



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Shri Siddi Vinayaka 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

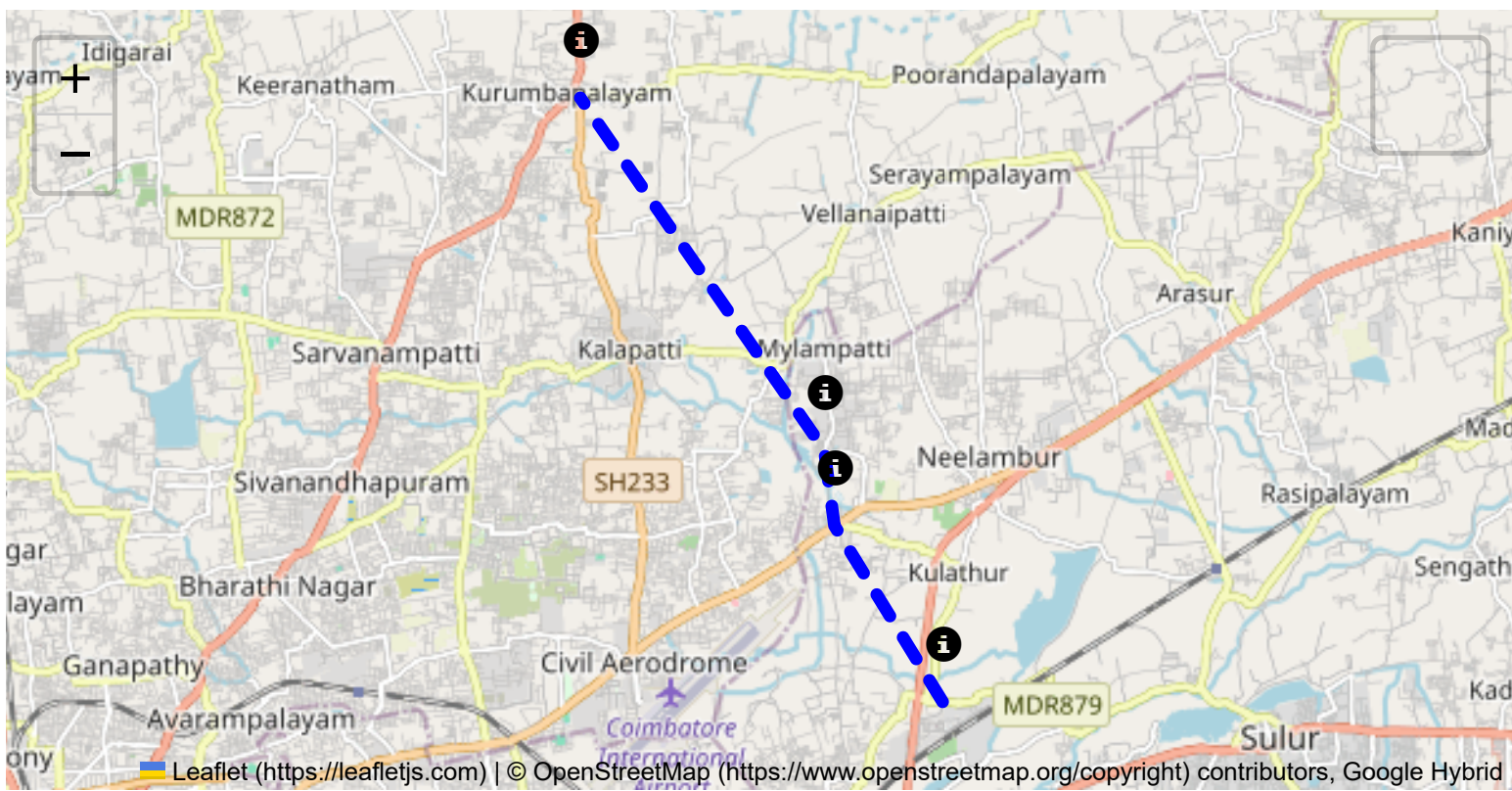
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

