



JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal To SRI GANESH LATCHUMI TRADERS

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

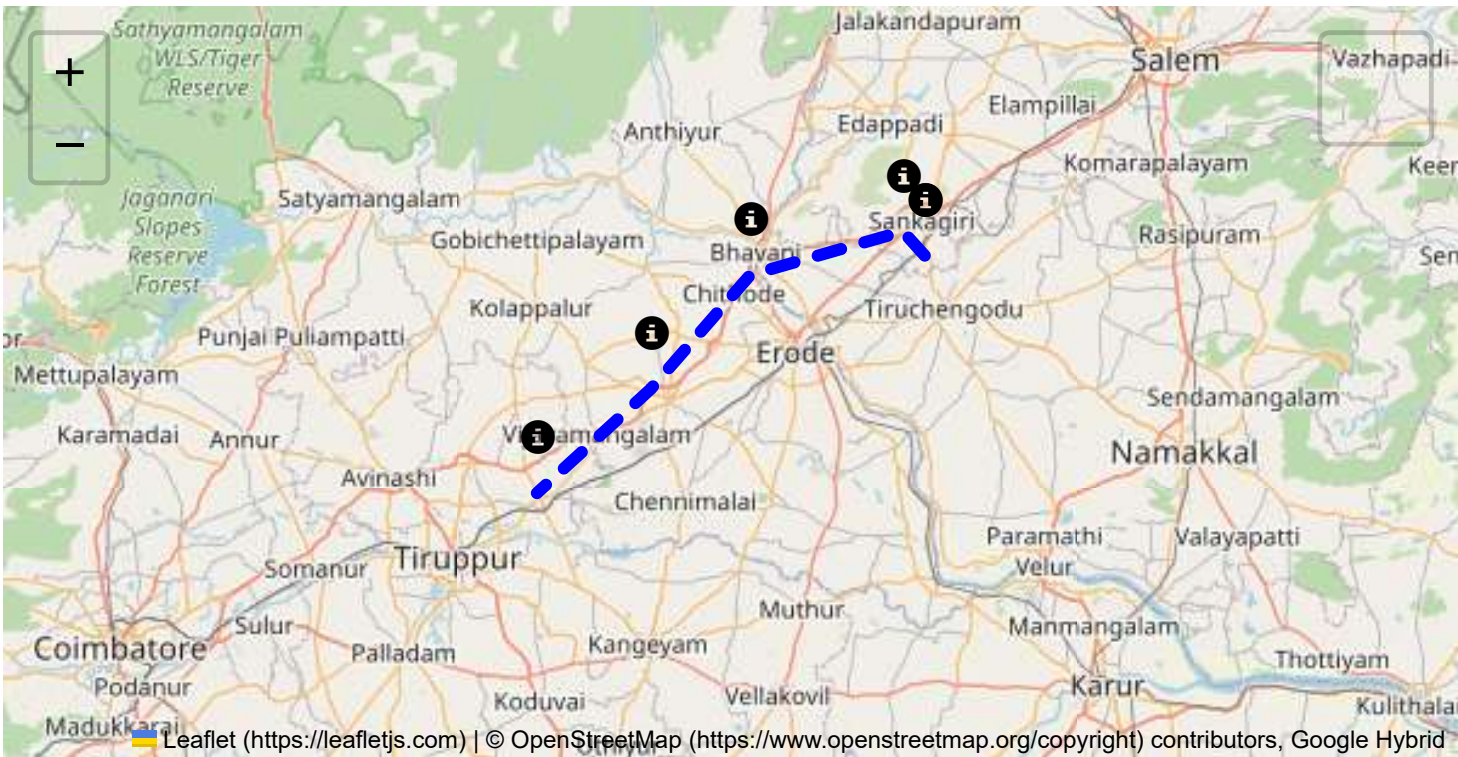
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

