



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Coco Karatholuvu Sri Kalaivani Agen

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

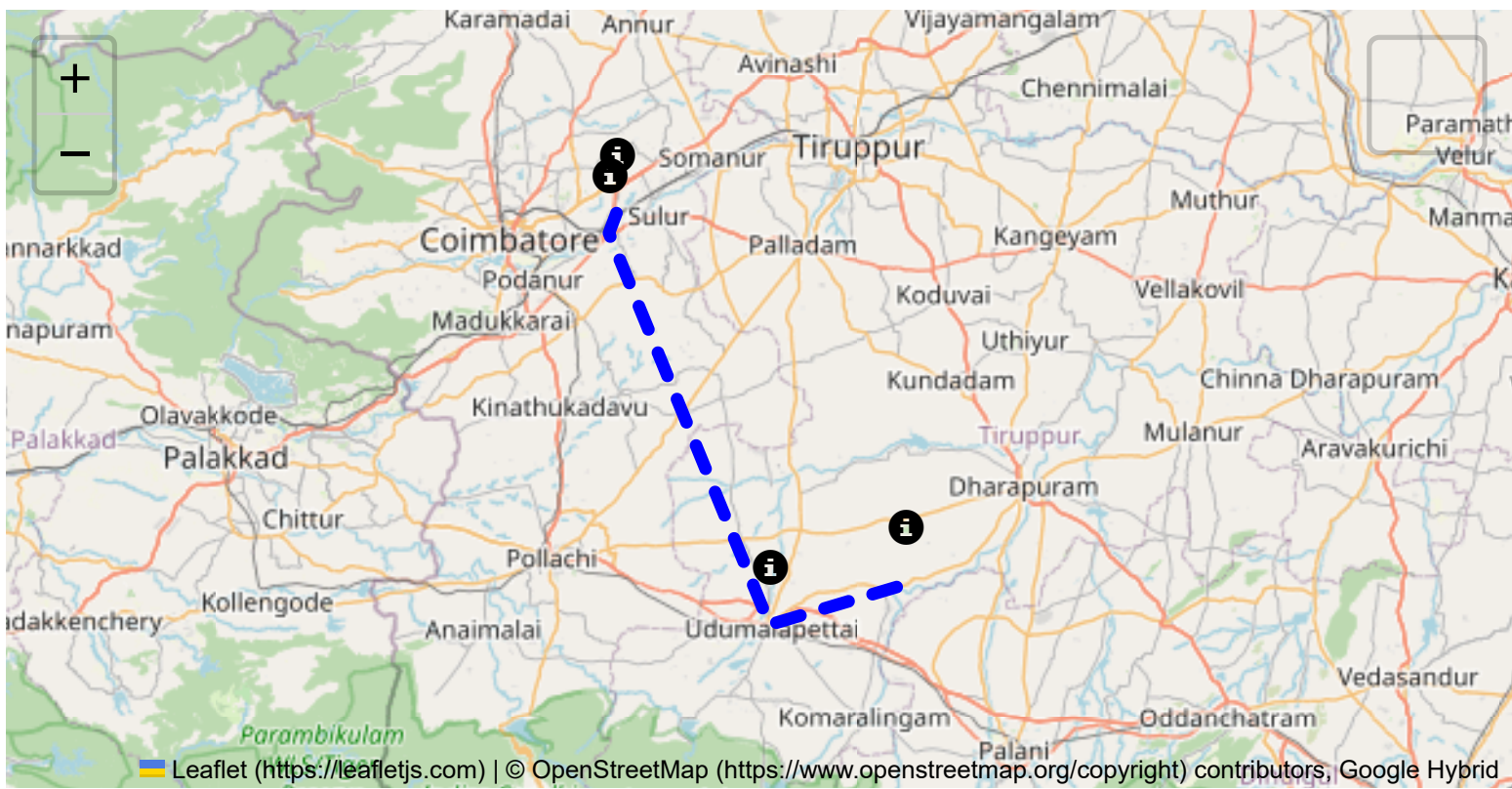
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

