



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Sri Selvanayagi Agencies

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

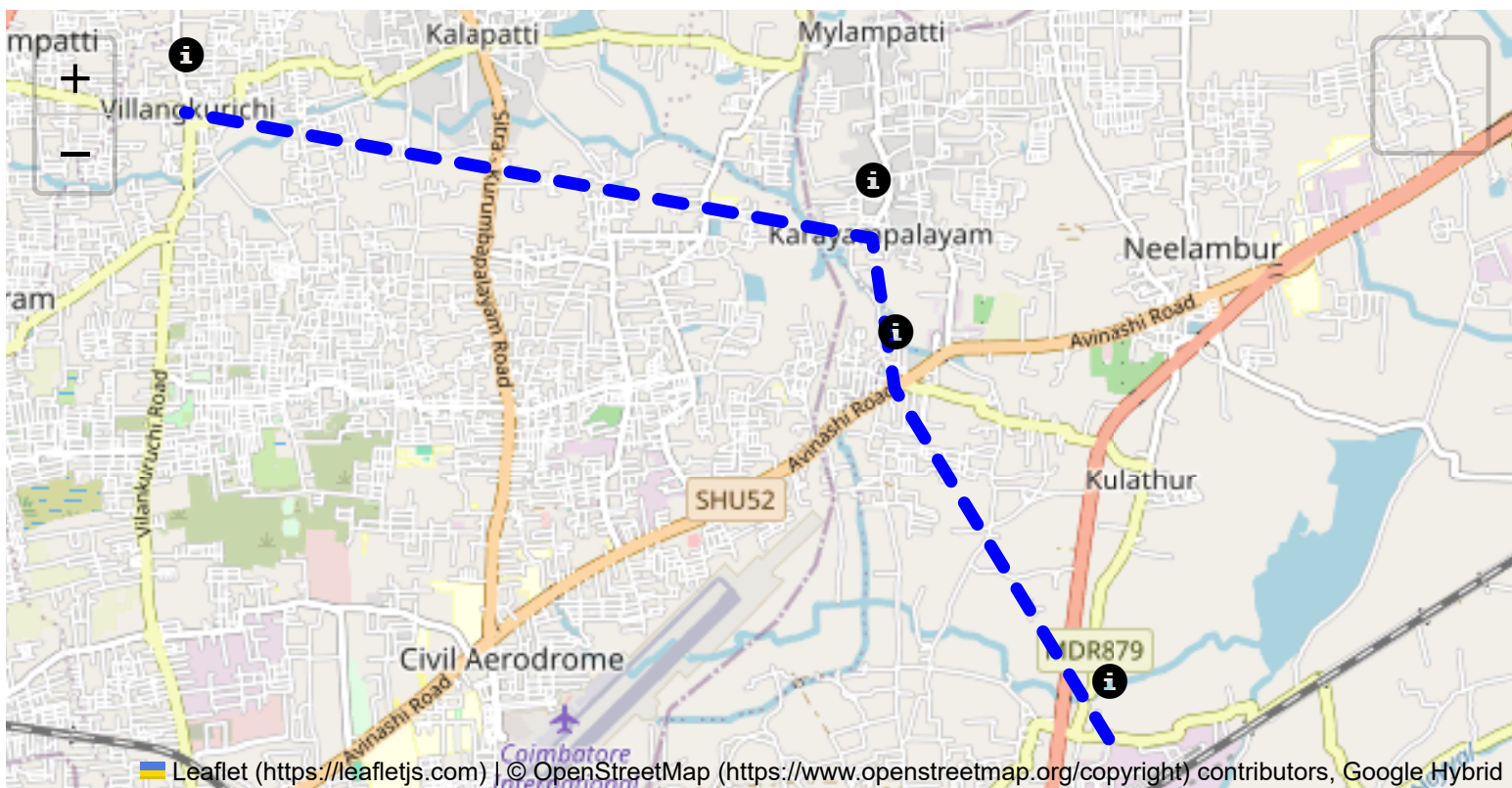
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

