



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Aadhithiya Krishnaa Fuels

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

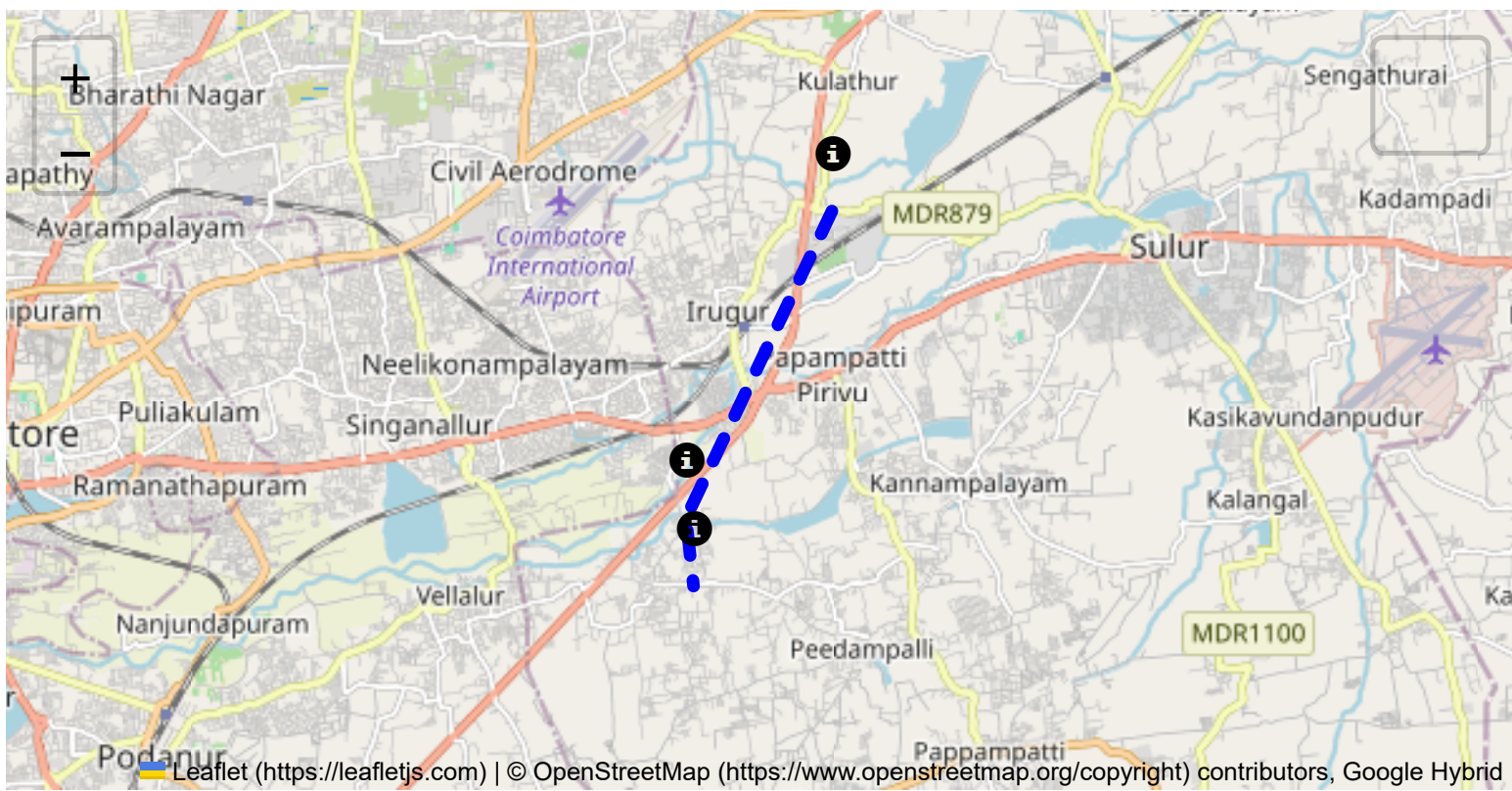
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

