



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Tanfed Udumalpet

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

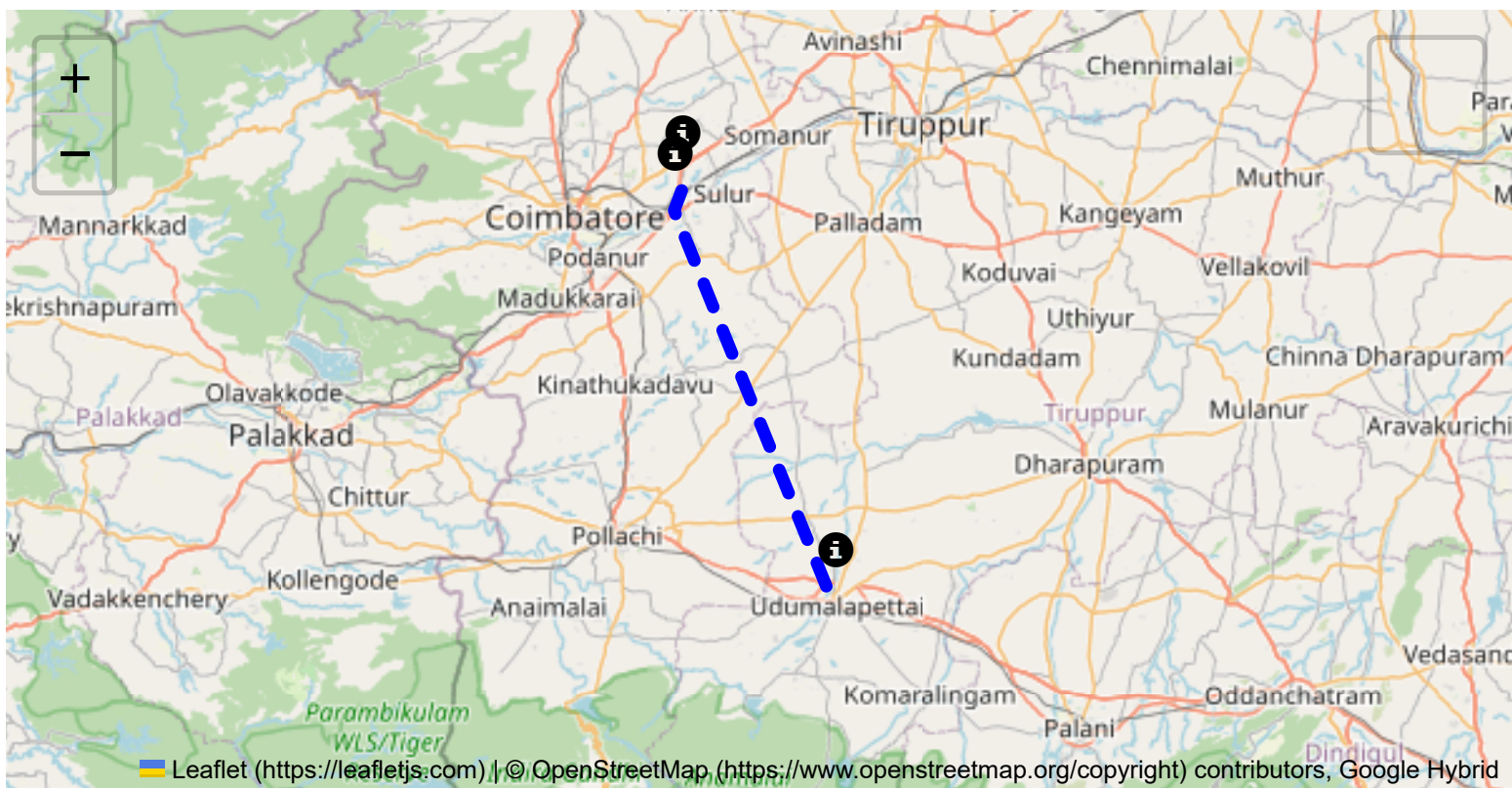
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