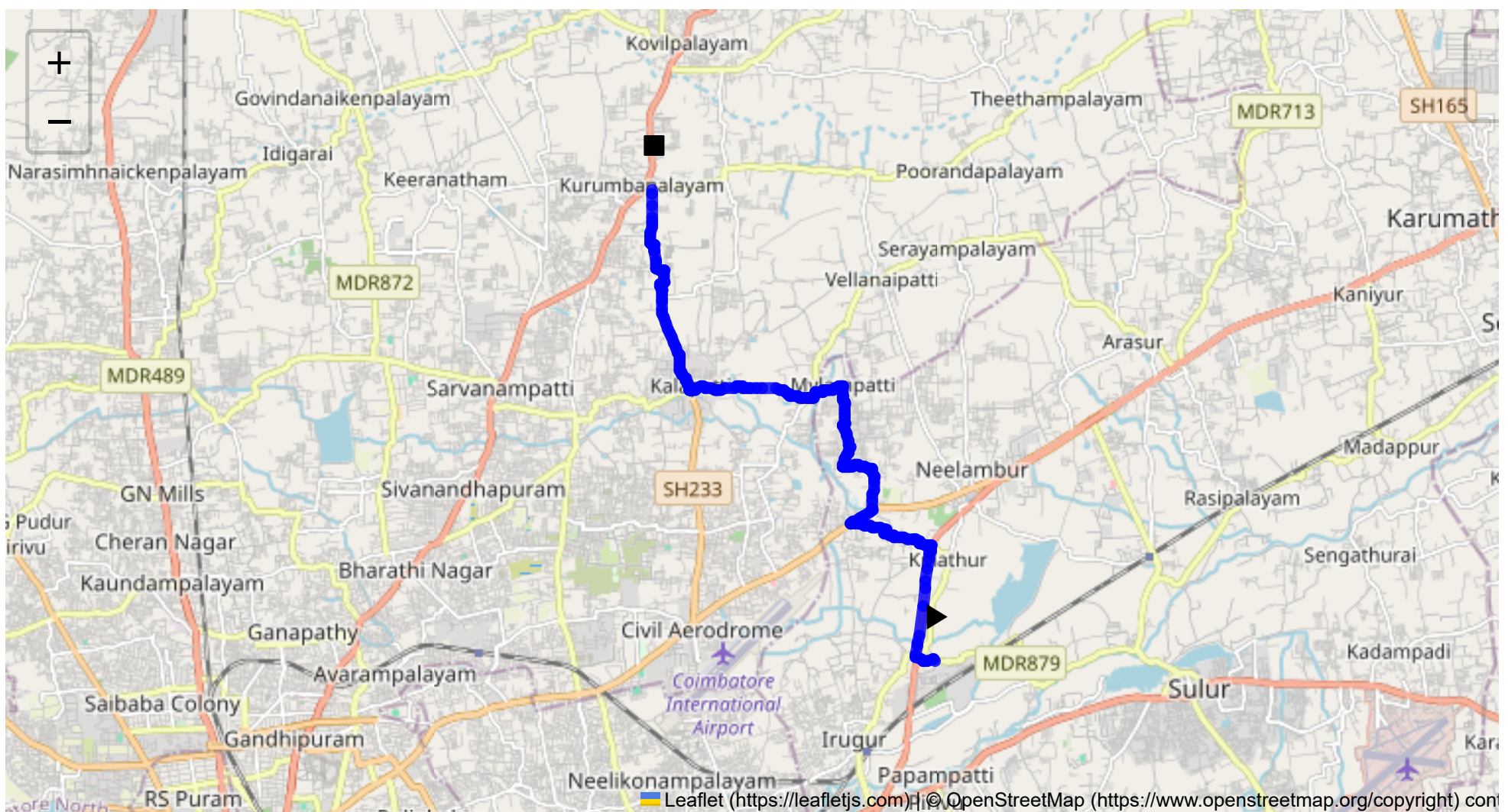
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 14.99 km
Estimated Duration: 0.5 hours
Adjusted Duration (Heavy Vehicle): 0.6 hours
Start: (11.0315, 77.0797)
End: (11.112479, 77.030389)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Athappagoundenpudur to Kurumbapalayam SSKulam, via Chinniyampalayam and GEM Nagar, spans approximately 14.99 kilometers. It travels through a mix of rural and suburban regions and is part of Coimbatore, Tamil Nadu's extensive road network.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The area experiences a tropical climate with high temperatures, especially during the summer months from March to May, which can affect road conditions due to heat. Monsoon season from June to September can lead to heavy rainfall, potentially causing flooding in low-lying areas and making roads slippery.

3. Analysis of Traffic Patterns

- **Peak Hours:** Typically between 8:00-10:00 AM and 5:00-7:00 PM.
- **Congestion-Prone Areas:** Notably around Chinniyampalayam, due to its proximity to educational institutions and markets, contributing to local traffic jams.

4. Assessment of Road Quality and Infrastructure

The roads vary in quality:

- **Major Roads:** Generally well-maintained but can have occasional potholes or uneven surfaces.
- **Rural Sections:** May lack adequate lighting and have narrower lanes, which can be challenging for heavy vehicles to navigate safely.

5. Suggestions for Alternative Routes for Emergencies

- An alternative route could bypass Chinniyampalayam via local streets to mitigate congestion.
- For severe weather conditions, utilizing major highways around the periphery of Coimbatore may be advisable, albeit longer.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transportation of hazardous materials in Tamil Nadu is subject to compliance with state regulations, often requiring specific permits, adherence to designated routes, and restrictions during certain hours to minimize risk to the population.

