



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to SUBHANITHI 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

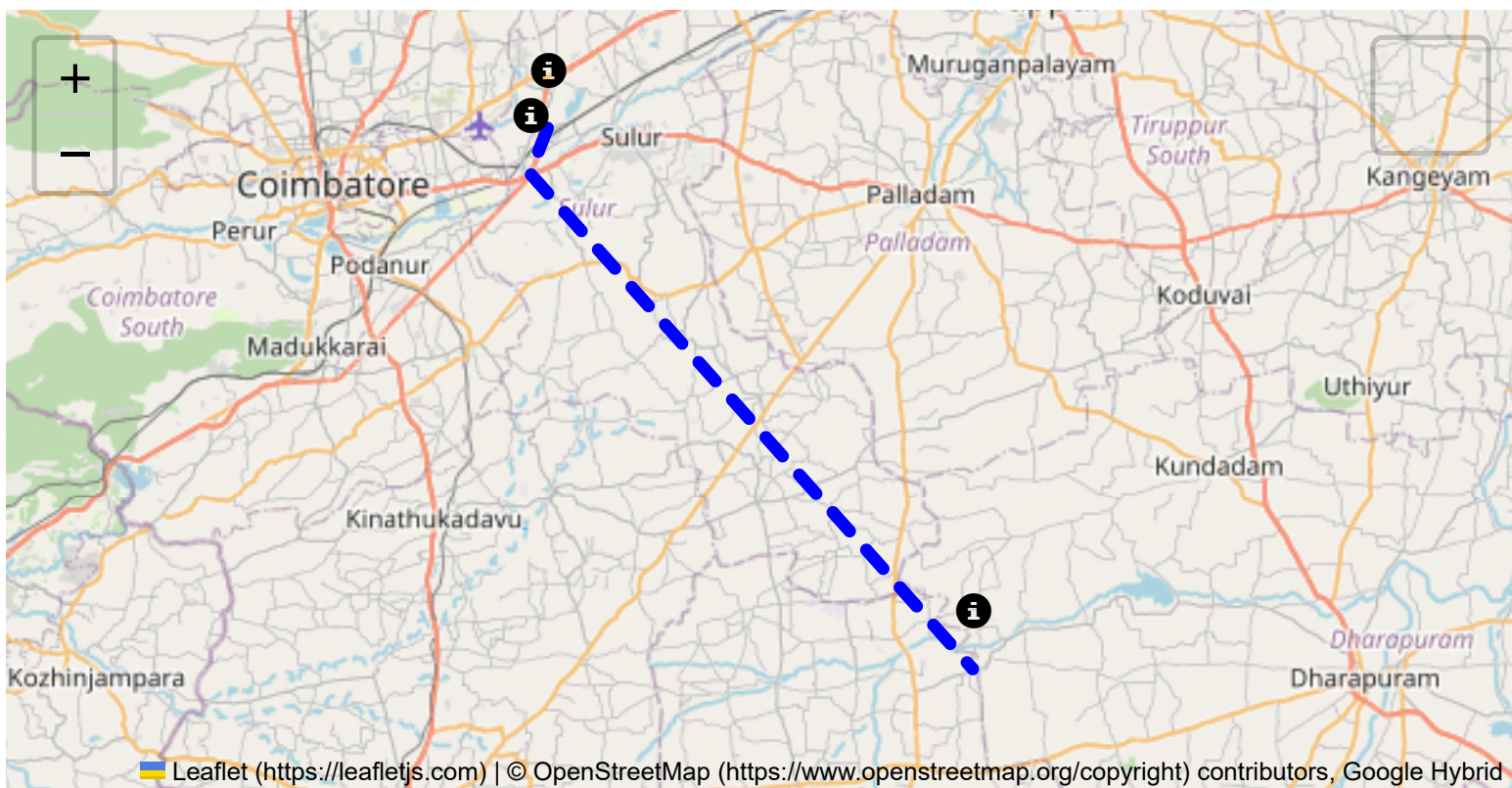
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

