



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to ASST. Materials Manager

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

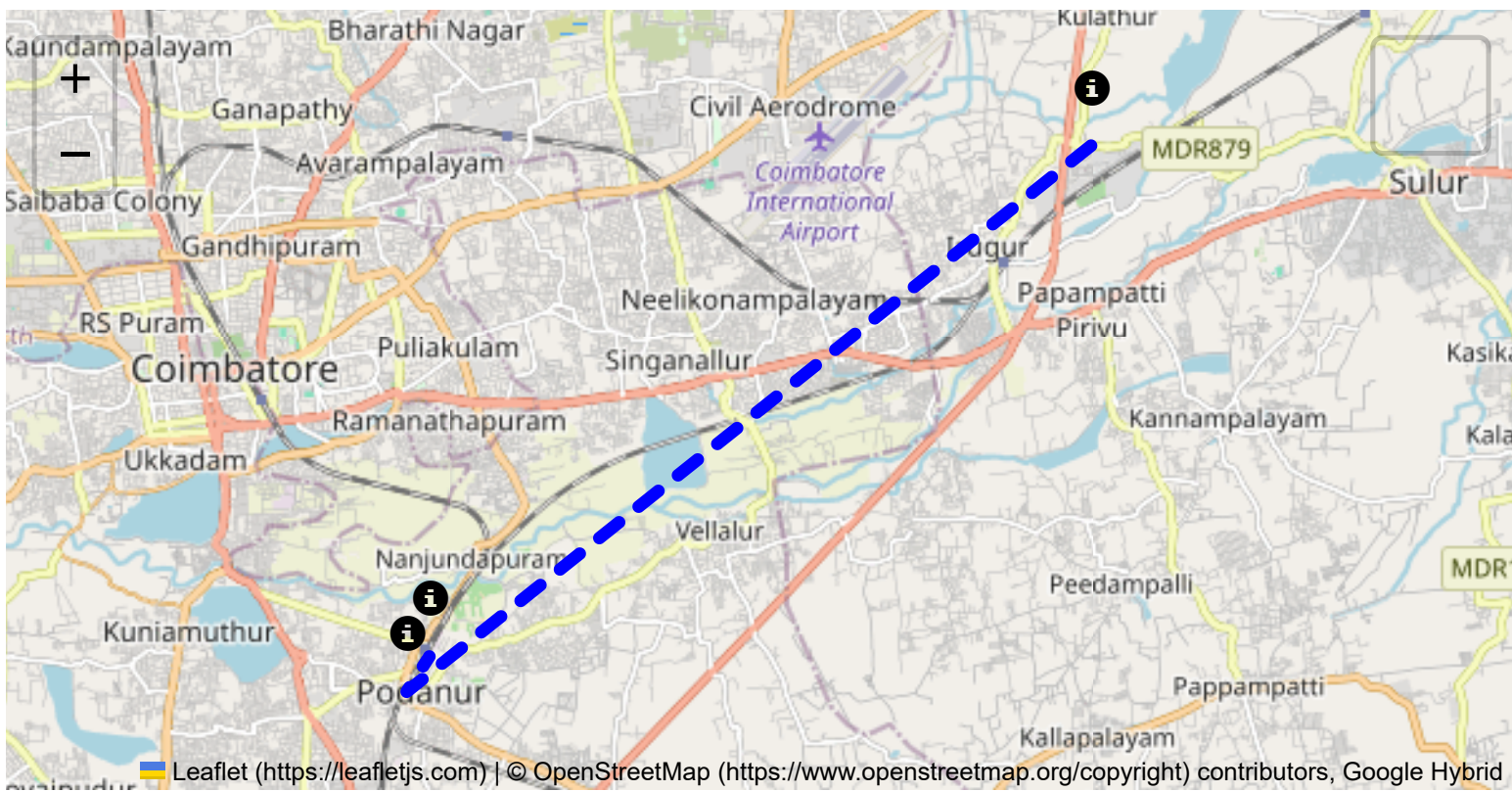
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

