



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to AVT Auto Feeds

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

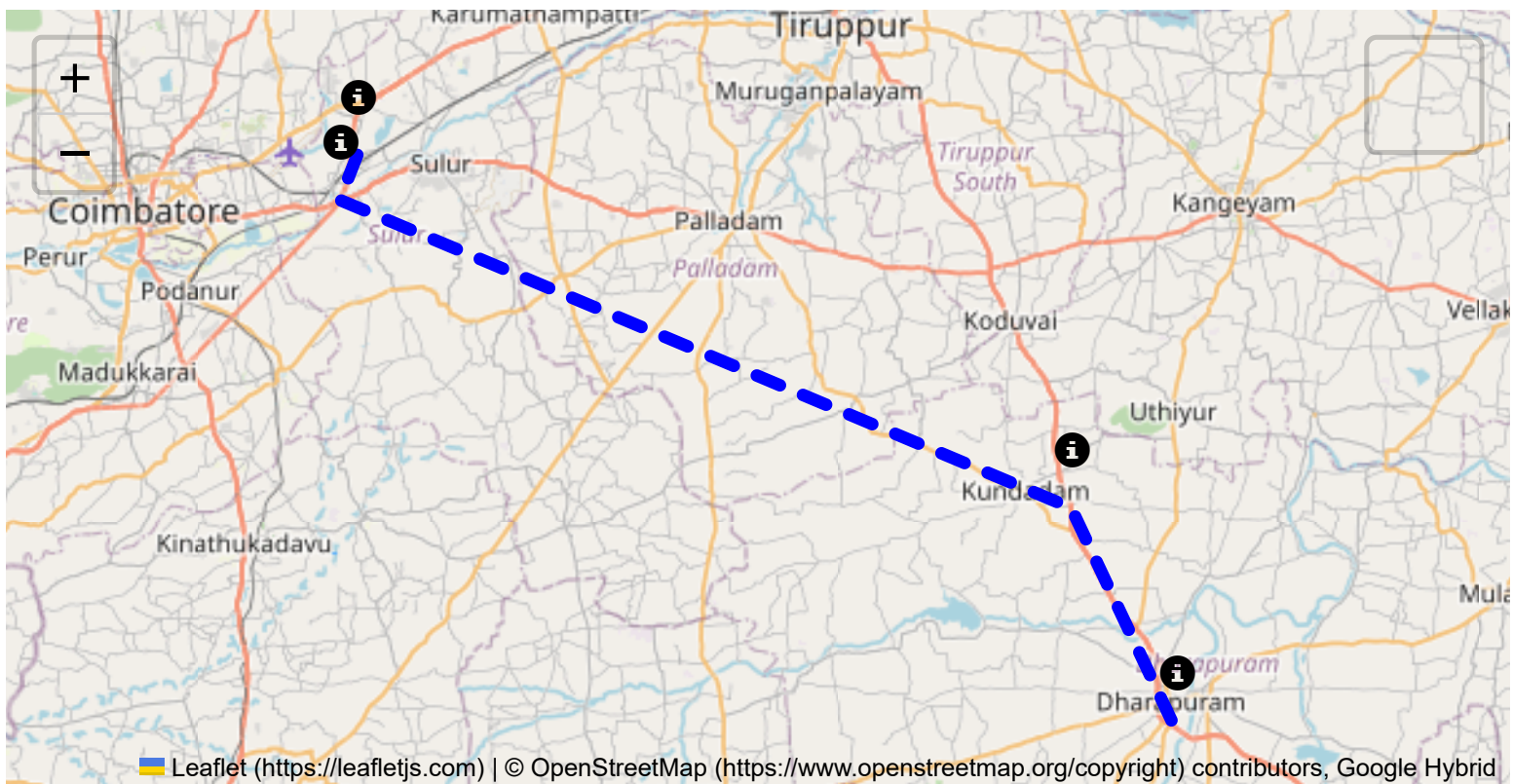
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