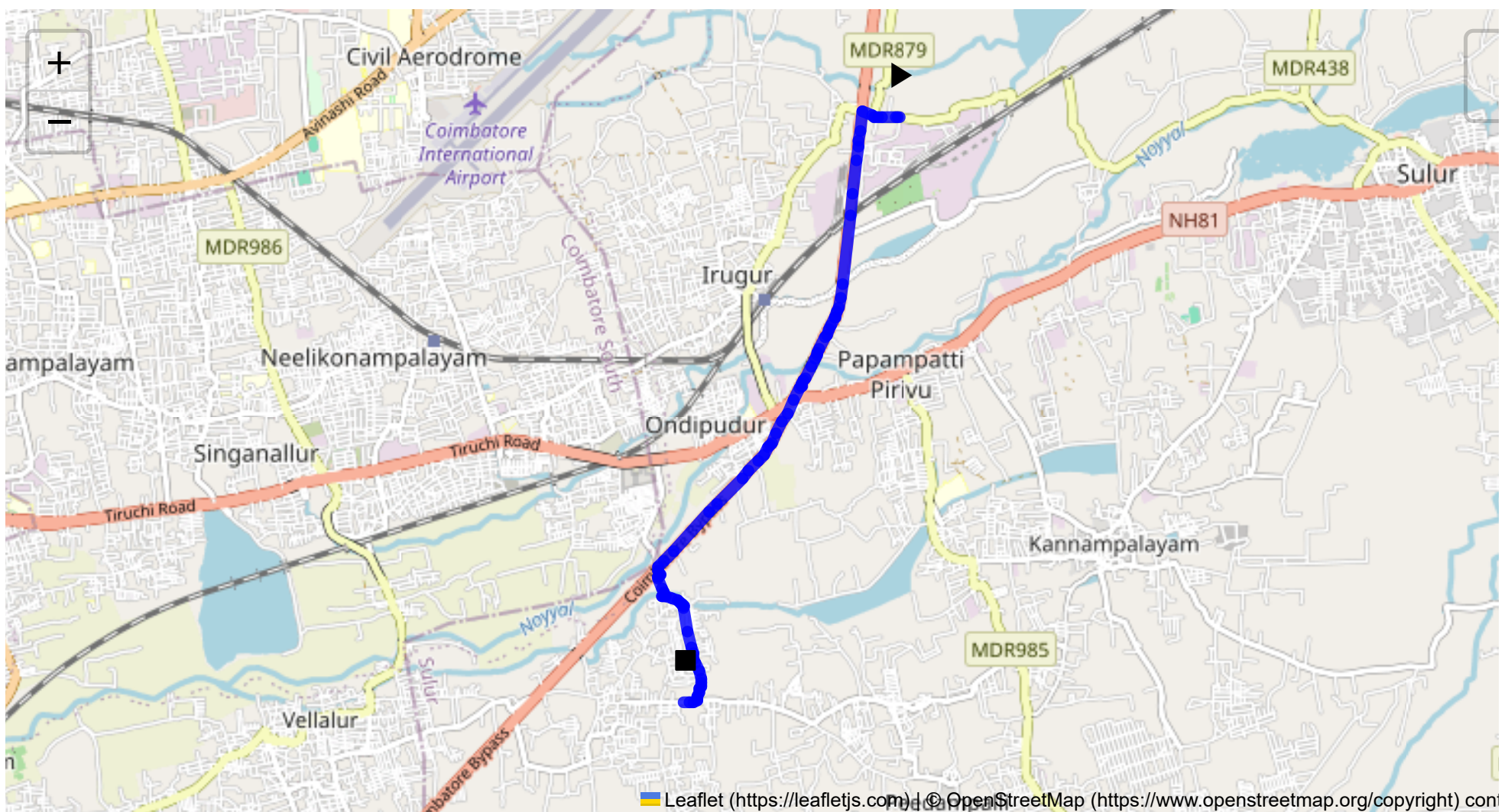
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 6.89 km
Estimated Duration: 0.2 hours
Adjusted Duration (Heavy Vehicle): 0.3 hours
Start: (11.0315, 77.0797)
End: (10.981271, 77.060825)



Welcome to the Journey Risk Management Study

Route Overview

The designated route begins at Athappagoundenpudur in Coimbatore and travels to Pattanam, via Gajalakshmi Nagar, covering approximately 6.89 kilometers. This region is characterized by local roads connecting small settlements and urban peripheral areas.

