



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO PON NATARAJAN 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

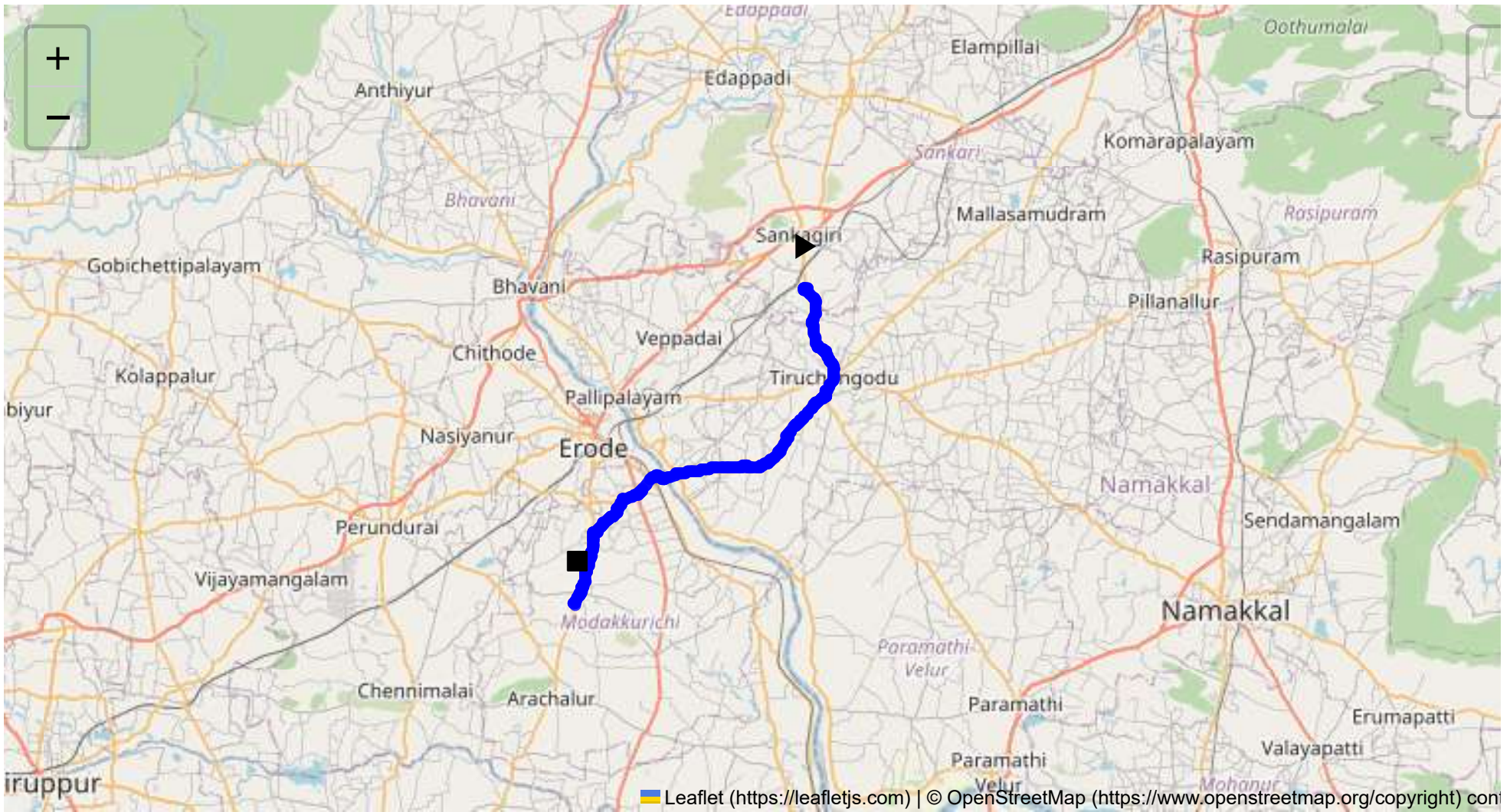
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 38.06 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.2 hours
Start: (11.4381, 77.8734)
End: (11.222776, 77.714288)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
1	Turn	11.43811, 77.87348	15 KM/Hr	0.00 km
2	Turn	11.43961, 77.87341	15 KM/Hr	0.14 km
3	Blind Spot	11.44029, 77.87544	10 KM/Hr	0.32 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
4	Turn	11.39671, 77.88878	15 KM/Hr	5.85 km
0	Roundabout	11.38395, 77.89480	15 KM/Hr	7.46 km
5	Turn	11.37868, 77.89498	15 KM/Hr	7.98 km
6	Turn	11.36604, 77.88887	15 KM/Hr	9.66 km
7	Turn	11.33882, 77.86218	15 KM/Hr	13.80 km
8	Turn	11.30970, 77.76705	15 KM/Hr	25.68 km
9	Turn	11.29490, 77.74685	15 KM/Hr	28.55 km
10	Turn	11.29133, 77.74660	15 KM/Hr	28.94 km
11	Turn	11.28859, 77.74323	15 KM/Hr	29.44 km
12	Turn	11.27558, 77.73107	15 KM/Hr	31.46 km
13	Turn	11.27326, 77.72991	15 KM/Hr	31.78 km
14	Turn	11.27330, 77.72711	15 KM/Hr	32.04 km
15	Turn	11.22378, 77.71384	15 KM/Hr	37.90 km