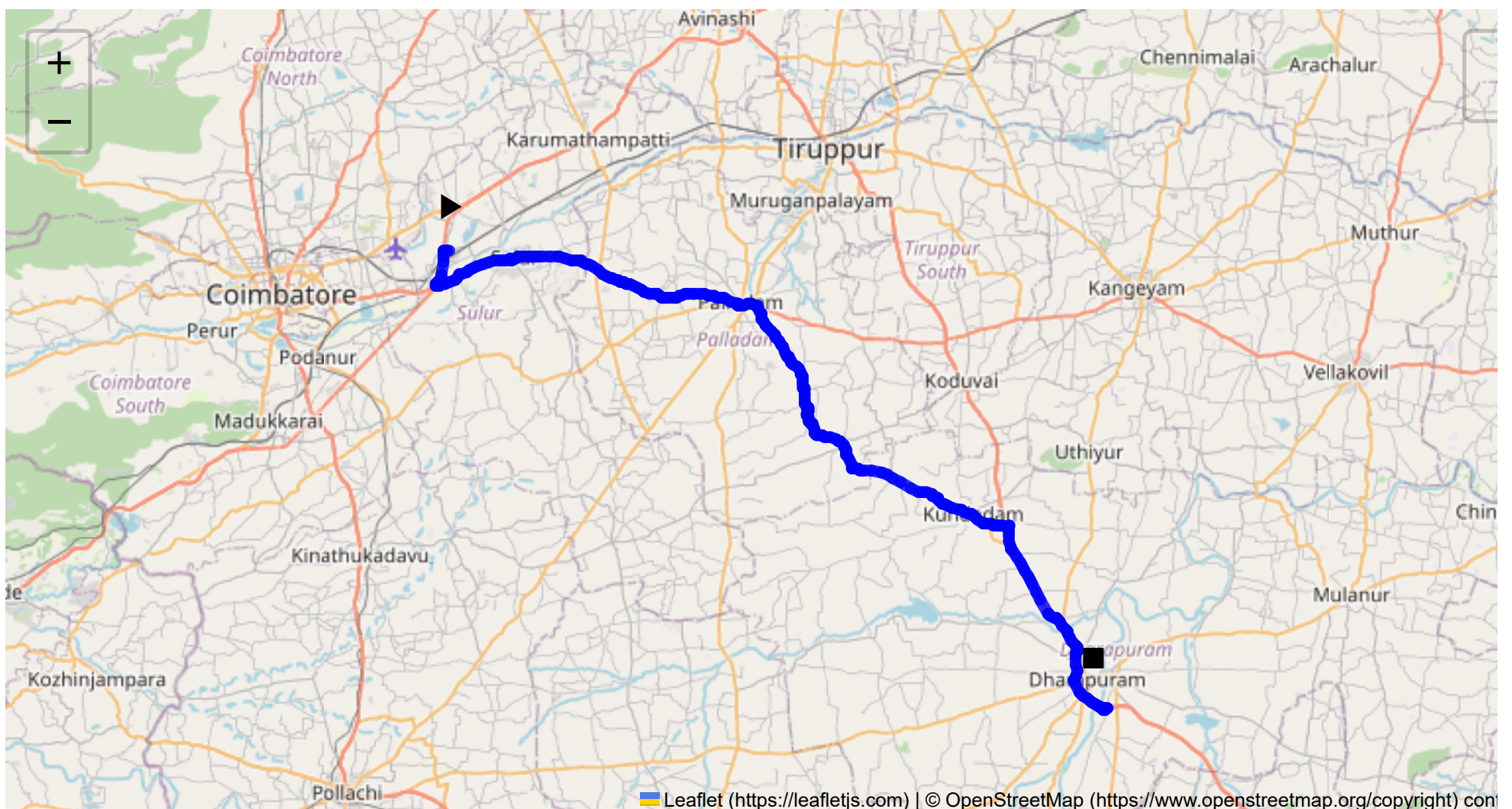
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 76.23 km
Estimated Duration: 1.5 hours
Adjusted Duration (Heavy Vehicle): 1.9 hours
Start: (11.0315, 77.0797)
End: (10.721865, 77.529448)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The specified route takes you from Athappagoundenpudur to Dharapuram South via Trichy Road in Chinthamanipudur and Best Cotton Mills Pvt Ltd in Suriyanallur. This approximately 76.23 km stretch passes through a mix of urban and rural areas, featuring state highways and local roads.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu generally experiences tropical weather. During the monsoon season (October to December), heavy rains can cause flooding and reduced visibility. The summer months (April to June) bring extreme heat, possibly affecting road conditions and vehicle performance.

3. Analysis of Traffic Patterns

Peak Hours: Traffic congestion can be prominent during morning hours (8:00 - 10:00 AM) and evening hours (5:00 - 7:00 PM) especially near urban areas like Coimbatore. **Congestion-Prone Areas:** Trichy Road is a major artery and can experience heavy traffic. Roads near major intersections and industrial zones may also be affected.

4. Assessment of Road Quality and Infrastructure

The state highways (SH 174 and SH 37) are generally in good condition, but some rural roads might have potholes and narrower lanes. Road signage and lighting may be limited in less populated areas.

5. Suggestions for Alternative Routes for Emergencies

- **Coimbatore to Dharapuram:** Via NH 81 and SH 21 as an alternative major highway route to bypass traffic in case of road blockage or congestion on the primary route.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Hazardous materials require special permits for transport through Tamil Nadu. Compliance with safety regulations and proper vehicle labeling is mandatory. Night travel restrictions might apply in certain areas.

7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

Records indicate occasional accidents involving heavy vehicles primarily due to speeding or brake failure on state highways. Incidents involving hazardous materials are less frequent but require immediate emergency response.