Weather Conditions

The climate of Coimbatore is generally tropical, with relatively moderate weather conditions. However, potential weather-related hazards include:

- **Monsoon Season (June to September):** Heavy rainfall can lead to slippery roads and localized flooding.
- **Summer Season (March to May):** High temperatures may affect road surfaces and vehicle performance.

Traffic Patterns

- **Peak Hours:** Typically, mornings (7-10 AM) and evenings (5-8 PM) witness increased traffic due to commuter movement.
- **Congestion-Prone Areas:** Areas close to local markets and Gajalakshmi Nagar might experience congestion due to narrow roads, increased pedestrian activity, and stalls.

Road Quality and Infrastructure

- **Road Conditions:** The roads are largely single-lane in each direction, with varying maintenance levels. Some sections might have potholes or uneven surfaces.
- **Infrastructure:** Basic roadside amenities are present, but truck stops and rest areas are limited.

Alternative Routes

In case of emergencies, alternative routes that bypass major congestion points include:

- **Via NH544 to NH948:** Although longer, this route offers better road quality and reliability.
- **Local bypass roads** to circumvent narrow sections in Gajalakshmi Nagar.

Local Regulations on Hazardous Material

- Coimbatore follows strict regulations for the transport of hazardous materials, including mandatory permits, restricted travel times (often prohibited during peak hours), and safety compliance with labeling and documentation.

Historical Incidents

- Historical data indicates sparse incidents involving heavy vehicles, primarily due to mechanical failures or human error. Significant incidents are usually linked to adverse weather or road conditions.

Environmental Considerations

- **Sensitive Areas:** Be cautious in regions adjacent to populated localities and water bodies where spills can have severe consequences.

- **Wildlife Crossings:** Though rare in this urban-fringe environment, there might be occasional instances of wildlife crossing in less populated stretches.

Communication Coverage

- **Potential Dead Zones:** Generally good coverage, but intermittent signal loss might occur in more remote or heavily forested areas.
- **Primary Providers:** Major telecom companies provide comprehensive coverage along the route.

Emergency Response Times

- **Urban Areas (e.g., Pattanam):** Response times can range between 10-20 minutes due to proximity to city services.
- **Rural Segments:** May experience delays, with response times extending to 30 minutes or more.

Overall Risk Assessment

While the route traverses manageable terrain with moderate traffic and weather risks, specific caution should be taken during adverse weather conditions and in congested areas. Compliance with local hazardous material transport regulations is crucial.

Summary

This route is moderately safe for the transport of hazardous materials, provided that all vehicle and regulatory requisites are carefully met. Emergency and contingency plans should be clearly communicated to ensure quick response and management of any potential incidents.

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	10.99307, 77.05866	15 KM/Hr
3	Turn	Medium	10.99073, 77.05906	30 KM/Hr
4	Blind Spot	Blind Spot	10.99062, 77.05900	10 KM/Hr
5	Turn	Medium	10.99061, 77.05936	30 KM/Hr
6	Turn	Medium	10.98981, 77.06084	30 KM/Hr
7	Turn	High	10.98156, 77.06210	15 KM/Hr

Risk Assessment - Elevation Changes

	Risk Type	Specific Risk	Risk Level	Coordinates	Speed Limit
0	Elevation Change	Ascent	Medium	10.98155897216622, 77.06209126337158	30 KMS/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	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