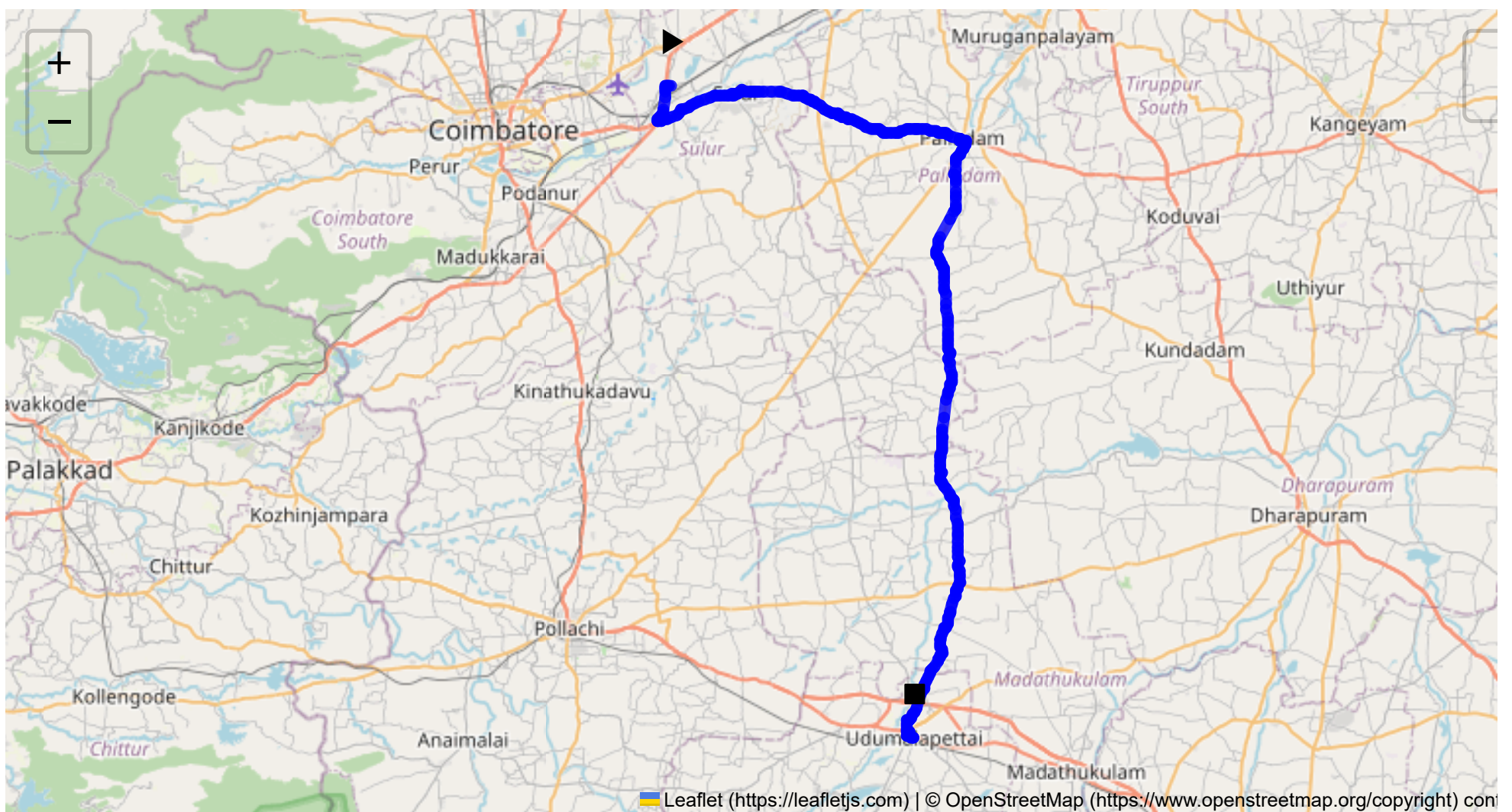
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 76.68 km
Estimated Duration: 1.6 hours
Adjusted Duration (Heavy Vehicle): 2.1 hours
Start: (11.0315, 77.0797)
End: (10.58340992115257, 77.24856419919229)



Welcome to the Journey Risk Management Study

Route Overview

The route from Athappagoundenpudur, Coimbatore to Udumalpettai via Trichy Rd, Chinthamanipudur spans approximately 76.68 kilometers. It begins in a rural area, progresses through urban settings, and encounters a mix of highways and local roads, encompassing varied terrains—it generally takes about 1.65 hours by truck under normal conditions.

Weather Conditions

The region is characterized by a tropical climate with wet and dry spells throughout the year. From June to October, the monsoon brings heavy rains, resulting in poor visibility and potentially slippery roads. From March to May, temperatures can soar, posing heat-related challenges for vehicles. It's crucial for drivers to be prepared for these conditions, particularly during the monsoon season.