8. Environmental Considerations and Sensitive Areas

- **Protected Areas:** Awareness of any wildlife corridors or protected zones along the route is crucial. Avoidance of spills near agricultural lands is necessary to prevent contamination.
- **Noise and Air Pollution:** Minimize during transit through populated residential areas by adhering to speed and sound regulations.

9. Analysis of Communication Coverage

Overall, communication networks are strong through major urban and suburban areas. However, rural stretches may experience potential signal dead zones, particularly around remote farming communities or forested regions.

10. Estimated Emergency Response Times

- Urban Areas (e.g., Coimbatore):** Emergency response times are typically quick, averaging around 15-20 minutes.
- Rural Areas:** Response times can be longer, averaging 30-45 minutes due to distance and accessibility.

12. Overall Summary of Risk Assessment

Overall, the route presents moderate risks, primarily due to weather conditions and potential traffic congestion during peak hours. The quality of state highways is good, but lesser roads may present challenges. Adequate preparation, such as obtaining necessary permits, awareness of alternative routes, and maintaining communication capabilities, is advised. Adherence to local regulations and environmental considerations remains critical to ensure safe transport of hazardous materials.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	10.716839, 77.5398277	10 KM/Hr
1	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
2	Blind Spot	Blind Spot	11.00778, 77.07085	10 KM/Hr
3	Turn	Medium	11.02774, 77.12761	30 KM/Hr
4	Turn	Medium	10.99570, 77.28153	30 KM/Hr
5	Turn	Medium	10.99535, 77.28179	30 KM/Hr
6	Turn	High	10.99416, 77.28200	15 KM/Hr
7	Turn	Medium	10.99304, 77.29585	30 KM/Hr
8	Turn	Medium	10.90536, 77.33657	30 KM/Hr
9	Turn	Medium	10.88226, 77.36219	30 KM/Hr
10	Turn	Medium	10.88198, 77.36259	30 KM/Hr
11	Turn	Medium	10.84192, 77.47077	30 KM/Hr
12	Blind Spot	Blind Spot	10.84231, 77.47133	10 KM/Hr
13	Turn	High	10.71684, 77.53983	15 KM/Hr
14	Blind Spot	Blind Spot	10.71672, 77.53985	10 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
1	clinic	Dr. V. Ramakrishnan Clinic	11.0086635, 77.081108	30 km/h	Medium
2	police	Sulur Police Station	11.0248612, 77.1204842	30 km/h	Medium
3	hospital	Government Hospital, Sulur	11.0247544, 77.1228621	30 km/h	Medium
4	hospital	Balaji Hospital, Sulur	11.0277947, 77.1298133	30 km/h	Medium
7	hospital	Ponni Hospital - Palladam	10.9965327, 77.2758865	30 km/h	Medium
8	police	Palladam Police Station	10.9966966, 77.279193	30 km/h	Medium
9	clinic	Rajeshwari Nursing Home	10.9953069, 77.2841138	30 km/h	Medium
10	hospital	Palladam Government Hospital	10.9962561, 77.2803585	30 km/h	Medium
11	hospital	Sanjeevi Hospital, Palladam	10.9963103, 77.2800924	30 km/h	Medium
12	hospital	Balaji Hospital	10.9936939, 77.2849449	30 km/h	Medium
13	hospital	Ponni Hospital, Coimbatore	10.9955604, 77.2887151	30 km/h	Medium
17	hospital	Sri Balaji Surya Hospital	10.735518, 77.5185388	30 km/h	Medium
18	hospital	Ramana Hospital, Dharapuram	10.7351092, 77.517107	30 km/h	Medium
20	hospital	Janani Hospital, Dharapuram	10.7294033, 77.5210119	30 km/h	Medium
21	clinic	Punitha Nursing Home	10.72901, 77.520148	30 km/h	Medium
22	hospital	Ponnaiah Hospital, Dharapuram	10.72916, 77.520131	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
5	school	Kendriya Vidhyalaya School	11.0254394, 77.1609298	30 km/h	Medium
6	school	Infant Jesus Matriculation Higher Secondary School	10.9986758, 77.2493732	30 km/h	Medium
14	college	Maharani College	10.7625655, 77.5157126	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
15	school	Sindhu Matriculation Higher Secondary School	10.7471261, 77.5182993	30 km/h	Medium
16	school	Vishnu Lakshmi Matriculation Higher Secondary School	10.7340392, 77.5164506	30 km/h	Medium
19	school	Thenmalar Higher Secondary School	10.7333748, 77.5166481	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 10.716839, 77.5398277



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.00778, 77.07085



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.02774, 77.12761



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99570, 77.28153



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99535, 77.28179



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99416, 77.28200



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99304, 77.29585



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.88226, 77.36219



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.88198, 77.36259



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.84231, 77.47133



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.71684, 77.53983



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.71672, 77.53985
