



JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal To SHANTHI 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

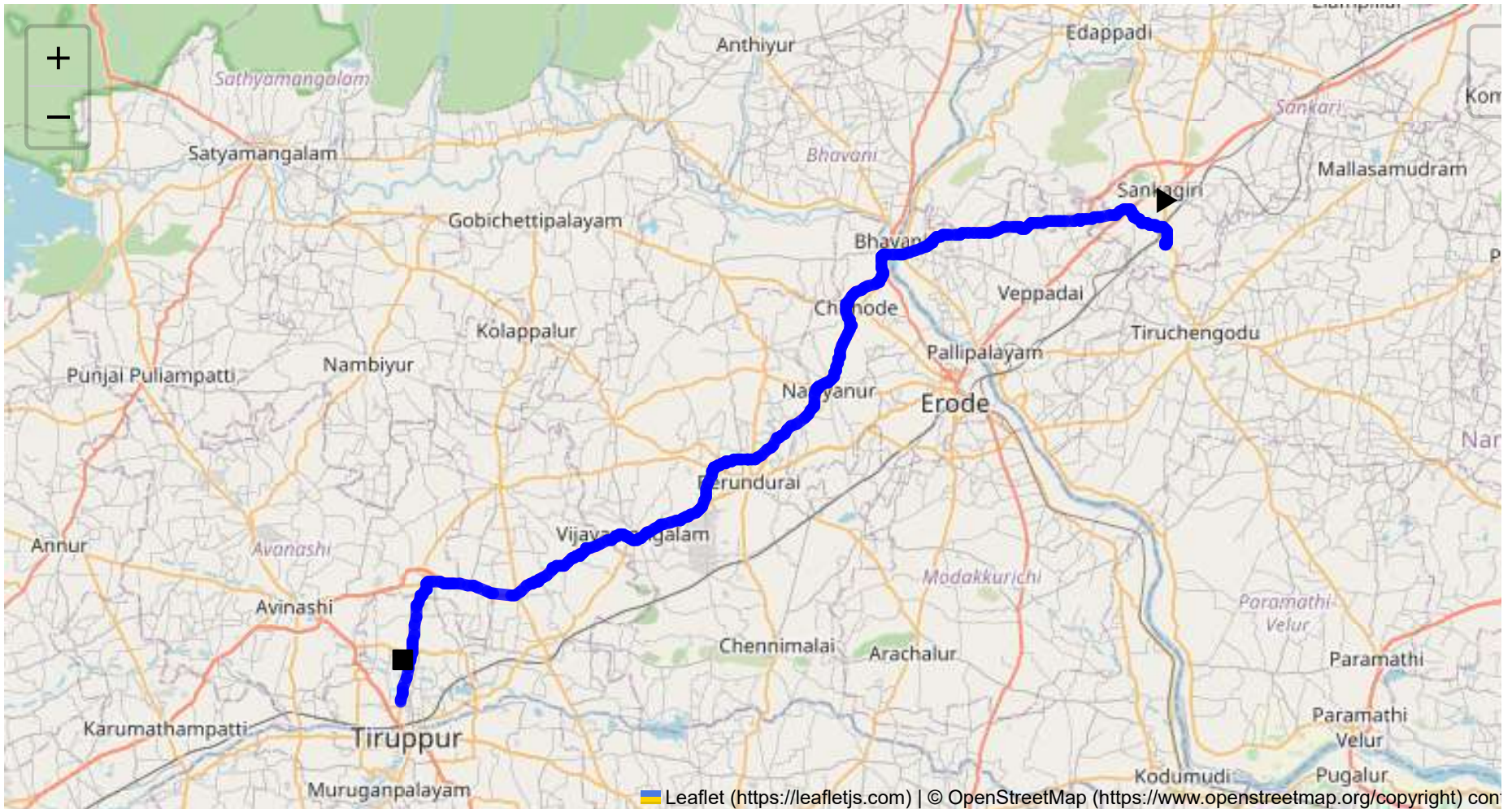
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 83.69 km
Estimated Duration: 1.7 hours
Adjusted Duration (Heavy Vehicle): 2.1 hours
Start: (11.4381, 77.8734)
End: (11.125178, 77.341179)



Welcome to the Journey Risk Management Study

Route Overview:

The route starts from Sangagiri in Tamil Nadu and proceeds through NH544 to reach Tiruppur. Major check-points on this route include Sangagiri on SH 79A, Lakshmi Nagar, and Perumanallur. The total distance is approximately 83.69 kilometers, typically taking 1.67 hours for heavy vehicles carrying hazardous materials.