Traffic Patterns

Traffic in and around Coimbatore, especially near Trichy Road, can be heavy during peak hours, generally between 8-10 AM and 6-8 PM. The areas near the urban centers usually experience congestion, particularly at major intersections and entry points to the city. Outside these hours, traffic tends to be lighter but drivers should remain vigilant for occasional road blocks or diversions.

Road Quality and Infrastructure

The infrastructure along this route is generally good but variable. Urban sections are well-paved with multiple lanes, while some rural stretches may have narrower lanes and uneven surfaces. Maintenance issues, such as potholes, can arise, especially after the monsoon season. Warning and guidance signs are present but may be sparse in some rural stretches.

Alternative Routes

In case of emergencies or significant congestion, an alternative route could take you via NH83, which is a more direct route from Coimbatore to Udumalaipettai, though longer in distance. This highway is more reliable in terms of road quality, but you should verify any weight or cargo restrictions for trucks carrying hazardous materials.

Local Regulations on Hazardous Material Transport

Tamil Nadu imposes rigorous regulations concerning the transport of hazardous materials, including proper documentation, restricted hours for transport through busy urban areas, and designated routes to mitigate risks. Compliance with local traffic rules and safety protocols is obligatory to minimize legal and safety-related issues.

Historical Incidents

There have been a few recorded incidents involving heavy vehicles in the past due to the dense fog and slippery conditions during the rainy season, causing collisions. Knowledge of these risks is essential for preventing repeats of such incidents.

Environmental Considerations

The route intersects with several ecologically sensitive areas. Drivers are advised to minimize noise and emissions especially near reserves and water bodies. Adequate containment measures must be ensured to prevent spills.

Communication Coverage

Overall, communication coverage is robust along this route due to its proximity to urban centers. However, rural stretches may experience weak signals or dead zones, particularly in more remote areas. It's advisable to have communication alternatives, such as satellite phones, handy for emergencies.

Emergency Response Times

In Coimbatore and Udumalaipettai, response times are fairly swift due to enhanced infrastructure and readily available emergency services. Rural segments may experience delayed response times due to the relative remoteness and lower density of emergency facilities.

Risk Assessment Summary

This route poses moderate risks primarily due to variable weather conditions, traffic congestion, and occasional road quality issues. Adequate preparation, real-time navigation aids, and compliance with local regulations can significantly mitigate these risks. Prior knowledge of alternative routes and emergency contacts is imperative for ensuring safety while transporting hazardous materials.

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 | 10.99570, 77.28153 | 30 KM/Hr |
| 5 | Turn | Medium | 10.99535, 77.28179 | 30 KM/Hr |
| 6 | Turn | Medium | 10.99436, 77.28183 | 30 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 | 10.59638, 77.24639 | 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 | High | 10.58790, 77.24599 | 15 KM/Hr |
| 13 | Blind Spot | Blind Spot | 10.58455, 77.24482 | 10 KM/Hr |
| 14 | Blind Spot | Blind Spot | 10.58420, 77.24845 | 10 KM/Hr |

| | Risk Type | Risk Level | Coordinates | Speed Limit |
|----|-----------|------------|--------------------|-------------|
| 15 | Turn | High | 10.58331, 77.24837 | 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 |
| 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 | Government Hospital, Udumalpet | 10.5836488, 77.247474 | 30 km/h | Medium |
| 16 | hospital | Lakshmi Hospital, Udumalai | 10.5824125, 77.2476474 | 30 km/h | Medium |
| 17 | hospital | Setty Hospital, Udumalapet | 10.5836256, 77.2482178 | 30 km/h | Medium |
| 18 | hospital | SK Medical Centre, Udumalpet | 10.5845297, 77.2486143 | 30 km/h | Medium |
| 19 | hospital | Saravana Hospital, Udumalai | 10.5829234, 77.2490212 | 30 km/h | Medium |
| 20 | hospital | Lavanya Hospital, Udumalai | 10.5819579, 77.2491994 | 30 km/h | Medium |
| 21 | hospital | ARVI Hospital | 10.58528, 77.249095 | 30 km/h | Medium |
| 22 | hospital | Dr.Sivakani Hospital Pvt Ltd | 10.5809554, 77.2461377 | 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: 10.99570, 77.28153



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.99535, 77.28179



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: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.59638, 77.24639



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: High

Speed Limit: 15 KM/Hr

Coordinates: 10.58790, 77.24599



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.58455, 77.24482



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.58420, 77.24845



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.58331, 77.24837
