



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### IOCL Coimbatore Terminal to Gounder And Co

#### 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**

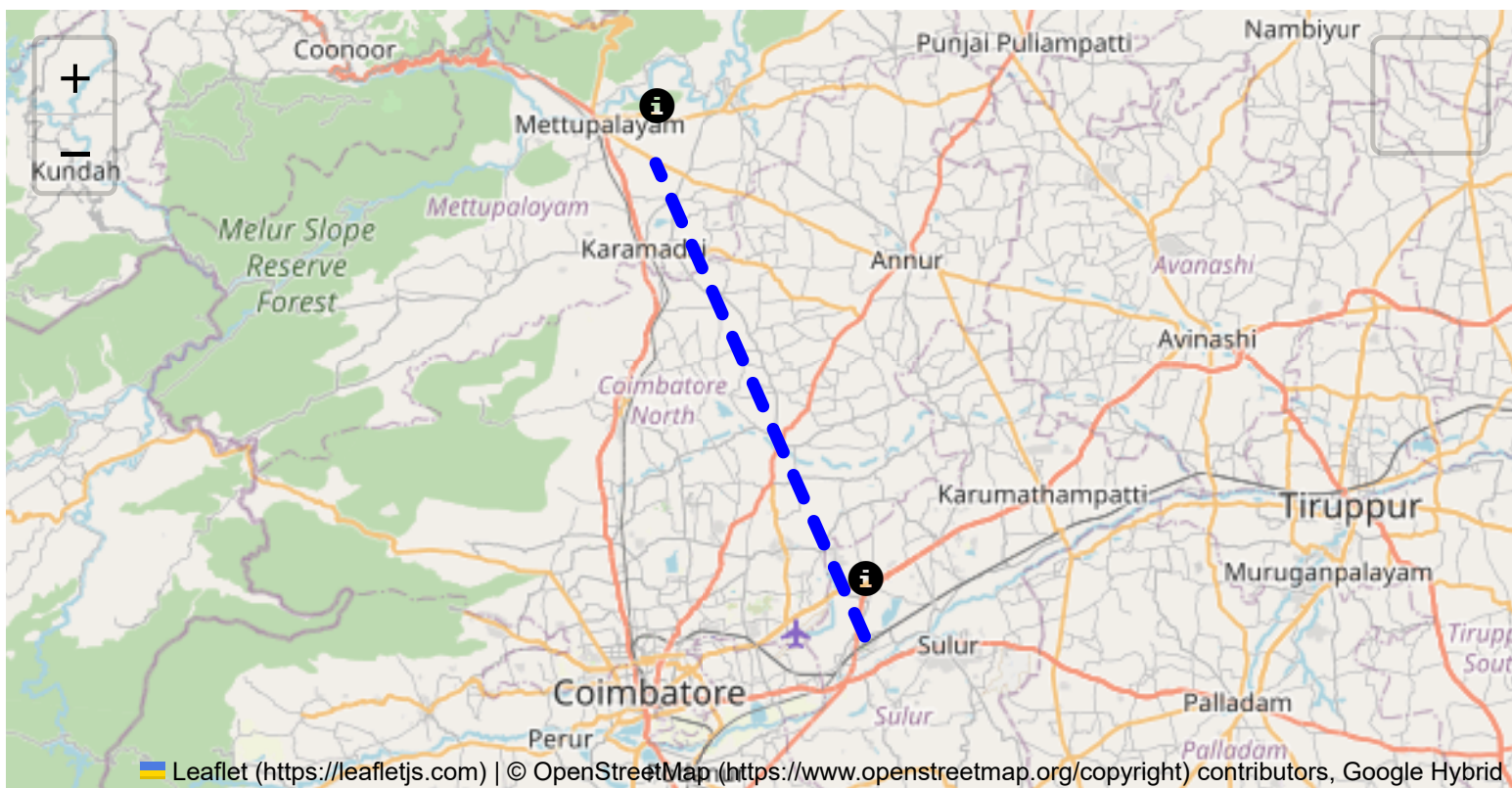
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

