



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Gowripriya 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

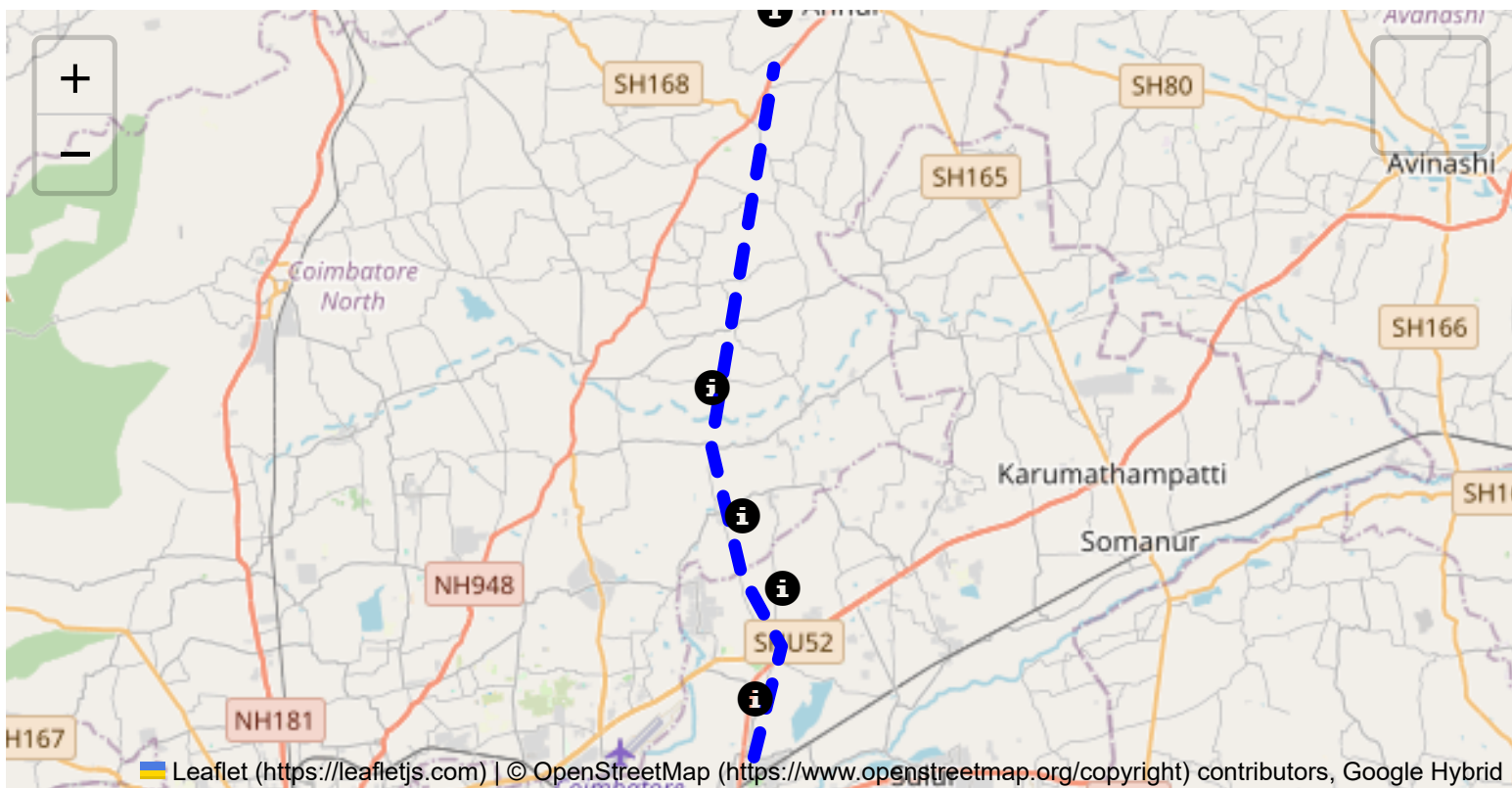
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

