



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to NGP Estate Motors 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

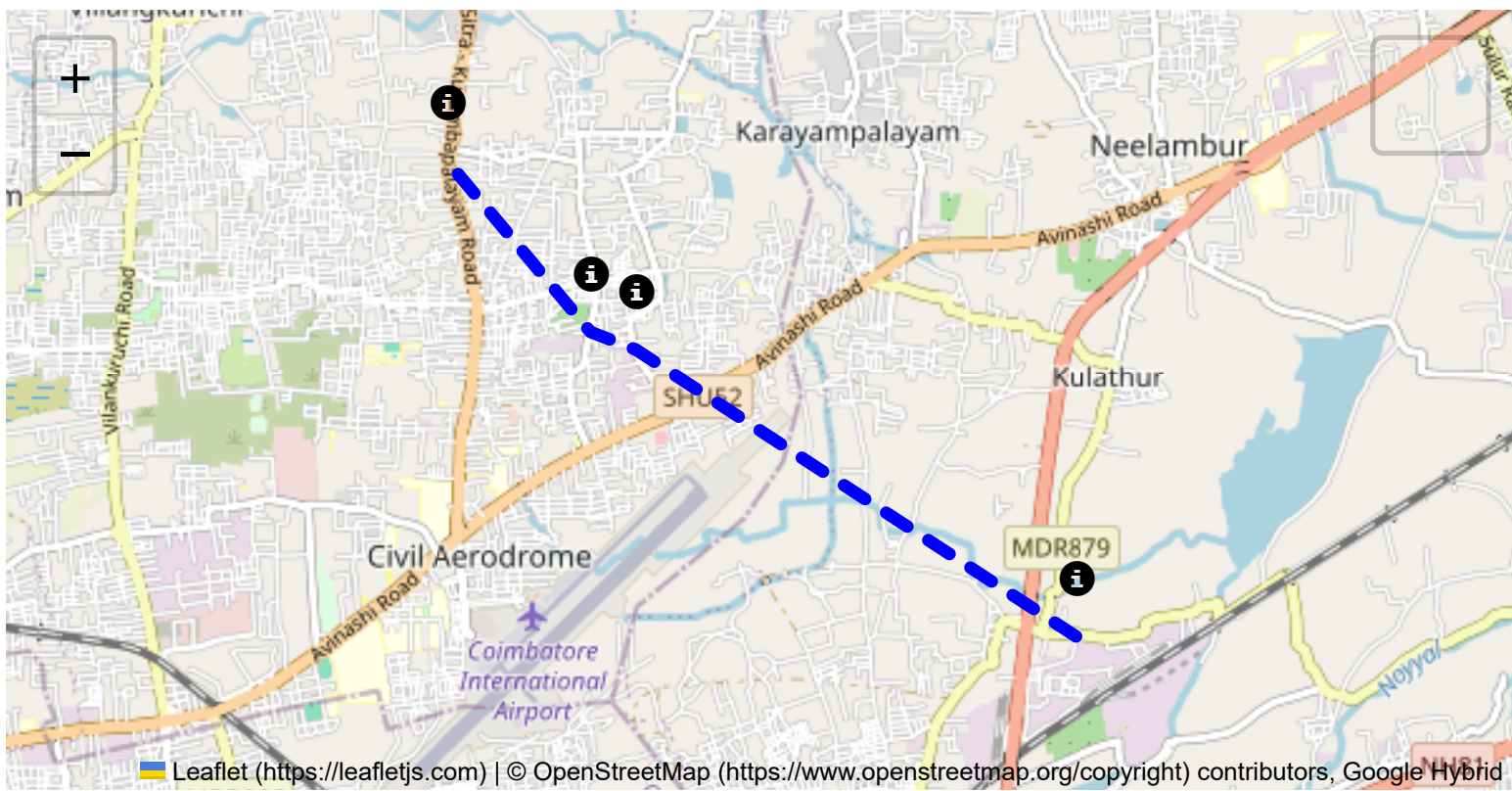
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

