116, 77.0401856	30 km/h	Medium
9	hospital	Park Hospital, Coimbatore	11.0419411, 77.0379131	30 km/h	Medium
13	hospital	St Lukes Hospital, Coimbatore	11.0335424, 77.0376261	30 km/h	Medium
15	hospital	Coimbatore Medical College Hospital	11.0289285, 77.0237553	30 km/h	Medium
17	hospital	Rajah Hospital, Coimbatore	11.0270299, 77.0187333	30 km/h	Medium
18	hospital	Sumith Hospital	11.0261493, 77.0176752	30 km/h	Medium
19	police	Peelamedu E2 Police Station	11.0253639, 77.0101634	30 km/h	Medium
25	hospital	Hindusthan Hospital, Coimbatore	11.019682, 76.9947731	30 km/h	Medium
26	hospital	Sri Ramakrishna Dental Hospital	11.0212988, 76.9883526	30 km/h	Medium
32	hospital	Sri Ramakrishna Hospital, Coimbatore	11.0231203, 76.9776419	30 km/h	Medium
33	hospital	Sri Ramakrishna Hospital	11.0236015, 76.976512	30 km/h	Medium
37	pharmacy	Tulsi Pharmacy	11.034999, 76.978383	30 km/h	Medium
38	clinic	Paari Nursing Home	11.0321465, 76.9761197	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
2	school	Government school	11.0554435, 77.0653927	30 km/h	Medium
4	school	Sri Vivekananda Matriculation Higher Secondary School	11.054695, 77.0572126	30 km/h	Medium
7	school	Park Global School	11.0424178, 77.038601	30 km/h	Medium
8	traffic_signals	SITRA Junction	11.0380037, 77.0374143	30 km/h	Medium
10	college	South India Textile Research Association - SITRA	11.0396478, 77.0355493	30 km/h	Medium
11	college	PSG College of Arts and Science	11.0328471, 77.034909	30 km/h	Medium
12	school	RAK's Pallikoodam	11.0381253, 77.0329064	30 km/h	Medium
14	college	Government Polytechnic	11.0300874, 77.0308517	30 km/h	Medium
16	traffic_signals	Hope College Signal	11.0263851, 77.0208783	30 km/h	Medium
20	school	Sardar Vallabhbhai Patel International School of Textiles & Management	11.0253598, 77.0082319	30 km/h	Medium
21	college	PSG College of Technology	11.024807, 77.0029194	30 km/h	Medium
22	school	PSG Sarva Jana Higher Secondary School	11.0227214, 77.0040432	30 km/h	Medium
23	college	PSG Institute of Management	11.0228112, 77.0030943	30 km/h	Medium
24	college	PSG Grounds	11.0203887, 77.0047109	30 km/h	Medium
27	college	Sri Ramakrishna Dental College	11.0213038, 76.9883559	30 km/h	Medium
28	college	SNR College of Arts and Science	11.0219743, 76.9877109	30 km/h	Medium
29	college	Sri Ramakrishna College of Arts & Science	11.022171, 76.98703	30 km/h	Medium
30	school	Sri Ramakrishna Matric Higher Secondary School	11.023175, 76.9847233	30 km/h	Medium
31	college	Sri Ramakrishna Arts and Science College for Womens	11.0223964, 76.9780502	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
34	school	P.R.Sidha Naidu Memorial Matriculation School	11.0221084, 76.9765552	30 km/h	Medium
35	school	Ramakrishna Institute of Pharamedical Sciences	11.0244052, 76.9767729	30 km/h	Medium
36	school	College of Pharamacy	11.0243971, 76.9762204	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.0161282, 76.9896128



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05129, 77.07919



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05181, 77.07696



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05222, 77.07690



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05343, 77.07106



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05351, 77.07099



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05411, 77.07097



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05529, 77.06566



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.01613, 76.98961



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.01618, 76.98951



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.02014, 76.99212



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.02051, 76.99177



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.02137, 76.98673



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.02097, 76.98650



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.02095, 76.98644



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.02119, 76.97860



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.03370, 76.97857



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.03374, 76.97843



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.03378, 76.97845