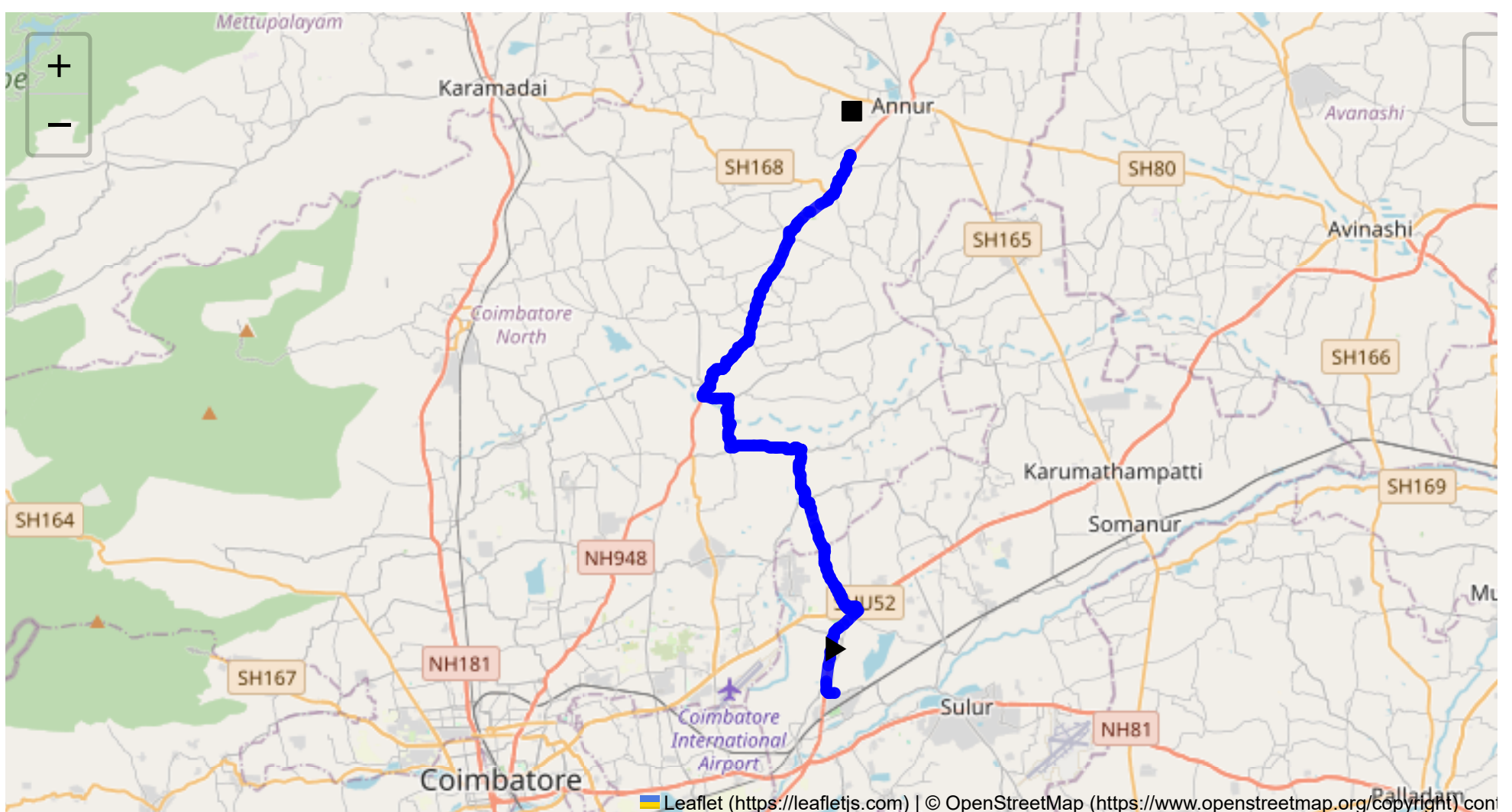
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 28.00 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.0 hours
Start: (11.0315, 77.0797)
End: (11.21606, 77.0851)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route covers approximately 28 kilometers, starting in Athappagoundenpudur in Coimbatore district and ending at NH 948 in Tamil Nadu. This journey includes passing through Neelambur and Kallipalayam, utilizing major roads like Avinashi Road and its by-passes. The route is a mix of urban and semi-urban segments, crossing through populated and industrial areas.

2. Typical Weather Conditions and Potential Weather-related Hazards

The Coimbatore region experiences a tropical semi-arid climate. Weather conditions are typically warm, with the monsoon period from June to September bringing heavy rains. Potential weather-related hazards include reduced visibility and slippery roads during monsoons, as well as occasional flooding in low-lying areas.

