



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal to AMMAN 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

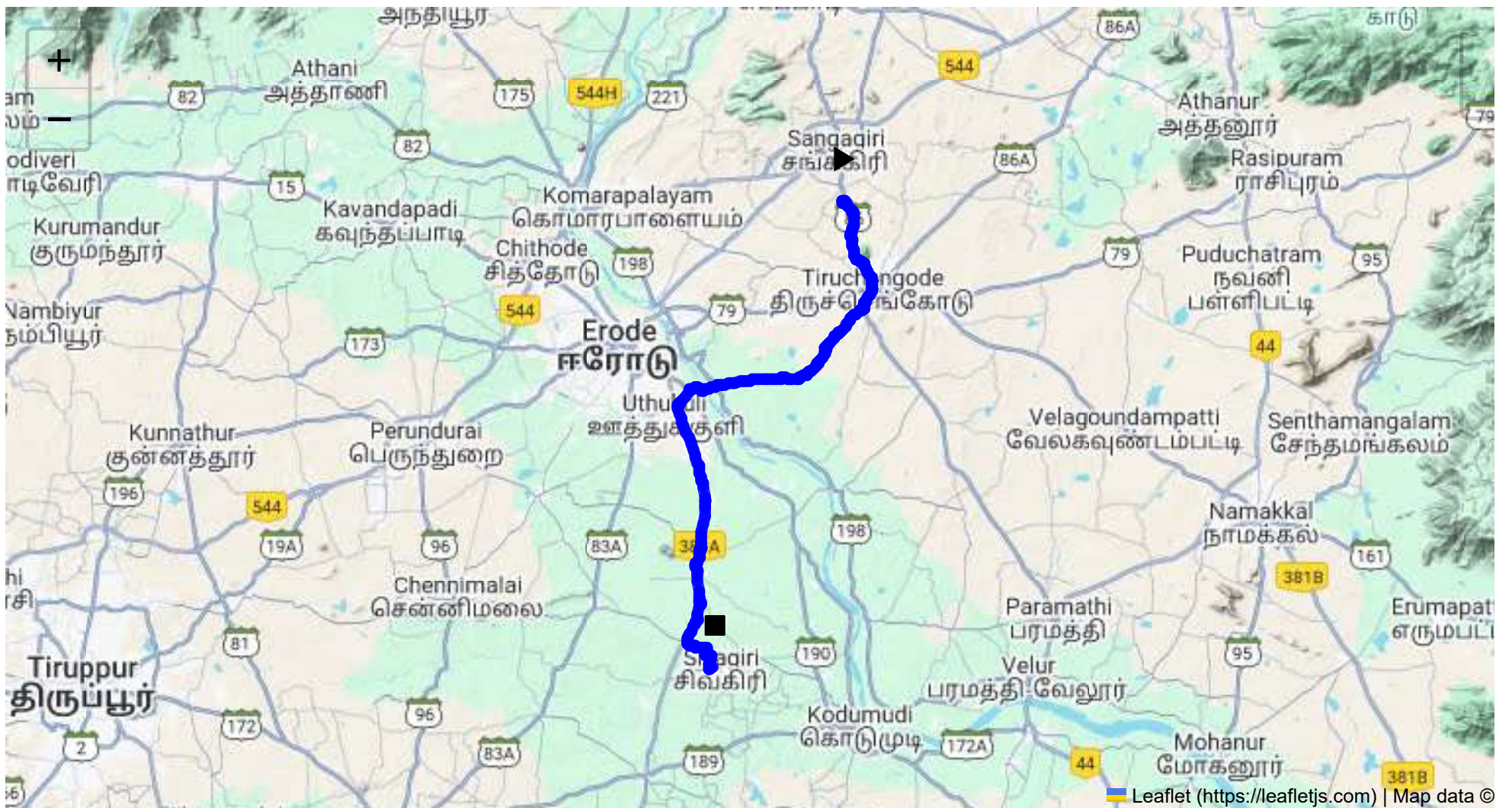
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 50.06 km
Estimated Duration: 1.3 hours
Adjusted Duration (Heavy Vehicle): 1.6 hours
Start: (11.4381, 77.8734)
End: (11.118236, 77.782684)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
1	Turn	11.43811, 77.87348	15 KM/Hr	0.00 km
2	Turn	11.43956, 77.87340	15 KM/Hr	0.14 km
3	Blind Spot	11.44029, 77.87544	10 KM/Hr	0.40 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
0	Roundabout	11.38395, 77.89480	15 KM/Hr	7.43 km
4	Turn	11.37868, 77.89498	15 KM/Hr	8.01 km
5	Turn	11.36604, 77.88887	15 KM/Hr	9.66 km
6	Turn	11.34067, 77.86347	15 KM/Hr	13.63 km
7	Turn	11.33882, 77.86218	15 KM/Hr	13.87 km
8	Turn	11.33778, 77.86236	15 KM/Hr	14.02 km
9	Turn	11.29894, 77.75808	15 KM/Hr	27.25 km
10	Turn	11.18959, 77.77076	15 KM/Hr	39.85 km
11	Turn	11.16375, 77.77424	15 KM/Hr	42.80 km
12	Turn	11.13506, 77.76540	15 KM/Hr	46.19 km
13	Blind Spot	11.13196, 77.77944	10 KM/Hr	47.75 km
14	Turn	11.12923, 77.77769	15 KM/Hr	48.11 km
15	Turn	11.12786, 77.77742	15 KM/Hr	48.31 km
16	Turn	11.12672, 77.78000	15 KM/Hr	48.63 km
17	Turn	11.12683, 77.78113	15 KM/Hr	48.76 km
18	Turn	11.12407, 77.78086	15 KM/Hr	49.04 km
19	Blind Spot	11.11821, 77.78074	10 KM/Hr	49.75 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
3	hospital	T.C.A Hospital Tiruchengode	11.3791885, 77.8965774	Driver's Side
4	hospital	Soorya Multispecialty Hospital	11.3786429, 77.8931912	Opposite Side
5	clinic	Kongu Nursing Home	11.3783065, 77.8961134	Driver's Side
6	hospital	Tiruchengode Government Hospital	11.37645, 77.89426	Driver's Side
7	hospital	Tirukumaran Hospitals	11.3782118, 77.8914933	Opposite Side
8	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	Opposite Side
10	hospital	Keerthana Hospital	11.2365339, 77.7772287	Opposite Side
11	hospital	Nataraj Nursing Home	11.2351682, 77.7785956	Driver's Side
12	hospital	Government Hospital, Elumathur	11.18533, 77.772496	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
2	restaurant	Lijo	11.3805115, 77.8946385	Opposite Side
9	fuel	Sri Sakthi Modern Fuels	11.242318, 77.7766688	Opposite Side

