



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### IOCL Coimbatore Terminal to R R Aagency

#### 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**

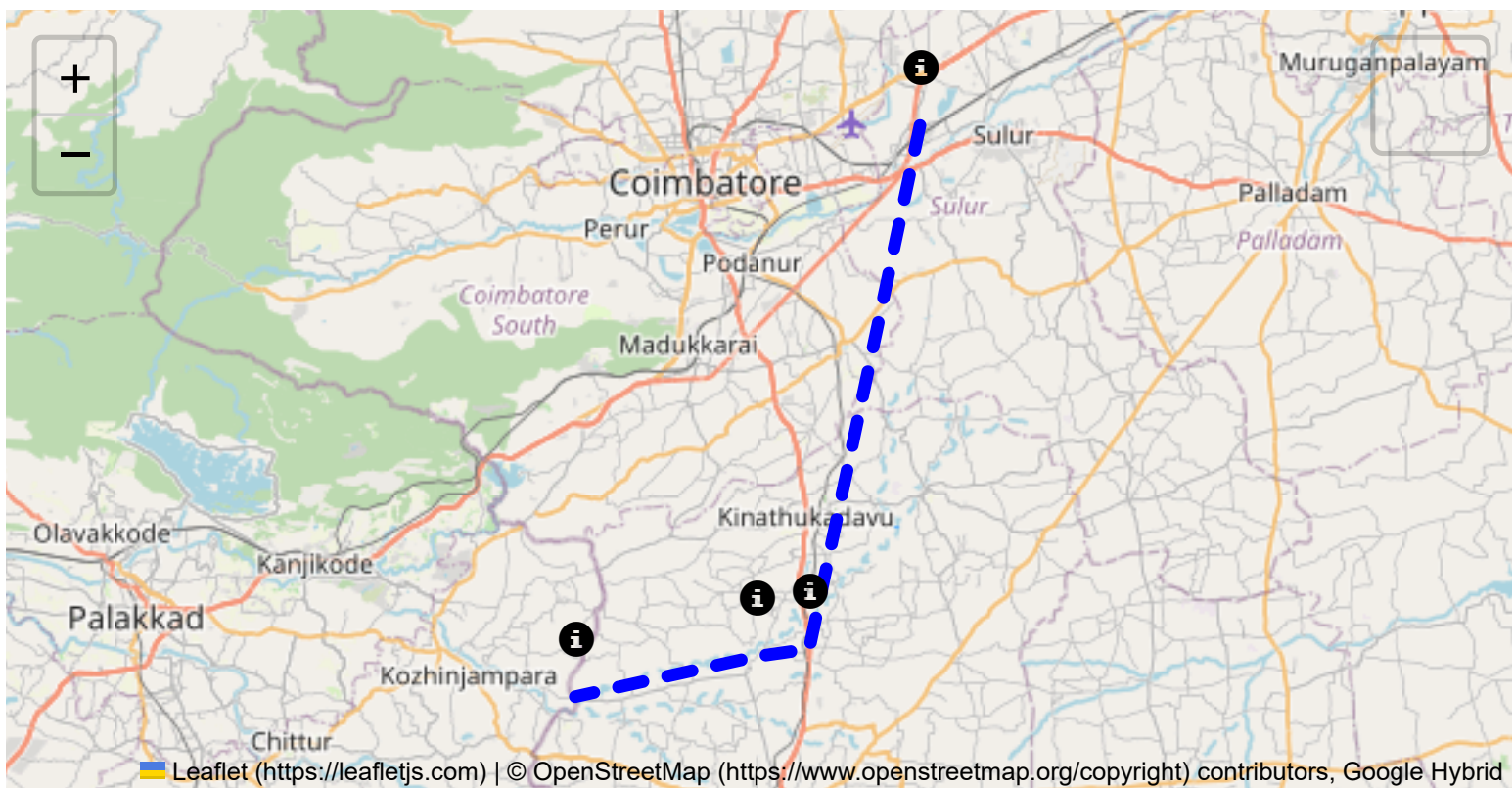
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