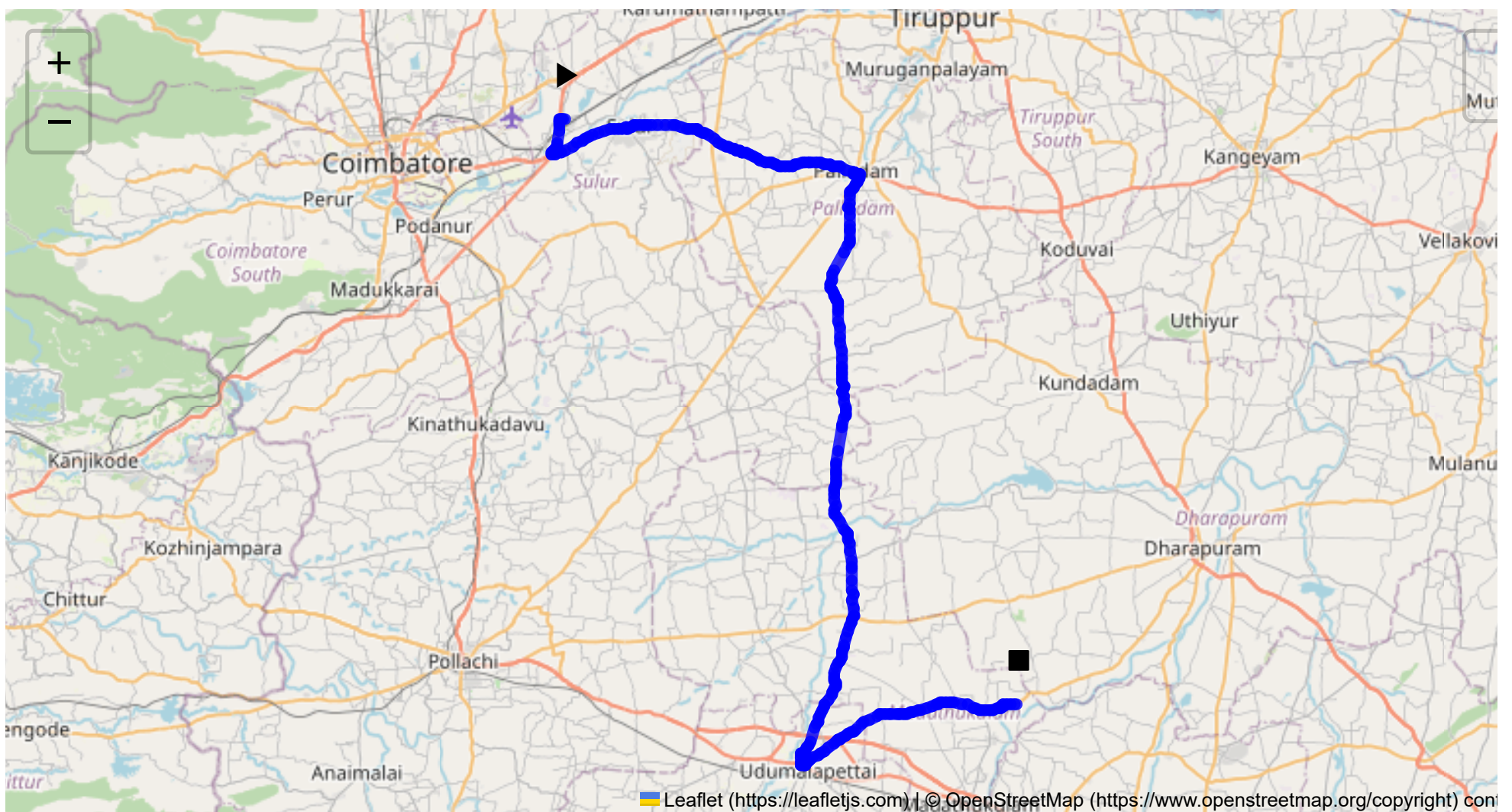
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 93.91 km
Estimated Duration: 2.0 hours
Adjusted Duration (Heavy Vehicle): 2.5 hours
Start: (11.0315, 77.0797)
End: (10.62982, 77.396278)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map:

The designated route begins in Athappagoundenpudur, Coimbatore, and proceeds via Chinthamanipudur and Udumalaipettai before ending in Jothampatti, Tamil Nadu. The journey primarily follows the Trichy Road and Pollachi-Dharapuram Road, traversing through urban and semi-urban areas.