## **Journey Risk Mitigation**

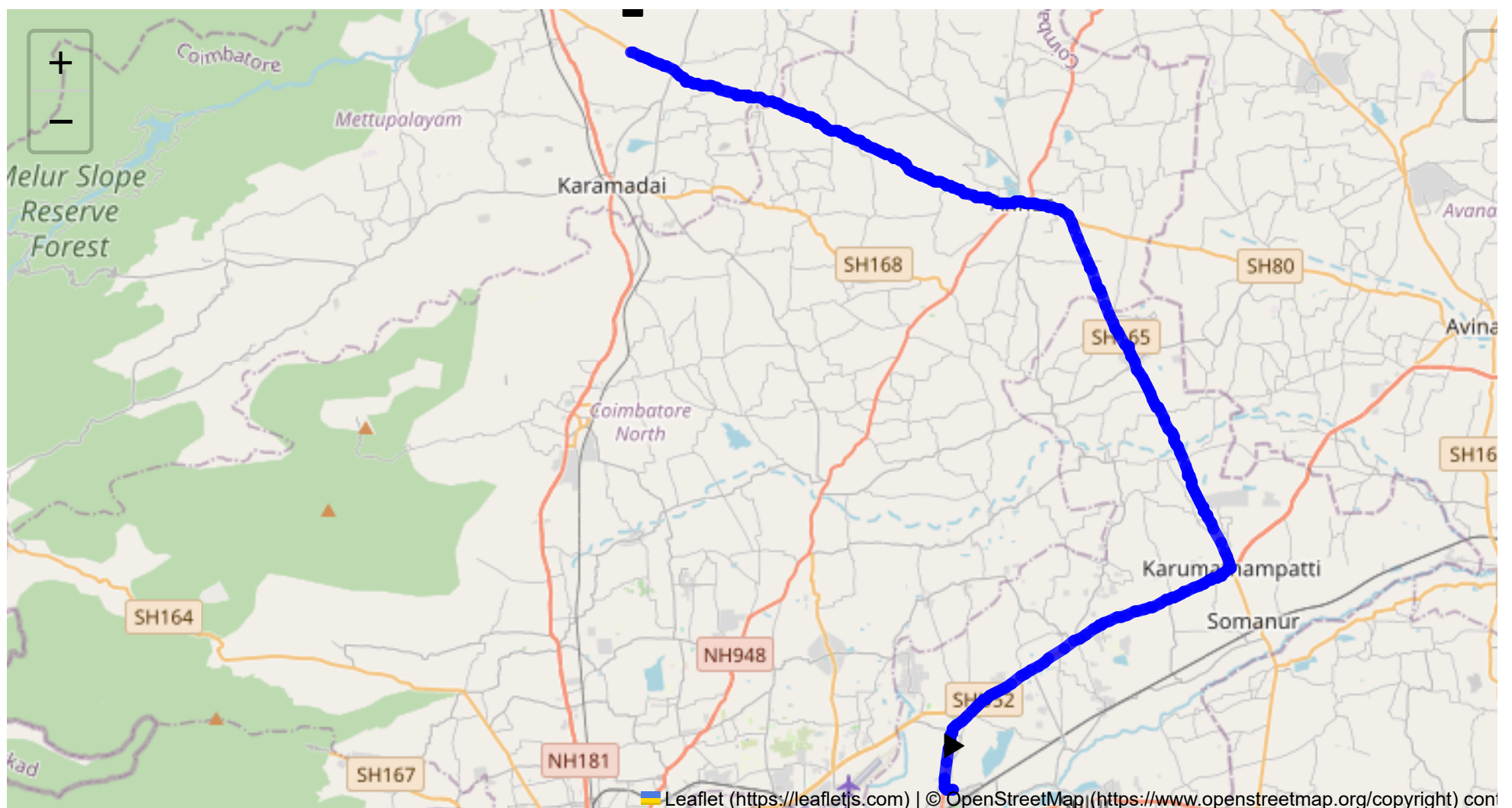
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 48.14 km**  
**Estimated Duration: 1.0 hours**  
**Adjusted Duration (Heavy Vehicle): 1.3 hours**  
**Start: (11.0315, 77.0797)**  
**End: (11.28518, 76.96657)**



## Welcome to the Journey Risk Management Study

### Route Analysis: Athappagundenpudur to Jadayampalayam

#### 1. Overview of the Route Map

The route from Athappagundenpudur to Jadayampalayam covers approximately 48.14 kilometers. It primarily involves traveling on local and regional roads in Tamil Nadu, including state highways and rural

routes.