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: 10.99307, 77.05866



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99073, 77.05906

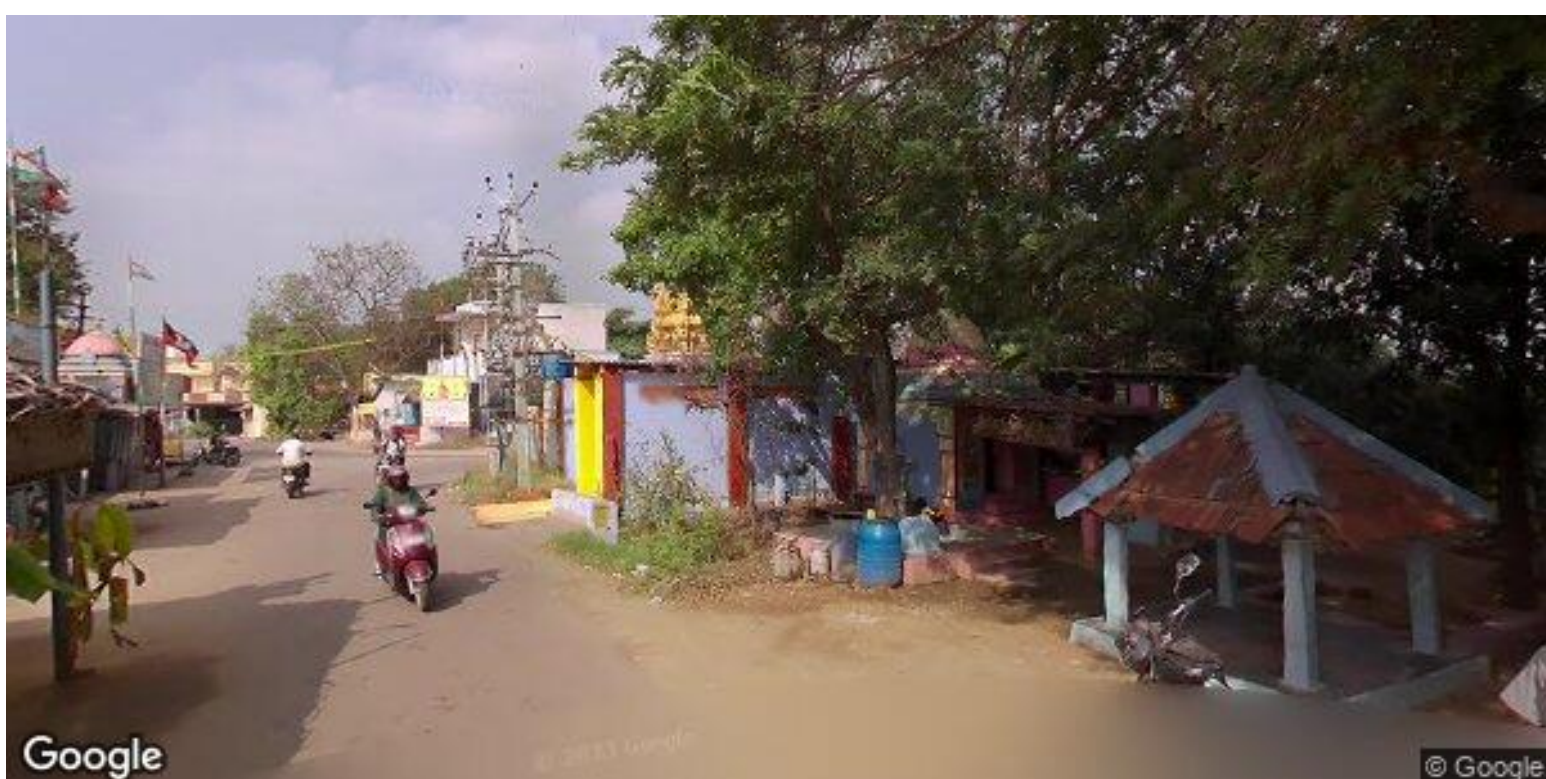


Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.99062, 77.05900



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.99061, 77.05936



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.98981, 77.06084



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.98156, 77.06210

