



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Rajalaxmii Enterprises

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

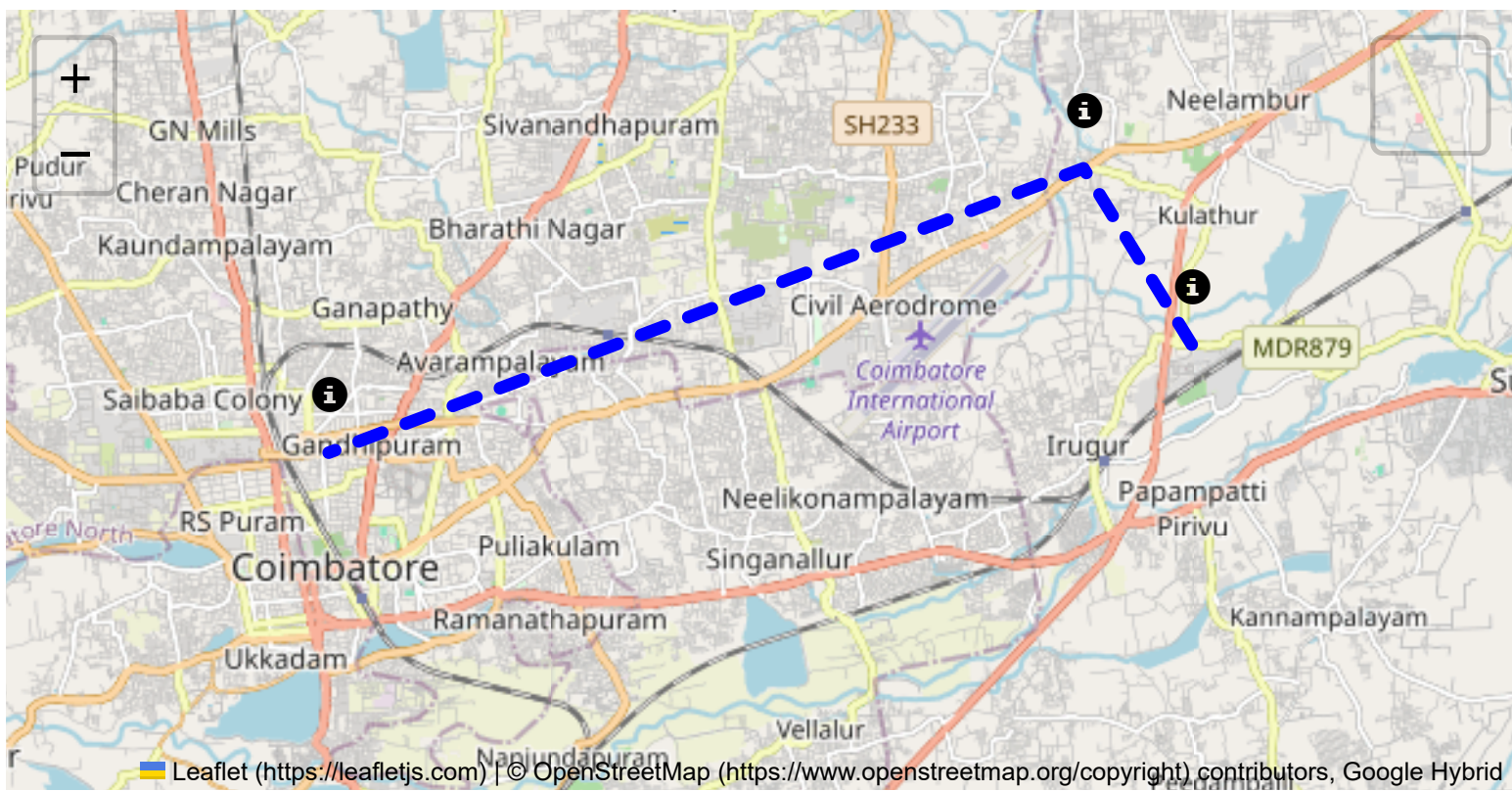
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 18.05 km
Estimated Duration: 0.6 hours
Adjusted Duration (Heavy Vehicle): 0.8 hours
Start: (11.0315, 77.0797)
End: (11.016964497813404, 76.96209183083221)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins at Athappagoundenpudur and proceeds towards Gandhi Puram in Coimbatore, via Chinniyampalayam. This 18.05-kilometer journey primarily uses local roads and city streets, moving from rural areas through semi-urban and urban zones.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The Coimbatore region generally experiences a tropical climate with significant rainfall during the monsoon (June to September). Weather hazards include heavy rain leading to slippery roads and potential flooding, especially in low-lying areas. Winter mornings might occasionally bring fog, affecting visibility.

3. Analysis of Traffic Patterns

- **Peak Hours:** Heavy traffic is typically seen during morning rush hours (8-10 AM) and evening hours (5-8 PM).
- **Congestion-Prone Areas:** Chinniyampalayam vicinity and crossings near Gandhipuram are notable for frequent traffic jams, particularly during peak times.

4. Assessment of Road Quality and Infrastructure

The road conditions vary significantly:

- **Rural Sections:** Roads can be narrower and less well-maintained with occasional potholes.
- **Urban Sections:** In Coimbatore City, roads are better maintained but can be congested with limited space for maneuvering large vehicles.

5. Suggestions for Alternative Routes in Emergencies

Alternate routes include using the Avinashi Road (NH544) for bypassing the congested sections when entering the city, but this route needs checking for current traffic conditions as it can also face heavy congestion.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Coimbatore requires specific permits for transporting hazardous materials, especially within city limits. Time and route restrictions might apply to minimize risk during peak hours.