3. Analysis of Traffic Patterns

- **Peak Hours:** The peak hours typically coincide with office timings—8:00-10:00 AM and 5:00-8:00 PM.
- **Congestion-prone Areas:** Avinashi Road, a major arterial road, often experiences congestion, especially near urban commercial zones and the Neelambur junctions.

4. Assessment of Road Quality and Infrastructure

Roads on this route are generally well-maintained, given the industrial importance of the area. However, potholes and road wear can be prominent in lesser-maintained segments, particularly after monsoonal rains.

5. Suggestions for Alternative Routes for Emergencies

- **Alternative 1:** For a detour, drivers can consider using the Trichy Road or the L&T Bypass if there are specific blockages on Avinashi Road.
- **Alternative 2:** The Palakkad Road offers another route from the central Coimbatore bypass to NH 948 if there are extended delays.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- **Permits Required:** Permits are essential for transporting hazardous materials.
- **Restricted Hours:** Restrictions on heavy vehicle movement during peak hours in urban areas may apply.
- **Safety Standards:** Compliance with national road safety and hazardous material transport regulations is mandatory.

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

There have been sporadic incidents involving heavy vehicles due to over-speeding and improper loading. Historical data suggest a few accidents on Avinashi Road related to high-traffic volumes, often exacerbated during adverse weather conditions.

8. Environmental Considerations and Sensitive Areas

- **Water Bodies:** There are several small water bodies along the route that could be impacted by spills.
- **Residential Areas:** High population density in Neelambur and surrounding areas heightens the risk of pollution from any accidental spills.

9. Analysis of Communication Coverage

Communication networks are generally strong across the route, although certain rural fringes might have minor coverage gaps. Regular updates from telecom services or satellite devices are advisable for seamless communication.

10. Estimated Emergency Response Times

- **Urban Segments:** Emergency services may respond within 10 to 20 minutes.
- **Rural Segments:** It may take 20 to 30 minutes for emergency services to reach these areas due to less immediate availability and accessibility.

12. Overall Summary of Risk Assessment

The route is relatively safe but not without challenges, primarily related to weather and traffic congestion. Regular monitoring of road conditions and weather forecasts is advisable. Adhering strictly to local regulations will mitigate statutory risks, while preparedness for communication issues and emergencies aids in operational safety. Given its strategic location in Tamil Nadu, this route requires diligent planning and adherence to safety norms, especially concerning hazardous material transit.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	High	11.03211, 77.07640	15 KM/Hr
1	Turn	High	11.05950, 77.08744	15 KM/Hr
2	Blind Spot	Blind Spot	11.06138, 77.08700	10 KM/Hr
3	Blind Spot	Blind Spot	11.06017, 77.08395	10 KM/Hr
4	Turn	High	11.09697, 77.07044	15 KM/Hr
5	Turn	High	11.09692, 77.06915	15 KM/Hr
6	Blind Spot	Blind Spot	11.11531, 77.06799	10 KM/Hr
7	Turn	Medium	11.11581, 77.05929	30 KM/Hr
8	Turn	Medium	11.11555, 77.05876	30 KM/Hr
9	Turn	High	11.11590, 77.04318	15 KM/Hr
10	Turn	Medium	11.12352, 77.04304	30 KM/Hr
11	Turn	Medium	11.12361, 77.04301	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
12	Turn	High	11.13291, 77.04230	15 KM/Hr
13	Turn	High	11.13350, 77.03352	15 KM/Hr
14	Blind Spot	Blind Spot	11.21577, 77.08522	10 KM/Hr
15	Turn	Medium	11.21592, 77.08509	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Royal Care Hospital, Coimbatore	11.059106, 77.0893479	30 km/h	Medium
4	hospital	Aravindan Hospital	11.1334592, 77.0340488	30 km/h	Medium
5	hospital	Sampath Hospital ,S.S.Kulam	11.1339, 77.034088	30 km/h	Medium
6	hospital	Gokulam ortho hospital	11.1340331, 77.0350369	30 km/h	Medium
7	hospital	Sanjeevani Hospital And Maternity Home, Annur	11.21711, 77.0872946	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	college	Info Institute of Engineering	11.1272103, 77.0392923	30 km/h	Medium
2	college	Vivekananda Institute Of Management Studies	11.1343205, 77.044678	30 km/h	Medium
3	school	Star kids pre school	11.1346624, 77.0390481	30 km/h	Medium