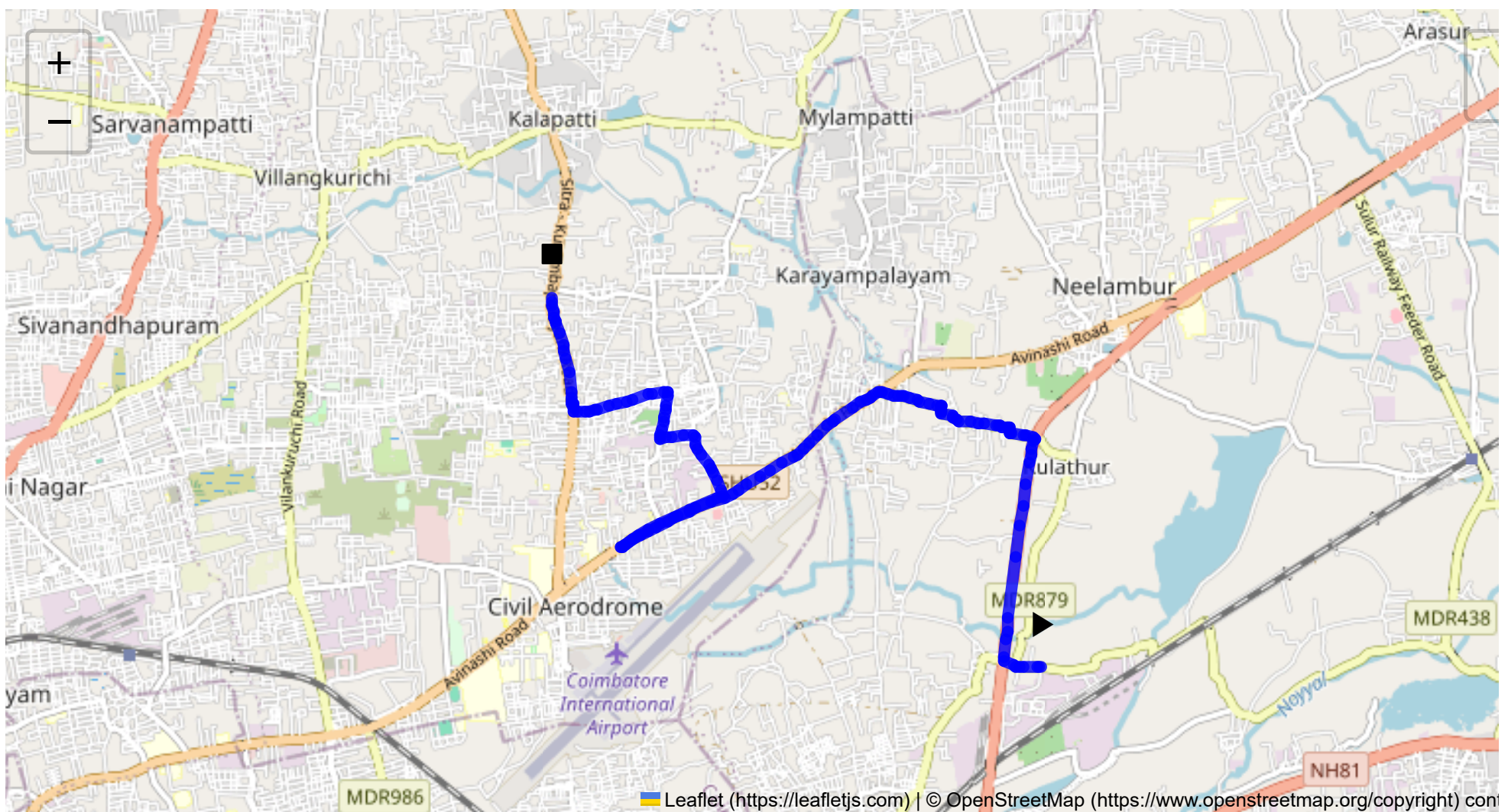
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 11.62 km
Estimated Duration: 0.4 hours
Adjusted Duration (Heavy Vehicle): 0.5 hours
Start: (11.0315, 77.0797)
End: (11.063326, 77.036758)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map: The route originates from Athappagoundenpudur in Coimbatore and travels towards Sharp Nagar, covering approximately 11.62 kilometers. The journey includes key waypoints such as Thottipalayam Road and Periyar Nagar. This urban route runs through both industrial and residential areas.