7. Overview of Historical Incidents Involving Heavy Vehicles

There have been occasional reports of heavy vehicles overturning or being involved in collisions, particularly in urban traffic congestion. Past incidents largely underscore the need for speed control and awareness of road conditions.

8. Environmental Considerations and Sensitive Areas

Sensitive zones include residential areas in Ram Nagar and near Chinniyampalayam, where noise and emissions from heavy trucks are a concern. Minimizing idling and using alternate routes during sensitive hours is advisable.

9. Analysis of Communication Coverage

Overall, the route enjoys good mobile network coverage, although rural starts might experience occasional signal dropouts. It's advisable to have an alternate communication plan or GPS system capable of offline navigation.

10. Estimated Emergency Response Times

- Rural Areas (Athappagoundenpudur):** Approximately 30-45 minutes due to distance from central emergency services.
- Urban Areas (Gandhipuram):** 15-20 minutes given proximity to larger hospital and fire services.

12. Overall Summary of Risk Assessment

The route, while manageable, comes with potential risks such as weather disruptions, traffic congestion in urban areas, and rural road conditions. Adequate preparation, including checking weather forecasts, traffic reports, and ensuring communication devices are fully functional, is imperative. Adhering to local transport regulations for hazardous materials and route planning to avoid peak times can mitigate these risks.

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	11.02133, 76.98668	30 KM/Hr
14	Turn	Medium	11.02098, 76.98650	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
15	Turn	Medium	11.02095, 76.98646	30 KM/Hr
16	Turn	Medium	11.02132, 76.98270	30 KM/Hr
17	Turn	High	11.01960, 76.96449	15 KM/Hr
18	Blind Spot	Blind Spot	11.01712, 76.96489	10 KM/Hr
19	Turn	High	11.01702, 76.96207	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinniampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinniampalayam 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
7	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

	type	name	coordinates	speed_limit	risk_level
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
35	clinic	Shark Clinic	11.0188961, 76.9744842	30 km/h	Medium
36	hospital	Ramakrishna Hospital	11.0207084, 76.972413	30 km/h	Medium
37	hospital	Ellen Multispeciality Hospital	11.0213634, 76.9708723	30 km/h	Medium
38	hospital	GP Hospital	11.0201233, 76.9710726	30 km/h	Medium
39	pharmacy	Chinnaiah Medicals	11.0207714, 76.9688485	30 km/h	Medium
40	hospital	Becker Manual Hospital	11.020659, 76.968611	30 km/h	Medium
41	pharmacy	Pasumai Pharmacy	11.0203554, 76.966338	30 km/h	Medium
42	clinic	C.S.R. Nursing Home, Coimbatore	11.0209812, 76.9661131	30 km/h	Medium
43	hospital	Jeevan Clinic and Hospital, Coimbatore	11.019947, 76.9670891	30 km/h	Medium
44	hospital	Nithya Hospital	11.0210366, 76.9665217	30 km/h	Medium
48	clinic	Aiswarya Clinic	11.0228593, 76.9656034	30 km/h	Medium
49	hospital	Preethi Medical Centre	11.0208486, 76.9649585	30 km/h	Medium
50	hospital	City Hospital	11.0193391, 76.9635166	30 km/h	Medium
52	hospital	Bethel Hospital	11.0190021, 76.962084	30 km/h	Medium
53	hospital	The Balakrishnan Hospital	11.0190567, 76.9625585	30 km/h	Medium
54	hospital	Lalitha Hospital	11.0174139, 76.9617565	30 km/h	Medium
56	clinic	Clarity Imaging Centre	11.0149765, 76.9642774	30 km/h	Medium
57	hospital	Bethel Hospital Pvt. Ltd. - Coimbatore	11.0187223, 76.9612328	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
58	hospital	Kovai Diabetes Speciality Centre and Hospital	11.0159329, 76.9613153	30 km/h	Medium
59	hospital	Roselet Medical ObgandSurgical Centre	11.0177943, 76.9612482	30 km/h	Medium
60	hospital	Kongunad Hospital, Coimbatore	11.018058, 76.9604883	30 km/h	Medium
61	hospital	Sheela Clinic	11.01843, 76.9604642	30 km/h	Medium
62	hospital	Spt Hospitals	11.0143493, 76.9614293	30 km/h	Medium
63	hospital	Ganga Medical Centre and Hospitals Pvt. Ltd ,Ramnagar	11.0158724, 76.9594235	30 km/h	Medium
64	hospital	Krishna Nursing Home	11.0152327, 76.9593766	30 km/h	Medium
65	pharmacy	Apollo	11.0187962, 76.9603231	30 km/h	Medium
66	pharmacy	arya vaidhya salai	11.0193537, 76.9603411	30 km/h	Medium
67	hospital	Seesha Karunya Community Hospital	11.0160619, 76.9593814	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
8	school	Park Global School	11.0424178, 77.038601	30 km/h	Medium
9	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

	type	name	coordinates	speed_limit	risk_level
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
34	school	P.R.Sidha Naidu Memorial Matriculation School	11.0221084, 76.9765552	30 km/h	Medium
45	school	St. Mary's Primary School	11.0218649, 76.9672728	30 km/h	Medium
46	school	St. Mar's High School	11.0221987, 76.9674321	30 km/h	Medium
47	school	Brindisi Matric. Ir. Sec. School	11.0226114, 76.9672831	30 km/h	Medium
51	crossing	Six Corner	11.0222184, 76.9626743	30 km/h	Medium
55	school	Kovai Linux Centre	11.0156272, 76.9655	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: 11.02133, 76.98668



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.02098, 76.98650



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.02095, 76.98646



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.02132, 76.98270



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.01960, 76.96449



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.01712, 76.96489



Google

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Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.01702, 76.96207