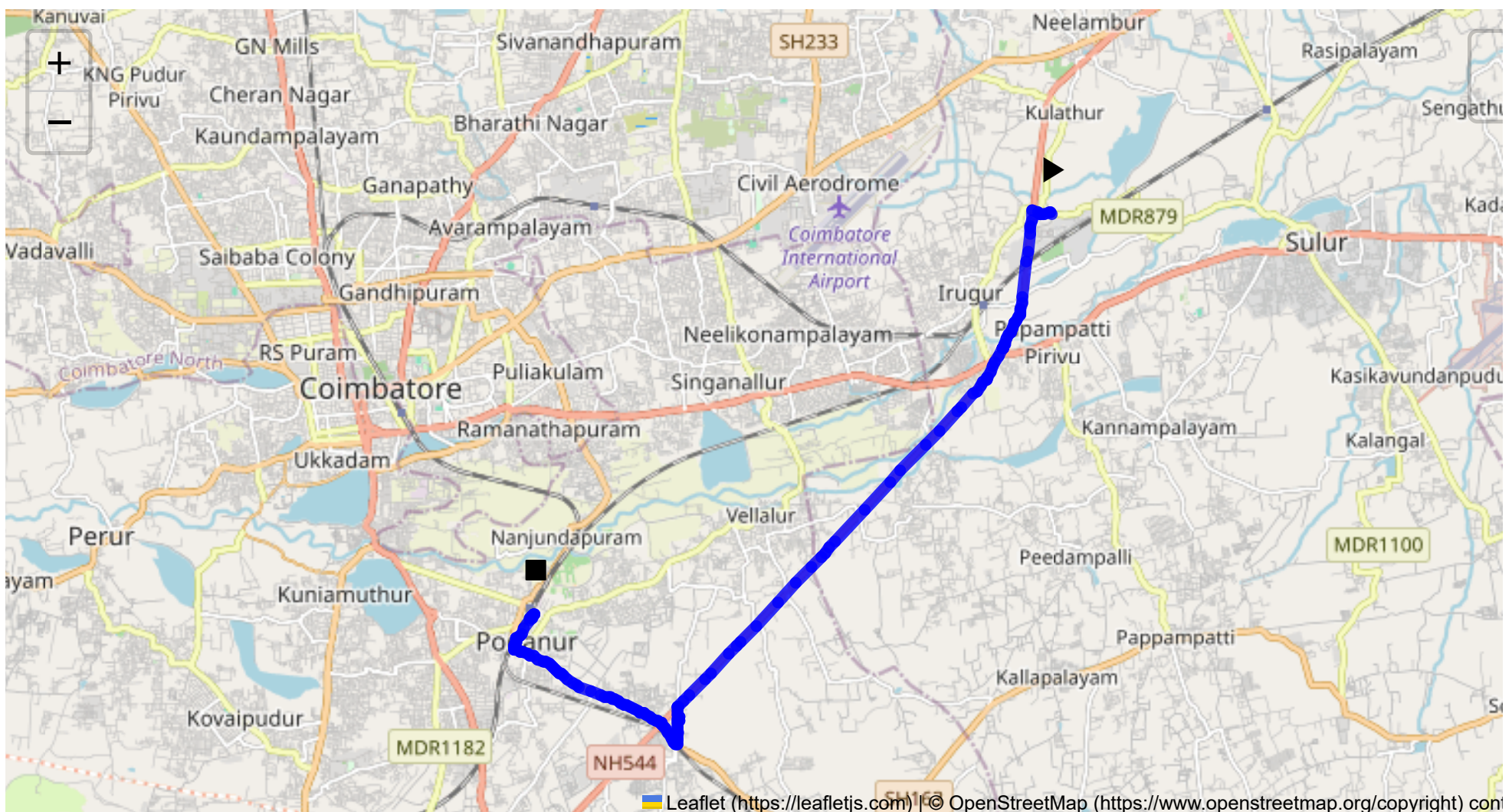
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 17.48 km
Estimated Duration: 0.5 hours
Adjusted Duration (Heavy Vehicle): 0.6 hours
Start: (11.0315, 77.0797)
End: (10.963248, 76.989578)



Welcome to the Journey Risk Management Study

Route Safety Analysis

1. Overview of the Route Map: The route from Athappagoundenpudur to Amman Nagar in Coimbatore via Railway Colony is approximately 17.48 kilometers long. It involves navigating through urban and suburban areas, including residential zones and industrial regions, with a connection through the bustling Railway Colony.