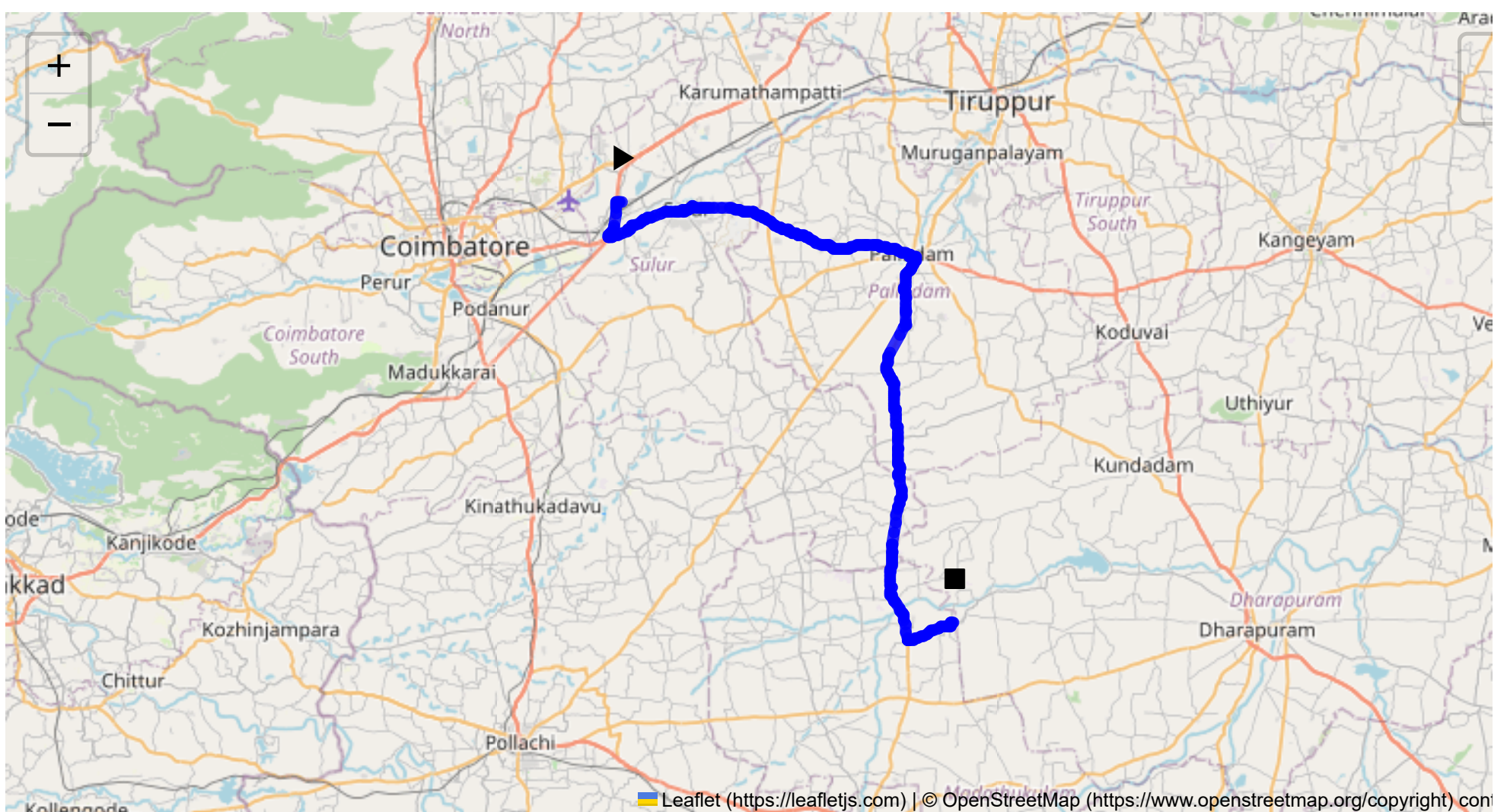
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 62.89 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.7 hours
Start: (11.0315, 77.0797)
End: (10.741599, 77.312783)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map:

- The route from Athappagundenpudur to Munduvelampatti via Trichy Road in Chinthamanipudur extends approximately 62.89 kilometers and passes through both urban and rural areas. Key segments include Trichy Road, known for its mix of heavy commercial and local traffic, and various smaller state highways and rural roads leading towards Munduvelampatti.

2. Typical Weather Conditions and Potential Weather-Related Hazards:

- The region generally experiences a hot semi-arid climate with hotter months from March to June, a monsoon season from July to September, and mild winters. During the monsoon, heavy rainfall can lead to localized flooding and slippery roads, especially in low-lying rural areas. Visibility can be reduced during heavy rains.