Emergency Services

	type	name	coordinates	side_of_road
0	hospital	Tiruchengode, Goverment Hospital	11.3903328, 77.8920627	Driver's Side
1	hospital	SPM Medical Centre,Tiruchengode	11.3881331, 77.8931963	Opposite Side
2	hospital	T.C.A Hospital Tiruchengode	11.3791885, 77.8965774	Driver's Side
4	clinic	Kongu Nursing Home	11.3783065, 77.8961134	Driver's Side
5	hospital	Soorya Multispecialty Hospital	11.3786429, 77.8931912	Opposite Side
6	hospital	Tiruchengode Government Hospital	11.37645, 77.89426	Driver's Side
7	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	Opposite Side
8	hospital	Tirukumaran Hospitals	11.3782118, 77.8914933	Opposite Side
9	hospital	Government Hospital	11.2343326, 77.719226	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
3	restaurant	Lijo	11.3805115, 77.8946385	Opposite Side

Welcome to the Journey Risk Management Study

Overview of the Route Map

The route begins at Sangagiri (CVQF+23W) and travels towards Avalpoondurai (6PF7+6P9) with key stops at Puthur, Girls High School in Thondikaradu, Tiruchengode, and Lakkapuram in Erode. This path covers approximately 38 kilometers, taking about an hour for heavy vehicles.

Typical Weather Conditions and Potential Weather-related Hazards

Tamil Nadu generally experiences a tropical climate, with hot summers, a monsoon season, and mild winters. Key weather-related hazards include:

- **Monsoon Season (June to September):** Heavy rainfall can lead to water-logged roads and reduced visibility.
- **Heat:** During peak summer months (March to May), temperatures can rise significantly, affecting vehicle tire pressure and driver alertness.
- **Fog:** Occasional during winter and early mornings, especially in lower-lying areas or near water bodies.

Traffic Patterns

- **Peak Hours:** 8:00 AM - 10:00 AM and 5:00 PM - 7:00 PM. Expect higher congestion near populous areas such as Thondikaradu and Erode.
- **Congestion-prone Areas:** Market areas in Tiruchengode and the entry/exit points to Erode are typically busier.

Assessment of Road Quality and Infrastructure

- **Road Surface:** Variable, with some well-paved sections but others worn, especially in rural areas.
- **Infrastructure:** Adequate signage is present, but lighting in some stretches, especially rural, is poor.
- **Bridges/Overpasses:** Generally safe but inspect bridges after heavy rainfalls for flood damage.

Suggestions for Alternative Routes for Emergencies

- **Bangalore Highway (NH44):** Provides a quicker detour if there's a major blockage between Tiruchengode and Lakkapuram.
- **Detour through Komarapalayam:** Offers an alternate route to bypass Erode during heavy congestion or roadblocks.

Summary of Local Regulations Affecting Hazardous Material Transport

- **Permits Required:** Valid permits for transporting hazardous materials.

- **Restrictions on Timing:** Often, there are restrictions during peak urban hours.
- **Safety Compliance:** Full compliance with labeling, access to Material Safety Data Sheets (MSDS), and appropriate vehicle placarding is mandatory.

Overview of Historical Incidents

- **Incidents:** Occasional reports of heavy vehicles overturning, particularly during monsoons due to slippery roads.
- **Safety Measures Enforced:** Better road surveillance and stricter adherence to speed regulations during adverse weather conditions.

Environmental Considerations and Sensitive Areas

- **Water Bodies/Rivers:** Near Erode, proximity to water bodies requires caution to avoid contamination from spills.
- **Flora/Fauna:** Certain stretches pass through agricultural lands, posing risks of contaminating local crops through spills.

Analysis of Communication Coverage

- **Network Coverage:** Generally good around urban areas. Some remote portions near Puthur and certain rural stretches may have weaker signals.
- **Dead Zones:** Occasional in deep rural stretches but minimal impact overall.

Estimated Emergency Response Times

- **Urban Areas (Erode/Tiruchengode):** 15-25 minutes.
- **Rural Areas:** Response times can stretch to 30-45 minutes due to distance from emergency services and rural infrastructure.

Overall Summary of Risk Assessment

- **Primary Risks:**
 - Traffic congestion, especially in urban sections.
 - Weather-induced hazards during the monsoon season.
 - Variable road quality demands defensive driving.
- **Emergency Preparedness:**
 - Regular updates on weather and traffic conditions.
 - Clear communication with traffic and emergency response units along the route.
 - Adequate driver training in handling hazardous materials and emergency scenarios.

Overall, while the route is manageable with proper precautions, constant monitoring of weather patterns, traffic updates, and adherence to safety practices are essential for minimizing risks.