## 2. Typical Weather Conditions

- **Monsoon Season (June to September):** Heavy rainfall can lead to waterlogging and slippery road conditions. Flash flooding in rural areas is a possibility.
- **Summer Season (April to June):** High temperatures may cause road surfaces to degrade, potentially leading to increased tire wear.
- **Winter Season (November to February):** Generally dry and mild weather, providing more favorable driving conditions.

## 3. Traffic Patterns

- **Peak Hours:** Mornings (7:00 AM - 10:00 AM) and evenings (5:00 PM - 8:00 PM).
- **Congestion-Prone Areas:** Near Coimbatore's city limits and major intersections heading into Mettupalayam and Annur.

## 4. Road Quality and Infrastructure

- **Road Conditions:** Generally good on state highways, but rural roads may have potholes and uneven surfaces.
- **Signage and Lighting:** Adequate on highways, limited in rural areas which increases risk during night travel.

## 5. Alternative Routes for Emergencies

- **Via NH 181:** If primary routes become impassable, divert to nearby NH 181 through Coimbatore which connects back to major roads towards Jadayampalayam.
- **Rural Alternatives:** Use local roads to bypass if state highways are blocked, but note that these might be narrower and less maintained.

## 6. Local Regulations

- **Hazardous Material Transport:** Requires special permits and adherence to safety protocols such as signage and documentation.
- **Time Restrictions:** Heavy vehicles might face restrictions during peak hours in dense urban areas.

## 7. Historical Incidents

- **Accidents:** Occasional incidents involving heavy vehicles due to narrow roads and sharp turns.
- **Material Spills:** Limited documented instances, but vigilance is advised given possible road surface degradation.

## 8. Environmental Considerations



- **Sensitive Areas:** Proximity to agricultural fields and small water bodies. Avoid spills and emissions, especially near these zones.
- **Wildlife Crossings:** Some rural stretches may have wildlife activity.

## 9. Communication Coverage

- **Service Availability:** Major telecom providers cover the main route, but expect potential coverage issues in remote rural areas, particularly away from highways.

## 10. Estimated Emergency Response Times

- **Urban Segments:** 15-30 minutes due to proximity of services.
- **Rural Segments:** 30-60 minutes depending on accessibility and road conditions.

## 11. Overall Summary of Risk Assessment

The route involves moderate risk mainly due to potential weather impacts, rural road conditions, and limited emergency response capabilities in certain segments. Travel should be planned with contingencies for communications and considerations for alternative routes. Compliance with local regulations and awareness of peak traffic patterns will mitigate some risks associated with transporting hazardous materials.

### Recommendations:

- Plan travel avoiding peak hours and under adverse weather conditions.
- Proactively check for road updates and ensure robust communication equipment to combat possible dead zones.
- Emergency preparedness must include an understanding of local facilities and their response times.

## Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	High	11.03211, 77.07640	15 KM/Hr
1	Turn	Medium	11.10499, 77.17299	30 KM/Hr
2	Turn	Medium	11.10527, 77.17318	30 KM/Hr
3	Turn	High	11.10777, 77.17700	15 KM/Hr
4	Turn	Medium	11.22872, 77.12009	30 KM/Hr
5	Turn	Medium	11.25609, 77.04276	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
5	hospital	Government Hospital, Annur	11.2325, 77.102249	30 km/h	Medium
6	hospital	NM Hospital	11.23271, 77.10187	30 km/h	Medium
7	hospital	Shanthi Medical Foundation	11.232428, 77.1016701	30 km/h	Medium
8	hospital	R.G. Hospital	11.23188, 77.100705	30 km/h	Medium
9	police	Annur Police Station	11.2315485, 77.1014321	30 km/h	Medium

## Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	college	PSG Institute of Technology and Applied Research	11.0677118, 77.0945744	30 km/h	Medium
2	school	GRD-CPF Matriculation Higher Secondary School	11.0610217, 77.0933504	30 km/h	Medium
3	school	M. Nanjappa Chettiar Matriculation Hr. Sec. School	11.0715394, 77.1039133	30 km/h	Medium
4	marketplace	Annur saturday market (weekly market)	11.2349165, 77.1028197	30 km/h	Medium
10	school	St. Mary's Convent Matriculation Higher Secondary School	11.2296044, 77.0928116	30 km/h	Medium
11	college	Shri Kumaran College of Arts and Science	11.2740813, 76.982175	30 km/h	Medium
12	marketplace	New Gandhi Maidhanam	11.2854945, 76.9683759	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:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.10499, 77.17299





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

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