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

While systematic historical data on specific incidents along this precise route may be limited, Coimbatore has reported accidents due to over-speeding and overloading of trucks across other regions. Awareness and adherence to safety regulations can mitigate risks.

8. Environmental Considerations and Sensitive Areas

- There are limited environmentally-sensitive regions directly on this route, but proximity to residential and educational zones demands cautious driving and adherence to noise and pollution controls.

- Awareness of wildlife crossings in rural outskirts is advisable, particularly during nocturnal hours.

9. Analysis of Communication Coverage

Majority of the route has satisfactory mobile network coverage; however, certain rural stretches could potentially act as dead zones. It is advisable to have communication devices that can operate on multiple networks or satellite support.

10. Estimated Emergency Response Times

- **Urban Sections (e.g., near Chinniyampalayam):** Emergency services can typically respond within 15 to 30 minutes.
- **Rural Sections:** Response times may extend to 30-45 minutes due to lower accessibility.

11. Overall Summary of Risk Assessment

The overall risk on this route is moderate, primarily due to weather implications, potential congestion, and rural road challenges. Mitigative strategies include strategic planning of travel times to avoid peak hours, continual monitoring of weather forecasts, prioritizing regular vehicle maintenance, and ensuring adherence to local regulations for hazardous material transport.

Providing drivers with comprehensive training focused on navigating specific conditions prevalent along this route, especially safe practice techniques during monsoon and keeping emergency contact ready, will greatly reduce operational risks.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	11.07800, 77.03707	15 KM/Hr
1	U-Turn	High	11.0549503, 77.0650284	10 KM/Hr
2	Turn	High	11.03211, 77.07640	15 KM/Hr
3	Turn	High	11.05129, 77.07919	15 KM/Hr
4	Turn	Medium	11.05181, 77.07696	30 KM/Hr
5	Turn	High	11.05222, 77.07690	15 KM/Hr
6	Turn	Medium	11.05343, 77.07106	30 KM/Hr
7	Turn	Medium	11.05351, 77.07099	30 KM/Hr
8	Turn	Medium	11.05411, 77.07097	30 KM/Hr
9	Turn	High	11.05529, 77.06566	15 KM/Hr
10	Turn	High	11.05495, 77.06503	15 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
11	Blind Spot	Blind Spot	11.05507, 77.06496	10 KM/Hr
12	Turn	High	11.05751, 77.06875	15 KM/Hr
13	Turn	High	11.06437, 77.06865	15 KM/Hr
14	Turn	Medium	11.06490, 77.06371	30 KM/Hr
15	Turn	Medium	11.06492, 77.06369	30 KM/Hr
16	Turn	Medium	11.06501, 77.06366	30 KM/Hr
17	Turn	Medium	11.07191, 77.06366	30 KM/Hr
18	Turn	Medium	11.07201, 77.06366	30 KM/Hr
19	Turn	Medium	11.07209, 77.06370	30 KM/Hr
20	Turn	Medium	11.07225, 77.06398	30 KM/Hr
21	Blind Spot	Blind Spot	11.07865, 77.06377	10 KM/Hr
22	Turn	High	11.07773, 77.05884	15 KM/Hr
23	Turn	Medium	11.09846, 77.03245	30 KM/Hr
24	Turn	Medium	11.09883, 77.03091	30 KM/Hr
25	Turn	Medium	11.10295, 77.03049	30 KM/Hr
26	Turn	Medium	11.10331, 77.02984	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinniampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinniampalayam Venkateshwara Hospital	11.0545152, 77.0652106	30 km/h	Medium
3	hospital	R V Hospital, Coimbatore	11.0546916, 77.0639178	30 km/h	Medium
4	hospital	Kamalaprakasam, Kalapatti	11.0778, 77.035681	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
2	school	Government school	11.0554435, 77.0653927	30 km/h	Medium
5	college	KV Institute of Management and Information Studies	11.1050789, 77.0276575	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07800, 77.03707



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.0549503, 77.0650284



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: 11.05129, 77.07919



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05181, 77.07696



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05222, 77.07690



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05343, 77.07106



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05351, 77.07099



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05411, 77.07097



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05529, 77.06566



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05495, 77.06503



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.05507, 77.06496



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05751, 77.06875



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06437, 77.06865



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06490, 77.06371



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06492, 77.06369



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06501, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07191, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07201, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07209, 77.06370



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07225, 77.06398



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.07865, 77.06377



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07773, 77.05884



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.09846, 77.03245



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.09883, 77.03091



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.10295, 77.03049



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.10331, 77.02984