## **Journey Risk Mitigation**

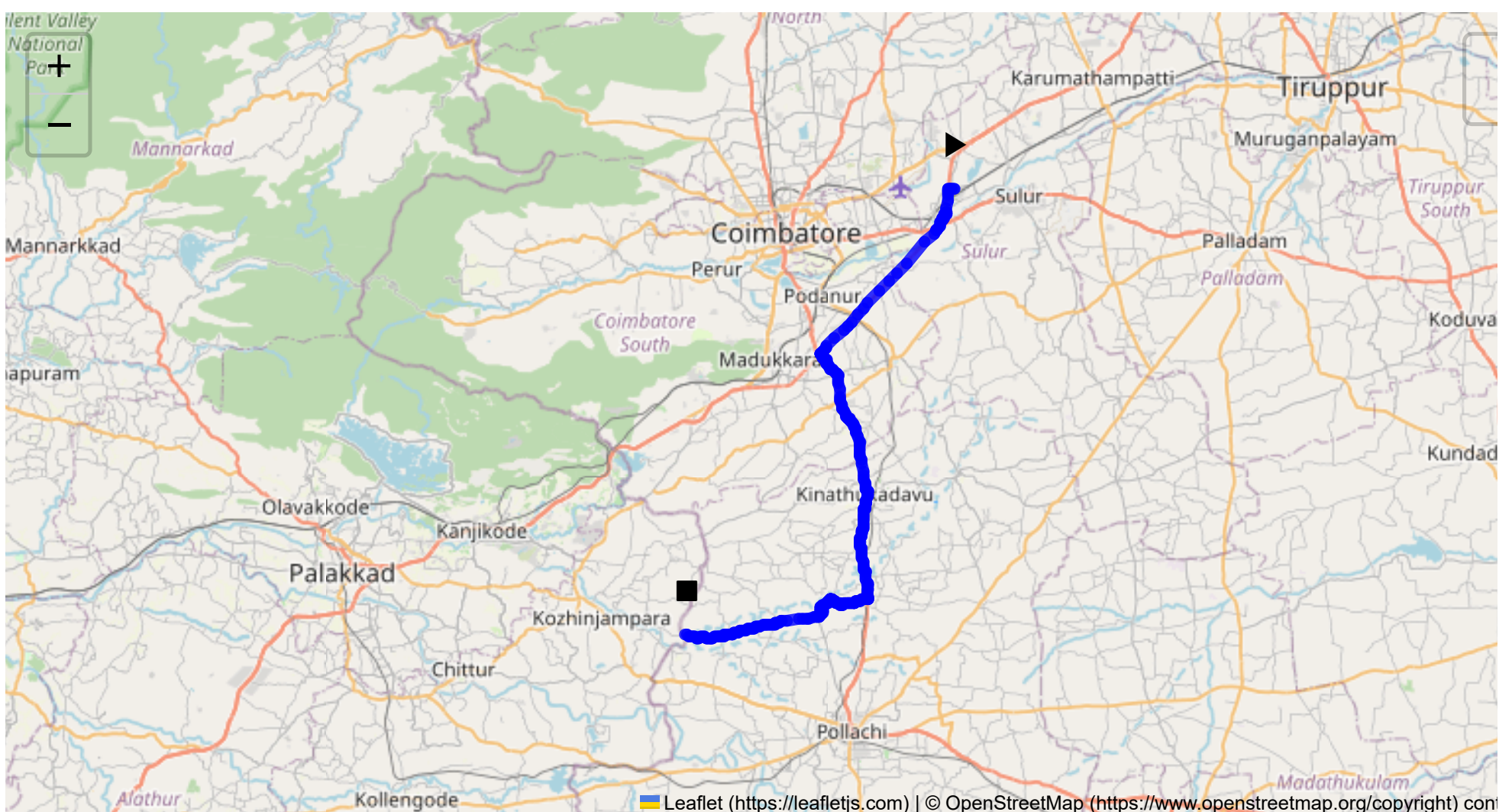
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 52.36 km**  
**Estimated Duration: 1.2 hours**  
**Adjusted Duration (Heavy Vehicle): 1.5 hours**  
**Start: (11.0315, 77.0797)**  
**End: (10.725266, 76.892204)**



## Welcome to the Journey Risk Management Study

### Route Overview

The route from Athappagoundenpudur to Nadupuni via Kovilpalayam and Sulakkal spans approximately 52.36 kilometers. The drive generally takes about 1.16 hours for heavy vehicles transporting hazardous material, accounting for potential speed regulations and stopping requirements for such cargo.



# Typical Weather Conditions and Potential Hazards

The region of Tamil Nadu typically experiences a tropical climate. During the monsoon season (June to September), heavy rain can result in slippery roads, flooding, and visibility issues. Summers (March to May) can feature very high temperatures, which may affect vehicle operation. Prepare for any unexpected weather changes, particularly during monsoon seasons.

## Traffic Patterns and Congestion

- Peak Hours:** Traffic tends to build up between 8-10 AM and 5-7 PM. Prepare for moderate congestion during these times in and around urban areas and towns.
- Congestion-Prone Areas:** The town centers of Kovilpalayam and Sulakkal can be congested, particularly because of local markets and narrow roadways.