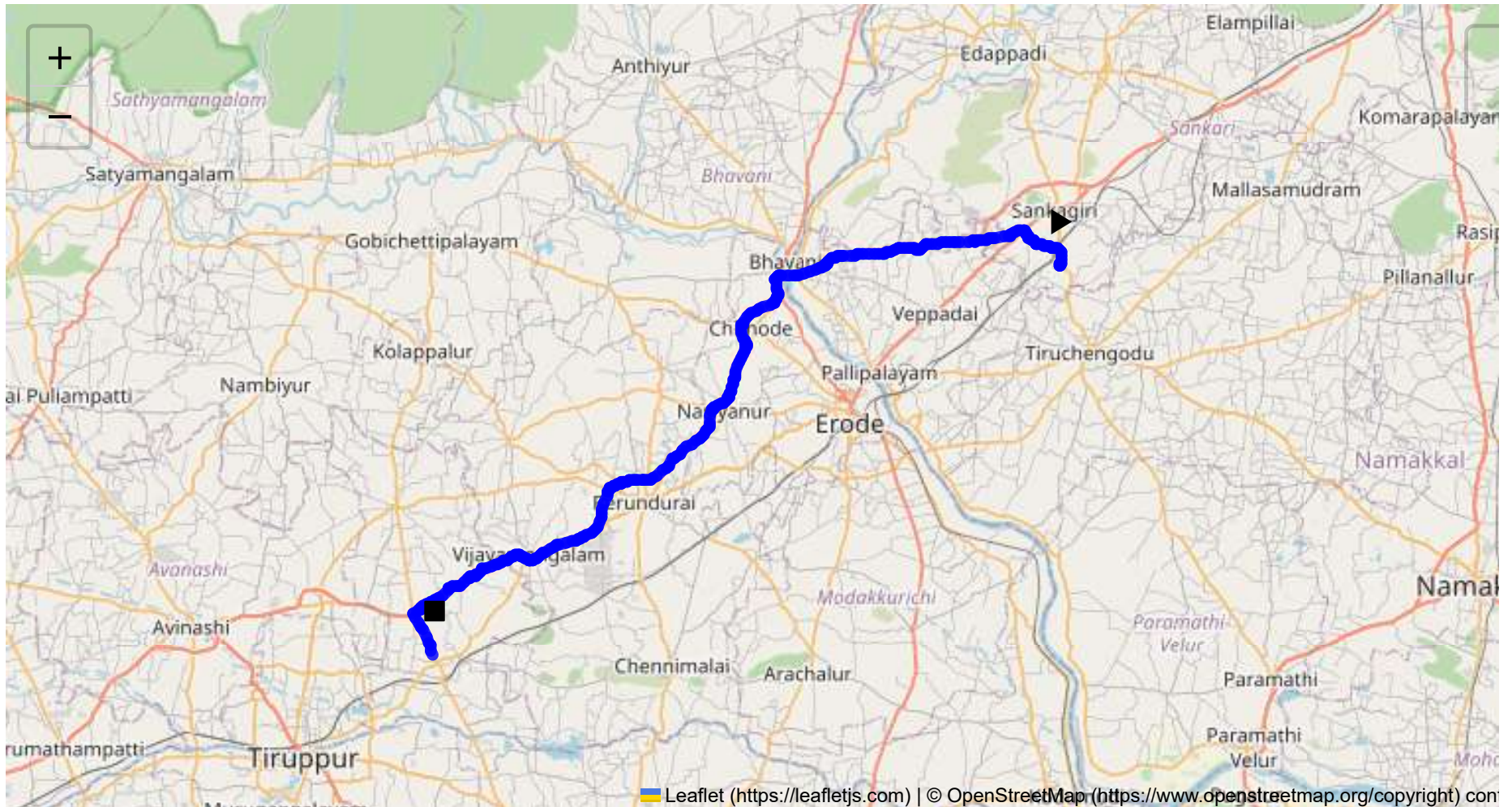
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 70.54 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.7 hours
Start: (11.4381, 77.8734)
End: (11.1722787, 77.4356965)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route spans approximately 70.54 kilometers and primarily includes the National Highway (NH) and the State Highway (SH 79A). Starting from Sangagiri, the route makes its way through Suriyampalayam and Thiruvengadam Palayam Pudhur before arriving at Poosaripalayam. This route is a mix of rural and semi-urban areas with varying road conditions.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The region typically experiences a tropical climate with dry, hot summers and mild winters. The monsoon season, from June to September, can lead to heavy rains, which pose risks of flooding, especially in low-lying areas. Fog can also be an issue, particularly in early mornings during December and January, reducing visibility.

3. Analysis of Traffic Patterns

Traffic in this region is moderate. Peak congestion typically occurs during morning hours (7:00 - 9:30 AM) and evening hours (5:00 - 8:00 PM). Areas near major townships and markets, particularly around Service Rd in Suriyampalayam, experience higher congestion.

4. Assessment of Road Quality and Infrastructure

The route primarily consists of two-lane roads. The NH and SH are relatively well-maintained. However, roads in rural areas may have uneven surfaces and potholes, especially after the monsoon season, posing challenges for heavy vehicles.

5. Suggestions for Alternative Routes for Emergencies

- For immediate detours, local roads branching from the main highway can be used, though they are typically narrower and less maintained.
- In case of severe congestion or accidents, using NH-544 towards Erode and then connecting back towards the destination may offer a viable alternative.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transportation of hazardous materials is generally restricted during peak hours to avoid exacerbating traffic conditions. Vehicles carrying such materials must display appropriate placards and be accompanied by necessary documentation.