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

The region generally experiences tropical weather, characterized by hot summers, a moderate monsoon season, and mild winters. The monsoon period (June to September) can bring heavy rains, leading to water-logging, reduced visibility, and increased slipperiness on roads.

3. Analysis of Traffic Patterns:

Traffic is typically heavier in urban areas like Coimbatore during peak hours (8:00-10:00 AM, 5:00-7:00 PM). Congestion is common near commercial centers and market areas, particularly on Trichy Road. Rural stretches may have lighter traffic but can feature slow-moving agricultural vehicles.

4. Assessment of Road Quality and Infrastructure:

- **Urban Areas:** Generally well-maintained, though road work or construction can cause occasional detours and uneven surfaces.
- **Rural Areas:** Varied quality; some sections might have potholes or narrow lanes which can be challenging for heavy vehicles.

5. Suggestions for Alternative Routes for Emergencies:

In case of emergencies, alternate routes may include:

- **Via NH 83 to Pollachi:** Provides a direct route avoiding Udumalaipettai.
- **Coimbatore-Pollachi Highway:** Offers broader lanes and possibly fewer urban congestion points.

6. Summary of Local Regulations Affecting Hazardous Material Transport:

Transport of hazardous materials requires necessary permits and adherence to safety standards regarding vehicle signage, spill management, and driver certification. Compliance with the Explosives Act and Environment Protection Act is mandatory.

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

While detailed databases are not publicly available, media reports suggest infrequent incidents primarily due to weather-induced slips or urban road congestion.

8. Environmental Considerations and Sensitive Areas:

Sensitive ecological zones along this route include agricultural lands, which necessitate careful management of any potential leaks or spills from vehicles transporting hazardous materials. Preservation of local flora and fauna habitats must be observed.

9. Analysis of Communication Coverage, Noting Potential Dead Zones:

Urban stretches have strong mobile network coverage. However, rural stretches, particularly around Pollachi, may experience fluctuating signals, which could impact real-time communication and navigation support.

10. Estimated Emergency Response Times for Different Route Segments:

- **Urban Areas (Coimbatore):** Typically 15-30 minutes, depending on traffic.
- **Rural Stretches:** Could extend to 30-45 minutes or more due to distance from major town centers.

11. An Overall Summary of Risk Assessment:

This route, while generally straightforward, presents risks primarily from weather conditions, road quality, and traffic congestion. Adhering to safety protocols for heavy vehicles carrying hazardous materials is crucial. Emergency preparedness must prioritize swift communication and the availability of alternative routes to mitigate delays. Proactive measures, such as traveling outside congested hours and ensuring driver readiness for varied road and weather conditions, will further enhance route safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	10.58771, 77.24710	15 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	High	10.99400, 77.28557	15 KM/Hr
8	Turn	Medium	10.98116, 77.27933	30 KM/Hr
9	Turn	Medium	10.91559, 77.26611	30 KM/Hr
10	Turn	Medium	10.59541, 77.24546	30 KM/Hr
11	Turn	High	10.58828, 77.24496	15 KM/Hr
12	Turn	Medium	10.60509, 77.27160	30 KM/Hr
13	Turn	Medium	10.62280, 77.30143	30 KM/Hr
14	Turn	Medium	10.63102, 77.34372	30 KM/Hr
15	Turn	Medium	10.62887, 77.38647	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
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	pharmacy	Apollo Pharmacy	10.5860212, 77.2456546	30 km/h	Medium
14	hospital	Anitha Hospital	10.58568, 77.248727	30 km/h	Medium
15	hospital	ARVI Hospital	10.58528, 77.249095	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: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.58771, 77.24710



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: 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: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.91559, 77.26611



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.59541, 77.24546



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.58828, 77.24496



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.60509, 77.27160



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.62280, 77.30143



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.63102, 77.34372



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.62887, 77.38647