3. Analysis of Traffic Patterns:

- Trichy Road is one of the main arterial roads and can experience heavy congestion, particularly during morning (8:00-10:00 AM) and evening (5:00-7:00 PM) peak hours. Chinthamanipudur, being closer to Coimbatore, sees significant traffic due to its mix of residential and commercial zones. Weekends may also see increased traffic due to local markets and recreational travel.

4. Assessment of Road Quality and Infrastructure:

- Parts of this route, especially Trichy Road, have good infrastructure with regular maintenance. However, rural stretches closer to Munduvelampatti may have narrower roads and occasional potholes, requiring cautious driving. Signage can be sparse in these areas, posing risks for non-local drivers.

5. Suggestions for Alternative Routes for Emergencies:

- In case of accidents or severe congestion, an alternative route could involve taking NH544 to bypass heavily trafficked sections of Trichy Road. Local state highways can provide alternative pathways, but care must be taken to check for road conditions and size constraints for heavy vehicles.

6. Local Regulations Affecting Hazardous Material Transport:

- Transport of hazardous materials is subject to strict regulations, including proper documentation, signage on vehicles, and restrictions in residential areas and timings in urban zones like Coimbatore. Compliance with safety checks and permits is mandatory.

7. Overview of Historical Incidents:

- Historically, the region does not have a high incidence of major accidents involving hazardous materials. However, there have been occasional reports of truck rollovers and collisions, particularly during adverse weather or due to driver fatigue.

8. Environmental Considerations and Sensitive Areas:

- The route passes through some agricultural areas. It's important to ensure no materials are leaked onto farmland to prevent environmental contamination. The air quality in urban sections can be a concern; thus, adherence to emission controls is necessary.

9. Analysis of Communication Coverage:

- Generally, communication networks are robust along this route, with major networks covering urban areas comprehensively. However, some rural stretches may experience temporary dead zones, particularly as you get closer to Munduvelampatti.

10. Estimated Emergency Response Times:

- In urban and semi-urban areas like Chinthamanipudur and parts of Coimbatore, emergency response times are typically around 15-30 minutes. In rural areas, this can extend to 30-45

minutes depending on the proximity to emergency services and road conditions.

11. Overall Summary of Risk Assessment:

- The route from Athappagoundenpudur to Munduvelampatti presents moderate risks typical of mixed urban-rural Indian roads. Key risks include congestion-related delays, particularly on Trichy Road, adverse weather impacts, and variable road conditions in rural areas. Awareness of local traffic regulations, regular vehicle maintenance, adherence to hazardous material protocols, and situational awareness are critical to minimizing potential hazards. Emergency preparedness, including knowing alternative routes and maintaining communication readiness, is essential for safe navigation.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
1	Turn	Medium	11.00787, 77.07082	30 KM/Hr
2	Turn	High	11.00778, 77.07085	15 KM/Hr
3	Turn	Medium	11.02774, 77.12761	30 KM/Hr
4	Turn	Medium	10.99557, 77.28171	30 KM/Hr
5	Turn	Medium	10.99436, 77.28183	30 KM/Hr
6	Turn	High	10.99400, 77.28557	15 KM/Hr
7	Turn	Medium	10.98116, 77.27933	30 KM/Hr
8	Blind Spot	Blind Spot	10.72904, 77.28051	10 KM/Hr
9	Turn	High	10.73958, 77.31080	15 KM/Hr
10	Turn	High	10.74103, 77.31103	15 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

	type	name	coordinates	speed_limit	risk_level
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	hospital	Palladam Government Hospital	10.9962561, 77.2803585	30 km/h	Medium
10	hospital	Sanjeevi Hospital, Palladam	10.9963103, 77.2800924	30 km/h	Medium
11	clinic	Rajeshwari Nursing Home	10.9953069, 77.2841138	30 km/h	Medium
12	hospital	Balaji Hospital	10.9936939, 77.2849449	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

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.00787, 77.07082



Risk Type: Turn

Risk Level: High

Speed Limit: 15 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: 10.99557, 77.28171



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99436, 77.28183



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.99400, 77.28557



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.98116, 77.27933



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.72904, 77.28051



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.73958, 77.31080