Route Photos of Risky Spots



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 0.32 km

Coordinates: 11.44029, 77.87544



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 5.85 km

Coordinates: 11.39671, 77.88878



Risk Type: Roundabout
Speed Limit: 15 KM/Hr
Distance from Start: 7.46 km
Coordinates: 11.38395, 77.89480



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 7.98 km
Coordinates: 11.37868, 77.89498



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 9.66 km

Coordinates: 11.36604, 77.88887

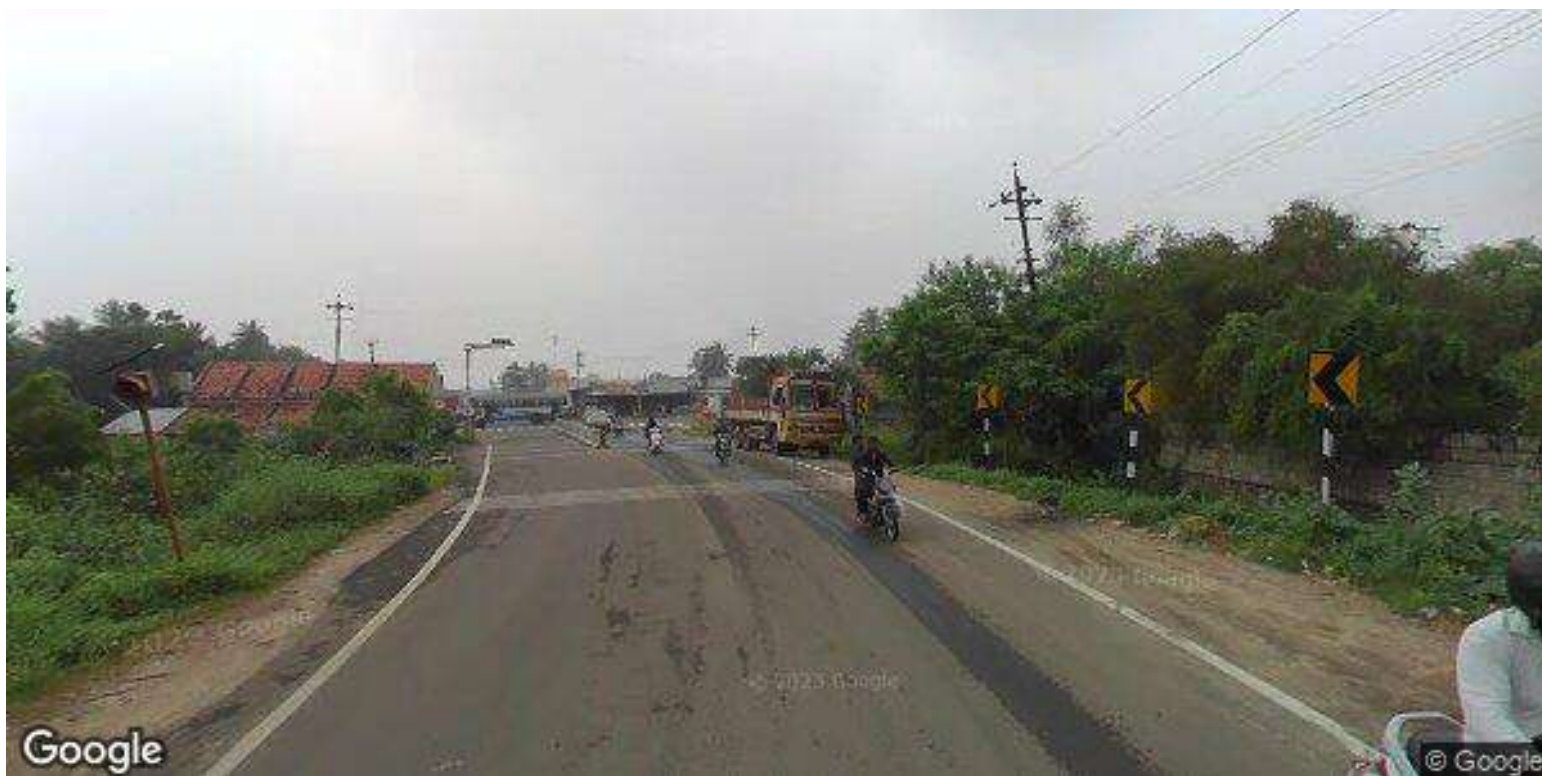


Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 13.80 km

Coordinates: 11.33882, 77.86218



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 25.68 km

Coordinates: 11.30970, 77.76705



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 28.55 km

Coordinates: 11.29490, 77.74685



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 28.94 km

Coordinates: 11.29133, 77.74660



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 29.44 km

Coordinates: 11.28859, 77.74323



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 31.46 km

Coordinates: 11.27558, 77.73107



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 31.78 km

Coordinates: 11.27326, 77.72991



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 32.04 km

Coordinates: 11.27330, 77.72711



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 37.90 km

Coordinates: 11.22378, 77.71384

[Download Interactive Map](#)