Welcome to the Journey Risk Management Study

Route Safety Analysis Report: Sangagiri to Sivagiri via Erode, Tamil Nadu

1. Route Overview The route begins in Sangagiri, travels towards Erode via the Outer Ring Road, and then proceeds to Sivagiri via Muthur Road. The total distance is approximately 50.06 kilometers, largely traversing major roads with some urban sections.

2. Weather Conditions The region experiences a tropical wet and dry climate. Typical conditions include:

- Summer (March to May):** High temperatures, occasionally exceeding 40°C along with the potential for heat-related vehicle stress.
- Monsoon (June to September):** Heavy rainfall can result in waterlogging and reduced visibility.
- Winter (December to February):** Mild temperatures, generally safer driving conditions but possible fog in early mornings.

3. Traffic Patterns

- Peak Hours:** Higher traffic volumes are typically observed between 8:00 AM - 10:00 AM and 5:00 PM - 8:00 PM, particularly within the urban areas of Erode.
- Congestion Zones:** Expect delays on Erode's Outer Ring Road and areas approaching the city center. Markets and schools contribute to congestion.

4. Road Quality and Infrastructure The road conditions vary:

- National Highways and Major Roads:** Well-maintained but can be busy.
- Some Urban Sections:** Narrow with potential for potholes and uneven surfaces, particularly after monsoon rains.

5. Alternative Routes for Emergencies

- Alternate Route 1:** Diverting via broader national highways whenever possible to circumvent congested urban zones.
- Alternate Route 2:** Reliance on local bypasses to avoid city centers, though these might add extra distance.

6. Local Regulations for Hazardous Material Transport

- Strict adherence to routes designated for hazardous materials is necessary.

- Timing restrictions may apply, prohibiting transport during peak urban hours to limit congestion and accidents.

7. Historical Incidents The region has a moderate history of heavy vehicle incidents, with occasional reports of overturned trucks or spills due to speeding or poor road conditions post-monsoon.

8. Environmental Considerations

- **Sensitive Areas:** Agricultural fields and water bodies are predominant. Minimizing pollution and residue spillage is critical.
- Potential impact on local wildlife, particularly in rural areas.

9. Communication Coverage Generally good, with some coverage gaps in rural segments outside major towns. Ensuring reliable communication tools is advised.

10. Emergency Response Times

- **Urban Areas:** Approximately 15-25 minutes due to closer proximity to emergency services.
- **Rural Segments:** Response times can extend to 30-45 minutes, depending on the exact location and time of day.

11. Overall Risk Assessment Summary This route offers a mix of urban and rural challenges, particularly concerning traffic patterns and weather conditions. While infrastructure is relatively robust, heavy rains and urban congestion pose risks, alongside considerations for hazardous material transport regulations. Continuous monitoring of weather forecasts and real-time traffic updates is advisable, with emphasis on potential need for alternate routes and reliance on local bypasses. Emergency services response is generally efficient in urban sections but warrants preparative measures for rural stretches.

Overall, the route requires diligent adherence to safety standards, adequate preparation for variable conditions, and informed navigation to ensure a safe and timely journey.

Route Photos of Risky Spots



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 0.40 km
Coordinates: 11.44029, 77.87544



Risk Type: Roundabout
Speed Limit: 15 KM/Hr
Distance from Start: 7.43 km
Coordinates: 11.38395, 77.89480



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 8.01 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: 13.63 km

Coordinates: 11.34067, 77.86347



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 13.87 km

Coordinates: 11.33882, 77.86218



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 14.02 km

Coordinates: 11.33778, 77.86236



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 27.25 km

Coordinates: 11.29894, 77.75808



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 39.85 km

Coordinates: 11.18959, 77.77076



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 42.80 km

Coordinates: 11.16375, 77.77424



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 46.19 km

Coordinates: 11.13506, 77.76540



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 47.75 km

Coordinates: 11.13196, 77.77944



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 48.11 km

Coordinates: 11.12923, 77.77769



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 48.31 km

Coordinates: 11.12786, 77.77742



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 48.63 km

Coordinates: 11.12672, 77.78000



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 48.76 km
Coordinates: 11.12683, 77.78113



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 49.04 km
Coordinates: 11.12407, 77.78086



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 49.75 km
Coordinates: 11.11821, 77.78074

[Download Interactive Map](#)