7. Overview of Historical Incidents

Historically, the region has reported few incidents involving heavy vehicles. Occasional accidents have occurred, mostly due to driver error or road conditions post-monsoon.

8. Environmental Considerations and Sensitive Areas

The route passes through agricultural zones, where care must be taken to avoid contamination of water bodies and farmlands. Noise pollution regulations may apply in residential areas along the route.

9. Analysis of Communication Coverage

Communication infrastructure is generally reliable along the NH and SH sections, but in rural stretches, there might be occasional dead zones. Ensuring a means of redundant communication is advisable for such stretches.

10. Estimated Emergency Response Times

- Urban stretches: approximately 15-20 minutes response time for emergency services.
- Rural stretches: response time can extend to 30-45 minutes, depending on road conditions and weather.

12. Overall Summary of Risk Assessment

The route presents a moderate-risk level for heavy vehicles carrying hazardous materials. Key risk factors include potential weather disruptions, road surface quality during certain seasons, moderate to high traffic congestion near towns, and communication dead zones in rural stretches. By ensuring compliance

with local regulations and planning for contingencies, the risks can be effectively managed. Proper vehicle maintenance and driver preparedness, especially during adverse weather, are essential for safe transit.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	Medium	11.43822, 77.87348	30 KM/Hr
1	Turn	High	11.43961, 77.87341	15 KM/Hr
2	Turn	High	11.44029, 77.87544	15 KM/Hr
3	Turn	High	11.44893, 77.87413	15 KM/Hr
4	Turn	Medium	11.45127, 77.86734	30 KM/Hr
5	Turn	Medium	11.45354, 77.85798	30 KM/Hr
6	Turn	High	11.45350, 77.85700	15 KM/Hr
7	Turn	Medium	11.45845, 77.85141	30 KM/Hr
8	Turn	High	11.46303, 77.84945	15 KM/Hr
9	Turn	Medium	11.46317, 77.84906	30 KM/Hr
10	Turn	Medium	11.29141, 77.58266	30 KM/Hr
11	Turn	Medium	11.29012, 77.56873	30 KM/Hr
12	Turn	Medium	11.28994, 77.56861	30 KM/Hr
13	Turn	High	11.20358, 77.42732	15 KM/Hr
14	Turn	High	11.20335, 77.42730	15 KM/Hr
15	Turn	High	11.19962, 77.42240	15 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
3	hospital	Government Hospital	11.4525596, 77.7749426	30 km/h	Medium
4	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	30 km/h	Medium
5	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	30 km/h	Medium
6	hospital	J.K.K. Trust Hospital	11.4445841, 77.7307962	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
7	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	30 km/h	Medium
9	hospital	Thanish Siddha Hospital	11.430003, 77.674964	30 km/h	Medium
10	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	30 km/h	Medium
11	clinic	G.K Clinic	11.4297244, 77.6749715	30 km/h	Medium
12	clinic	Harshitha Clinic	11.4313207, 77.674718	30 km/h	Medium
13	clinic	Erode Cancer Centre	11.3732, 77.649152	30 km/h	Medium
15	hospital	Irt Hospital	11.2803603, 77.5644118	30 km/h	Medium
17	hospital	Gen Siddha Hospital	11.2375033, 77.5059797	30 km/h	Medium
18	hospital	Vijayamangalm Government Hospital	11.2382827, 77.501687	30 km/h	Medium
19	hospital	Dr. N Viswanathan Hospital	11.2412783, 77.5005502	30 km/h	Medium
20	clinic	P.M. Clinic	11.2281078, 77.4647296	30 km/h	Medium
22	hospital	Sri Renu Hospital	11.1990225, 77.4219937	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
0	school	KRP Matric. Hr. Sec School	11.4546193, 77.8142445	30 km/h	Medium
1	college	Vivekanandha Engineering College	11.4589312, 77.7899284	30 km/h	Medium
2	marketplace	Monday market	11.452863, 77.775989	30 km/h	Medium
8	school	SSM Matriculation Higher Secondary School	11.4321653, 77.6880046	30 km/h	Medium
14	college	Government polytechnic college	11.2907053, 77.5698726	30 km/h	Medium
16	school	Bharathi Matriculation School	11.2494613, 77.5307028	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
21	marketplace	Weekly Market (sandhai)	11.2287229, 77.4646676	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.44029, 77.87544



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.44893, 77.87413



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.45127, 77.86734



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.45354, 77.85798



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.45350, 77.85700



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.45845, 77.85141



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.46303, 77.84945



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.46317, 77.84906



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.29141, 77.58266



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.29012, 77.56873



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.28994, 77.56861



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.20358, 77.42732



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.20335, 77.42730



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.19962, 77.42240