## Assessment of Road Quality and Infrastructure

The road quality varies along the route. Here are a few observations:

- Roadways in urban centers may be well-maintained.
- Rural stretches might present potholes and uneven surfaces.
- Due to limited street lighting, driving at night might require additional caution.
- Watch out for livestock crossings and pedestrian traffic in rural areas.

## Alternative Routes for Emergencies

In the case of a blockage or emergency on the primary route, consider using the following:

- For bypassing Kovilpalayam, NH544 (Coimbatore to Palakkad) is a major highway with better facilities.
- Alternative rural roads can be considered, but verify their condition and accessibility before use.

## Local Regulations for Hazardous Material Transport

Tamil Nadu has specific regulations regarding transporting hazardous materials, requiring full compliance with labeling, speed regulations, and vehicle safety checks. Ensure all paperwork and permits are secured and up-to-date before transit.

## Historical Incidents with Heavy Vehicles

There have been instances of accidents involving trucks in this region, mostly due to challenging weather conditions or driver fatigue. Cornering areas and intersections can be higher risk zones.

## Environmental Considerations and Sensitive Areas

Areas near Sulakkal and Kovilpalayam may have agricultural fields, requiring consideration for any chemical spills or leakage. There might also be biodiversity-sensitive zones, necessitating careful driving to avoid disturbing wildlife.

# Communication Coverage

General mobile and radio coverage is reliable in urban and semi-urban areas. However, some rural parts might experience intermittent or no signal. Plan for potential communication dead zones, especially near agricultural lands.

# Estimated Emergency Response Times

- **Urban Areas:** Emergency services typically respond within 20-30 minutes.
- **Rural stretches near Sulakkal and Kovilpalayam:** Delays can extend response times due to distance and road conditions, potentially taking up to 45 minutes or more.

# Overall Risk Assessment Summary

This route has manageable risks with attentive planning. Key concerns are weather conditions, road quality, and emergency response delays in rural sections. Ensuring vehicle preparedness and awareness of local regulations will substantially mitigate risks. Consistent communication with dispatch and regular weather checks can enhance safety further. Prefer using well-lit and frequently traveled paths where possible and adhere strictly to road safety norms and regulations governing hazardous materials.

## Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	10.7493636, 77.02019659999999	10 KM/Hr
1	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
2	Blind Spot	Blind Spot	10.91785, 76.98617	10 KM/Hr
3	Blind Spot	Blind Spot	10.74936, 77.02020	10 KM/Hr
4	Turn	High	10.74936, 77.02009	15 KM/Hr
5	Blind Spot	Blind Spot	10.75093, 77.02003	10 KM/Hr
6	Turn	High	10.75015, 76.99326	15 KM/Hr
7	Turn	Medium	10.74180, 76.98687	30 KM/Hr
8	Turn	Medium	10.74142, 76.98751	30 KM/Hr
9	Turn	Medium	10.74060, 76.98758	30 KM/Hr
10	Turn	Medium	10.73737, 76.98461	30 KM/Hr

## Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
4	hospital	Ambal Malumichampatty, Coimbatore	10.90265, 76.997586	30 km/h	Medium
11	hospital	Sri Venkateswara Kinnathukadavu	10.8241085, 77.0191884	30 km/h	Medium
12	hospital	Government Hospital, Kinathukadavu	10.82107, 77.017406	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
2	college	Karpagam Polytechnic College	10.9185202, 76.99131	30 km/h	Medium
3	college	Karpagam Academy of Higher Education	10.9175939, 76.9882369	30 km/h	Medium
5	college	DJ Academy of Design and Management	10.8740175, 77.0042594	30 km/h	Medium
6	college	Coimbatore Marine College	10.8627423, 77.0107491	30 km/h	Medium
7	school	Sasi Creative School for Architecture	10.8613583, 77.0118878	30 km/h	Medium
8	school	Vivek Vidyalaya Matric Hr. Sec. School	10.8451346, 77.015443	30 km/h	Medium
9	school	Vivek Vidya Mandir	10.8448467, 77.01614	30 km/h	Medium
10	college	VSB College of Engineering Technical Campus=Coimbatore	10.8430943, 77.0180336	30 km/h	Medium

## Route Photos of Risky Spots





**Risk Type:** U-Turn

**Risk Level:** High

**Speed Limit:** 10 KM/Hr

**Coordinates:** 10.7493636, 77.02019659999999



**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:** 10.91785, 76.98617



**Risk Type:** Blind Spot  
**Risk Level:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Coordinates:** 10.74936, 77.02020



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 10.74936, 77.02009





**Risk Type:** Blind Spot  
**Risk Level:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Coordinates:** 10.75093, 77.02003



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 10.75015, 76.99326





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 10.74180, 76.98687



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 10.74142, 76.98751



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 10.74060, 76.98758



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 10.73737, 76.98461

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