1. Overview of the Route Map:

- The journey begins at Sangagiri, proceeding on SH 79A, before transitioning to NH544.
- The route then continues through Lakshmi Nagar and Perumanallur, before finally reaching the destination in Tiruppur.

2. Typical Weather Conditions and Potential Hazards:

- Tamil Nadu generally experiences a tropical climate.
- Peak monsoon months (October-November) can cause heavy rainfall, leading to road flooding and poor visibility.
- During summer, high temperatures may affect vehicle components like tires and brakes.
- Drivers should be cautious of fog in the early mornings, particularly during winter months, which could impair visibility.

3. Traffic Patterns:

- Peak traffic hours typically occur between 8-10 AM and 5-8 PM.
- NH544 is known for heavy traffic, especially near urban areas around Perumanallur and Tiruppur.
- Congestion-prone areas include Sangagiri and Tiruppur due to commuter and commercial traffic.

4. Road Quality and Infrastructure:

- SH 79A and NH544 are generally well-maintained, with some areas prone to potholes, especially after rains.
- Adequate signage is available, although some segments near smaller villages might lack lighting and clear markers.

5. Alternative Routes for Emergencies:

- In case of major roadblocks or accidents on NH544, SH 81 or local roads through Erodu may serve as potential alternative routes, though they may add distance and travel time.
- Utilize local roads in majorly congested areas to bypass short sections of NH544.

6. Summary of Local Regulations:

- Transport of hazardous materials requires specific permits, and adherence to speed limits is mandatory.
- Restriction of heavy vehicle movements is often enforced in urban areas during peak hours.

7. Historical Incidents:

- There have been incidents of heavy vehicle overturns on curves in NH544, primarily due to poor visibility and speeding.
- Some spills of hazardous materials have been reported in the past, emphasizing the importance of careful driving and adherence to safety protocols.

8. Environmental Considerations:

- The route crosses agricultural and residential areas where spills could severely impact local ecosystems.
- Noise and air pollution controls are in effect near populated zones like Tiruppur.

9. Communication Coverage:

- Generally good coverage on NH544 and SH 79A; however, rural stretches might experience brief connectivity issues.
- Important to have alternative communication means during emergencies.

10. Emergency Response Times:

- Urban areas like Tiruppur and Perumanallur have faster response capabilities, typically within 20-30 minutes.
- Rural response times could stretch beyond 45 minutes depending on the proximity to emergency services.

11. Overall Summary of Risk Assessment:

- The route is generally safe but requires caution in congested areas and during adverse weather conditions.
- Major risks include traffic congestion, potential for accidents due to poor weather, and incidents caused by road quality issues.
- Proper adherence to traffic regulations and preparedness for emergencies are essential for safe transit.

Recommendations for Truck Drivers:

- Maintain constant communication with the dispatch team especially when traversing known dead zones.
- Anticipate and plan for weather events based on forecasts, adapting driving techniques accordingly.
- Regularly inspect and maintain the vehicle, particularly braking and tire systems, due to potential wear from climatic impacts.
- Reiterate adherence to speed limits and local regulations, especially around populated and environmentally sensitive areas.

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	High	11.45350, 77.85700	15 KM/Hr
6	Turn	Medium	11.45845, 77.85141	30 KM/Hr
7	Turn	High	11.46303, 77.84945	15 KM/Hr
8	Turn	Medium	11.46317, 77.84906	30 KM/Hr
9	Turn	Medium	11.29141, 77.58266	30 KM/Hr
10	Turn	High	11.20728, 77.35914	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
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
23	hospital	Akshitha Hospital- Perumanallur	11.2050424, 77.3584876	30 km/h	Medium
24	hospital	Malarpriya Medical Centre - Tiruppur	11.16584, 77.351437	30 km/h	Medium
26	hospital	Jacob Hospital	11.1645096, 77.3496992	30 km/h	Medium
27	clinic	Sri Dhanvanthri Clinic	11.160539, 77.349578	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
28	hospital	Revathi Charity Trust Hospital	11.1588612, 77.34966	30 km/h	Medium
29	hospital	Sree Saran Medical Centre	11.1488, 77.346725	30 km/h	Medium
30	hospital	Sri Kumaran Hospital, Tiruppur	11.1307528, 77.3412468	30 km/h	Medium
31	hospital	Saayi Prema, Tiruppur	11.1286682, 77.3404616	30 km/h	Medium
32	hospital	Vasan Eye Care Hospital, Tirupur	11.127834, 77.3415747	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
21	marketplace	Weekly Market (sandhai)	11.2287229, 77.4646676	30 km/h	Medium
25	school	Sharadha Vidhyalaya	11.1690521, 77.3485671	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: 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: High

Speed Limit: 15 KM/Hr

Coordinates: 11.20728, 77.35914