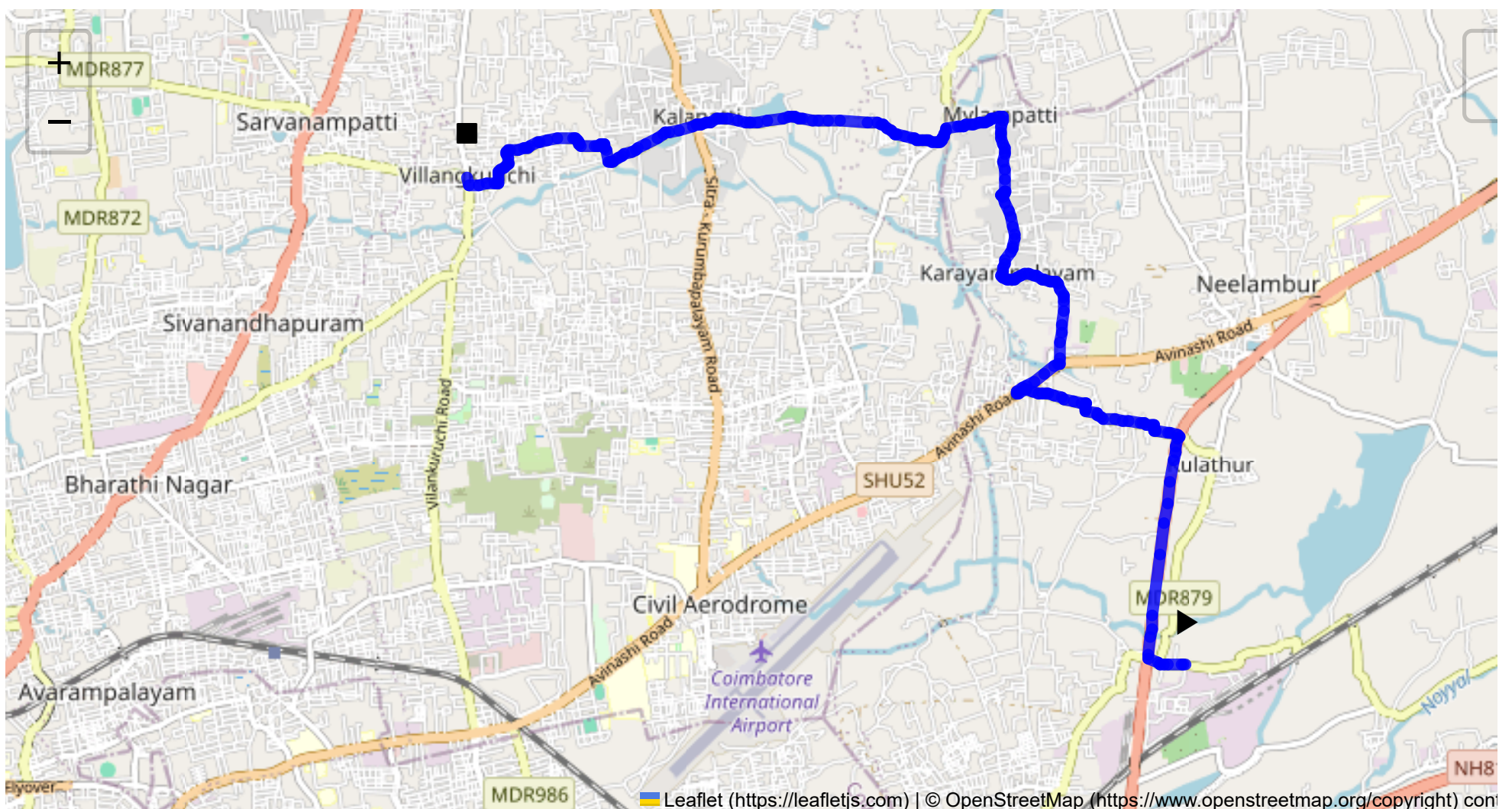
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 13.57 km
Estimated Duration: 0.5 hours
Adjusted Duration (Heavy Vehicle): 0.6 hours
Start: (11.0315, 77.0797)
End: (11.07339, 77.016816)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Athappagoundenpudur to Balaji Nagar via Chinniyampalayam and Mylampatti covers around 13.57 kilometers in the Coimbatore district. The journey typically navigates through a mix of local roads and semi-urban areas, emphasizing both residential and some industrial or commercial zones.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Coimbatore has a tropical climate with a distinct wet and dry season. The area generally experiences moderate to heavy rainfall between June and September due to the southwest monsoon. During the wet season, expect potential flooding and slippery roads. The dry season, from December to February, presents minimal weather-related hazards.

3. Analysis of Traffic Patterns

- **Peak Hours:** Generally, traffic congestion is more pronounced during the morning (8 AM - 10 AM) and evening (5 PM - 7 PM) rush hours.
- **Congestion-Prone Areas:** Chinniyampalayam's Teachers Colony is notorious for high traffic during these periods, largely due to school and office commutes.