2. Typical Weather Conditions and Potential Hazards: The Coimbatore region generally experiences mild to hot weather. The monsoon season, from June to September, could bring heavy rains leading to potential flooding or waterlogging in low-lying areas. The driver should be wary of reduced visibility and slippery roads during these times.

3. Traffic Patterns and Congestion:

- **Peak Hours:** The route experiences heavy traffic during the morning (8-10 AM) and evening (5-8 PM) rush hours.
- **Congestion-Prone Areas:** Notable congestion zones include the commercial areas around Railway Colony and near the Podanur railway junction, which can significantly delay travel, especially with ongoing construction or roadworks.

4. Assessment of Road Quality and Infrastructure:

- **Overall Quality:** The roads are generally well-maintained but may have regular potholes or wear and tear.
- **Infrastructure:** Expect some narrow streets, especially near residential zones and older parts of Railway Colony. Signage is typically adequate, but vigilance is required for sudden changes in road conditions.

5. Suggestions for Alternative Routes: In emergencies, the following alternative routes can be considered:

- Detour through Ettimadai Road to bypass heavily congested zones.
- Use the Coimbatore bypass during adverse weather conditions for quicker freeway access if permissible.

6. Local Regulations on Hazardous Material Transport: Local laws require adherence to specific guidelines on transporting hazardous materials, including appropriate vehicle markings, permits, and avoiding schools and densely populated areas during peak times for safer passage.

7. Historical Incidents Involving Heavy Vehicles: There have been isolated incidents of truck mishaps, primarily due to driver fatigue or mechanical failures, with a focus on intersections and transitional zones like Railway Colony. Such incidents highlight the need for rigorous pre-trip vehicle inspections and adherence to speed limits.

8. Environmental Considerations and Sensitive Areas: The route passes through residential suburbs that demand noise control and minimized emissions, especially when transporting hazardous materials. There are also environmentally sensitive zones near city parks that require careful navigation to prevent ecological disturbances.

9. Analysis of Communication Coverage: The route generally has good mobile network coverage, but signal fluctuations could occur in densely built-up areas like Railway Colony. It's advisable to have dual-network SIMs for redundancy in communications.

10. Estimated Emergency Response Times:

- **Urban Areas (like Railway Colony):** Response time is around 10-15 minutes due to proximity to police stations and fire services.

- **Suburban Areas (early part of the route):** Expect longer response times, approximately 20-30 minutes, due to traffic and distance.

12. Overall Summary of Risk Assessment: This route poses moderate risk for transporting hazardous materials, primarily due to congestion and weather-related issues during the monsoon. Hazardous areas include crowded zones near transportation hubs like railway stations and narrow roads in residential sectors. Consistent communication, adherence to traffic laws, and weather awareness are key to mitigating risks. Continuous monitoring for route updates and emergency contact readiness enhance overall safety on this transit corridor.

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	11.00873, 77.07114	30 KM/Hr
2	Turn	High	10.94724, 77.01460	15 KM/Hr
3	Turn	Medium	10.94097, 77.01435	30 KM/Hr
4	Blind Spot	Blind Spot	10.94090, 77.01428	10 KM/Hr
5	Blind Spot	Blind Spot	10.95715, 76.98589	10 KM/Hr
6	Turn	Medium	10.95970, 76.98731	30 KM/Hr
7	Turn	High	10.96251, 76.98899	15 KM/Hr
8	Turn	Medium	10.96299, 76.98930	30 KM/Hr
9	Turn	Medium	10.96304, 76.98939	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
2	clinic	S.M.Clinic, Podhanur, Coimbatore	10.9553739, 76.9898473	30 km/h	Medium
3	hospital	Raksha Medical Centre	10.95665, 76.987019	30 km/h	Medium
5	hospital	St. Mary's Hospital	10.9626641, 76.98594	30 km/h	Medium
6	hospital	St. Marys Hospital	10.9625619, 76.9865689	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	school	Kadri Mills Higher Secondary School	11.0058181, 77.0664118	30 km/h	Medium
4	school	St. Marys School of Nursing	10.9621472, 76.986111	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: 11.00873, 77.07114



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.94724, 77.01460



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.94097, 77.01435



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.94090, 77.01428



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.95715, 76.98589



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.95970, 76.98731