Route Photos of Risky Spots



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: 11.05950, 77.08744



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.06138, 77.08700



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.06017, 77.08395



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.09697, 77.07044



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.09692, 77.06915

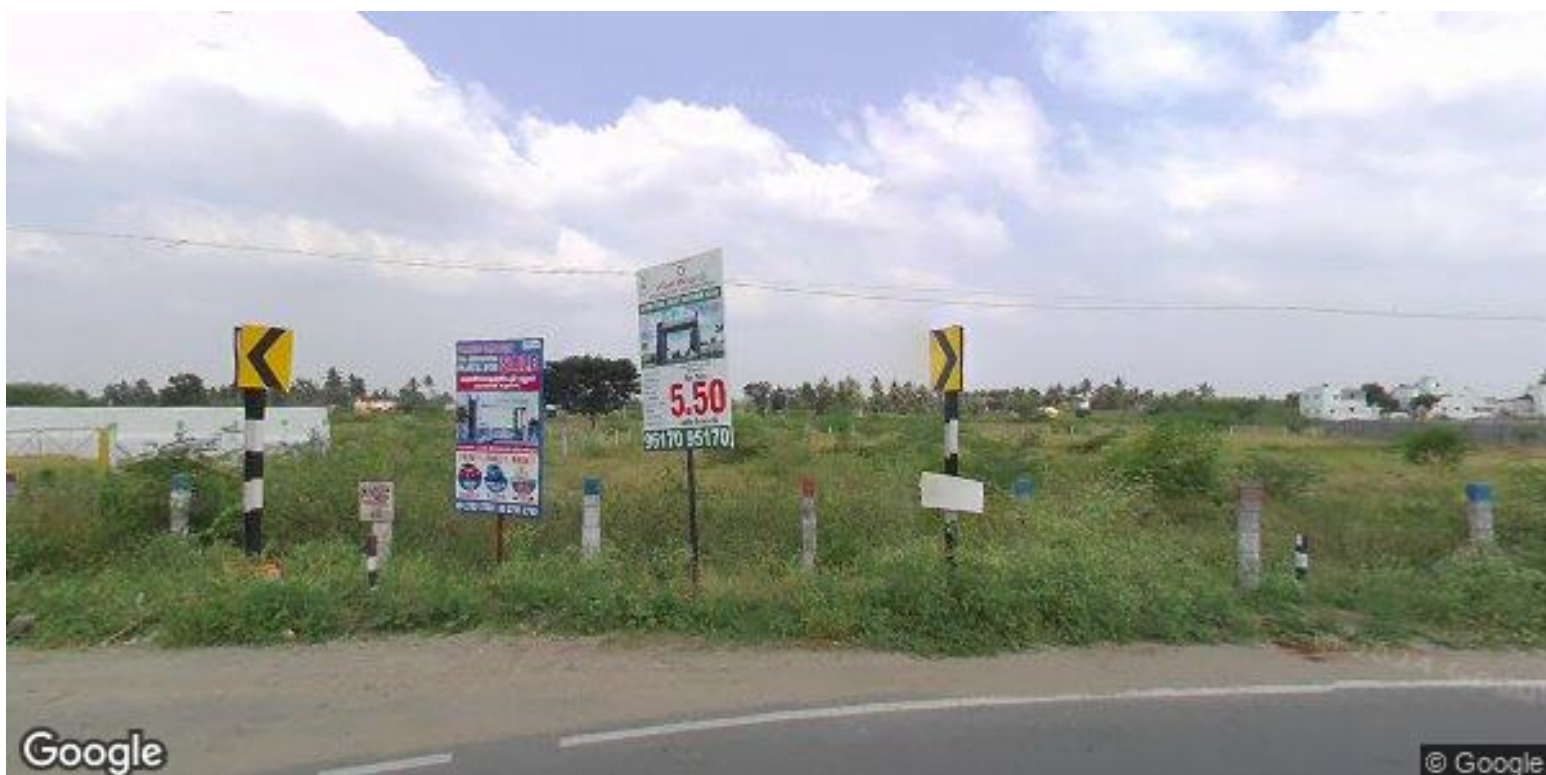


Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.11531, 77.06799



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11581, 77.05929



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11555, 77.05876



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.11590, 77.04318



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.12352, 77.04304



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.12361, 77.04301



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.13291, 77.04230



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.13350, 77.03352



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.21577, 77.08522



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.21592, 77.08509