4. Assessment of Road Quality and Infrastructure

- The roads along this route are generally maintained but can be narrow in densely populated areas.
- Potholes and uneven surfaces can be found sporadically, particularly near ongoing construction zones.
- Signage is adequate but occasional overgrowth of vegetation can obstruct visibility.

5. Suggestions for Alternative Routes for Emergencies

In case of serious congestion or roadblocks, the IF road between Mylampatti and Neelambur could serve as an alternative, though detours significantly increase travel time.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Local regulations require all vehicles transporting hazardous materials to clearly display hazard placards and comply with route restrictions typically enforced during high traffic hours for safety purposes.

7. Overview of Historical Incidents

Heavy vehicle incidents are rare but not unheard of, mainly occurring around Chinniyampalayam due to congestion and narrow roads. No significant incidents involving hazardous materials have been documented recently.

8. Environmental Considerations and Sensitive Areas

- Sensitive areas include schools and hospitals, particularly around Teachers Colony and GEM Nagar.
- Noise and air pollution should be minimized to protect residential neighborhoods and sensitive areas.

9. Analysis of Communication Coverage

- Mobile communication coverage is generally reliable throughout this route, with potential weaker signals in dense residential or industrial zones.

10. Estimated Emergency Response Times

- Urban segments of the route can expect emergency response times of 10-20 minutes.
- More rural stretches might experience slightly longer response times, possibly up to 30 minutes due to accessibility challenges.

12. Overall Summary of Risk Assessment

The route is moderately safe for transporting hazardous materials provided the driver adheres to traffic norms and monitors weather conditions closely. Potential congestion and road surface issues demand vigilant driving, particularly during peak hours and monsoon seasons. Stable communication networks and proximity to emergency services contribute positively to safety, although care should be taken to avoid known bottlenecks and sensitive areas for a seamless and secure journey.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	11.0549503, 77.0650284	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	11.05495, 77.06503	15 KM/Hr
10	Blind Spot	Blind Spot	11.05507, 77.06496	10 KM/Hr
11	Turn	High	11.05751, 77.06875	15 KM/Hr
12	Turn	High	11.06437, 77.06865	15 KM/Hr
13	Turn	Medium	11.06490, 77.06371	30 KM/Hr
14	Turn	Medium	11.06492, 77.06369	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
15	Turn	Medium	11.06501, 77.06366	30 KM/Hr
16	Turn	Medium	11.07191, 77.06366	30 KM/Hr
17	Turn	Medium	11.07201, 77.06366	30 KM/Hr
18	Turn	Medium	11.07209, 77.06370	30 KM/Hr
19	Turn	Medium	11.07225, 77.06398	30 KM/Hr
20	Blind Spot	Blind Spot	11.07865, 77.06377	10 KM/Hr
21	Turn	High	11.07773, 77.05884	15 KM/Hr
22	Turn	High	11.07800, 77.03706	15 KM/Hr
23	Turn	High	11.07798, 77.03706	15 KM/Hr
24	Turn	High	11.07795, 77.03702	15 KM/Hr
25	Turn	Medium	11.07475, 77.02954	30 KM/Hr
26	Turn	Medium	11.07479, 77.02937	30 KM/Hr
27	Turn	Medium	11.07629, 77.02884	30 KM/Hr
28	Turn	Medium	11.07626, 77.02677	30 KM/Hr
29	Turn	Medium	11.07573, 77.02044	30 KM/Hr
30	Turn	Medium	11.07299, 77.01959	30 KM/Hr
31	Turn	High	11.07291, 77.01953	15 KM/Hr
32	Turn	High	11.07278, 77.01700	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
4	hospital	Kamalaprakasam, Kalapatti	11.0778, 77.035681	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

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.0549503, 77.0650284



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: 11.05495, 77.06503



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.05507, 77.06496



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05751, 77.06875



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06437, 77.06865



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06490, 77.06371



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06492, 77.06369



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06501, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07191, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07201, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07209, 77.06370



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07225, 77.06398



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.07865, 77.06377



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07773, 77.05884



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07798, 77.03706



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07795, 77.03702



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07475, 77.02954



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07479, 77.02937



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07629, 77.02884



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07626, 77.02677



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07573, 77.02044



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07299, 77.01959



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07291, 77.01953