2. Typical Weather Conditions and Potential Weather-Related Hazards: Coimbatore generally experiences a tropical wet and dry climate with moderate temperature variations. Heavy rainfall can occur during the monsoon months (June to September and October to November), leading to potential flooding and poor visibility conditions. The months from December to February are dry and less humid.

3. Analysis of Traffic Patterns: Traffic congestion is a significant concern, especially during peak hours from 8:00 am to 10:30 am and 5:30 pm to 8:00 pm. The areas near Thottipalayam Road and Periyar Nagar typically experience delays due to daily commuting traffic.

4. Assessment of Road Quality and Infrastructure: Road conditions vary; some sections are well-maintained, while others have potholes and uneven surfaces. The infrastructure around industrial areas may see increased wear and tear due to heavy vehicle usage.

5. Suggestions for Alternative Routes: In case of emergency or roadblocks, utilizing local bypass routes around Villankurichi can mitigate delays. However, it's essential to monitor local traffic reports for real-time updates.

6. Summary of Local Regulations Affecting Hazardous Material Transport: Transporting hazardous materials requires adherence to Tamil Nadu's regulations, including proper vehicle signage, driver certifications, and environmental precautions. Time restrictions may apply, particularly during peak hours in residential areas.

7. Overview of Historical Incidents: Coimbatore has experienced incidents involving heavy vehicles due to brake failures and overturning on sharp curves. Vigilance in maintaining vehicle safety standards and awareness of road contours is crucial.

8. Environmental Considerations and Sensitive Areas: Routes traverse residential zones with schools and hospitals, which require cautious driving to mitigate risk to pedestrians. Noise and pollution control measures are mandatory.

9. Analysis of Communication Coverage: Overall, mobile network coverage is consistently strong along the route, with occasional weak zones near industrial outskirts. Drivers should be prepared for brief communication delays.

10. Estimated Emergency Response Times: Urban areas in Coimbatore typically have quicker emergency response times of approximately 10-15 minutes. However, response can vary based on traffic conditions and proximity to emergency services.

12. Overall Summary of Risk Assessment: This route entails moderate risk due to urban traffic, road conditions, and environmental factors. Adequate preparation, adherence to local regulations, and situational awareness can minimize potential hazards. Heavy vehicle operators should remain cautious during peak hours, inclement weather, and while navigating densely populated areas. Regular vehicle maintenance and emergency preparedness are key to safe transport.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	11.0419501, 77.04308759999999	10 KM/Hr
1	Turn	High	11.03211, 77.07640	15 KM/Hr
2	Turn	High	11.05129, 77.07919	15 KM/Hr
3	Turn	Medium	11.05181, 77.07696	30 KM/Hr
4	Turn	High	11.05222, 77.07690	15 KM/Hr
5	Turn	Medium	11.05343, 77.07106	30 KM/Hr
6	Turn	Medium	11.05351, 77.07099	30 KM/Hr
7	Turn	Medium	11.05411, 77.07097	30 KM/Hr
8	Turn	High	11.05529, 77.06566	15 KM/Hr
9	Turn	High	11.04195, 77.04309	15 KM/Hr
10	Blind Spot	Blind Spot	11.04203, 77.04303	10 KM/Hr
11	Blind Spot	Blind Spot	11.04636, 77.05199	10 KM/Hr
12	Turn	High	11.05158, 77.04943	15 KM/Hr
13	Blind Spot	Blind Spot	11.05130, 77.04643	10 KM/Hr
14	Blind Spot	Blind Spot	11.05528, 77.04708	10 KM/Hr
15	Turn	High	11.05356, 77.03890	15 KM/Hr
16	Turn	Medium	11.05427, 77.03879	30 KM/Hr
17	Turn	Medium	11.05431, 77.03881	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
5	hospital	Kovai Medical Centre,Coimbatore	11.0426077, 77.0406074	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
4	school	Sri Vivekananda Matriculation Higher Secondary School	11.054695, 77.0572126	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.0419501, 77.04308759999999



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: 11.04195, 77.04309



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.04203, 77.04303



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.04636, 77.05199



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05158, 77.04943



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.05130, 77.04643



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.05528, 77.04708



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05356, 77.03890



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05427, 77.03879



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05431, 77.03881