



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Shree Raam Petro Fills

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

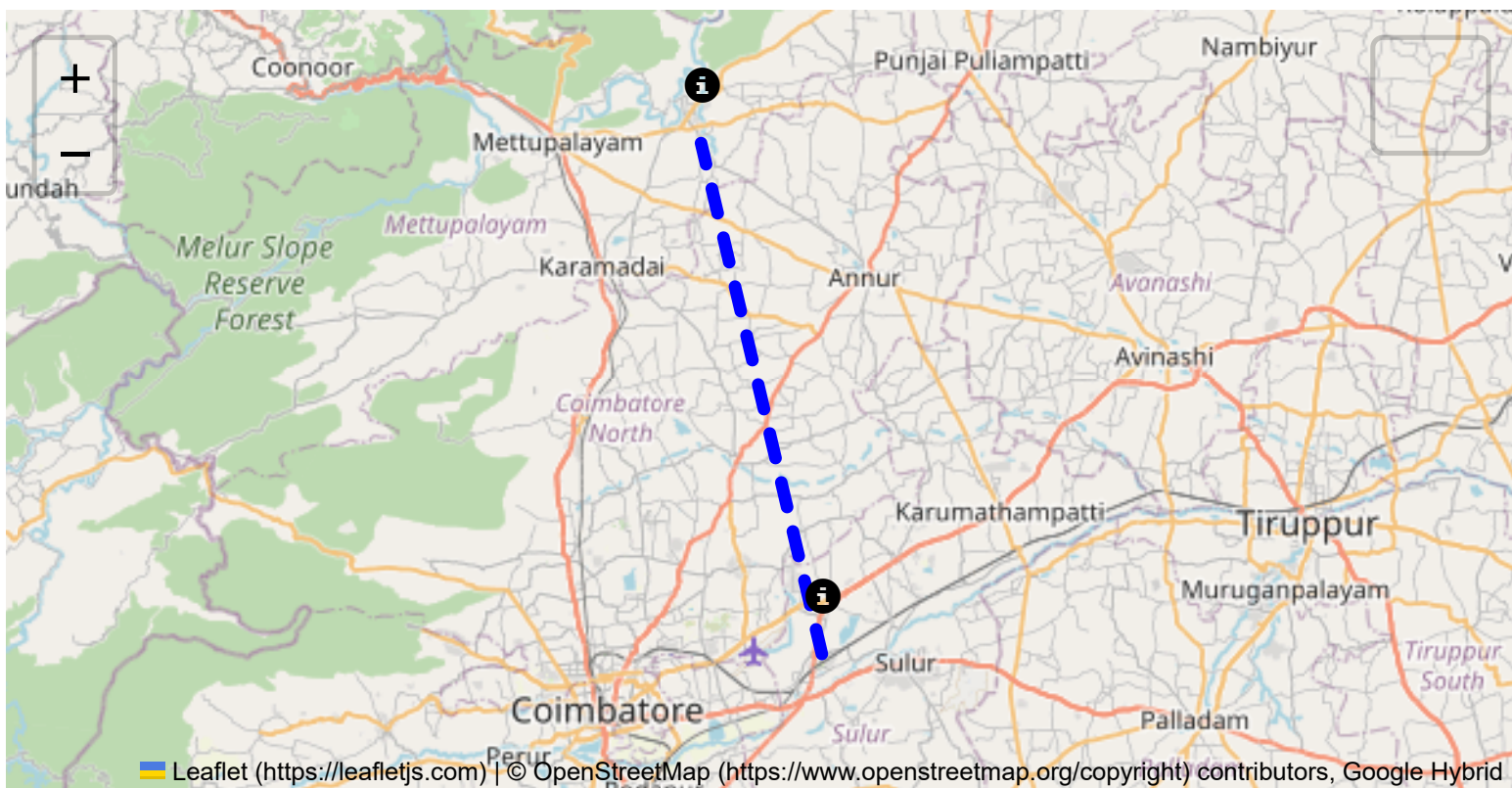
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

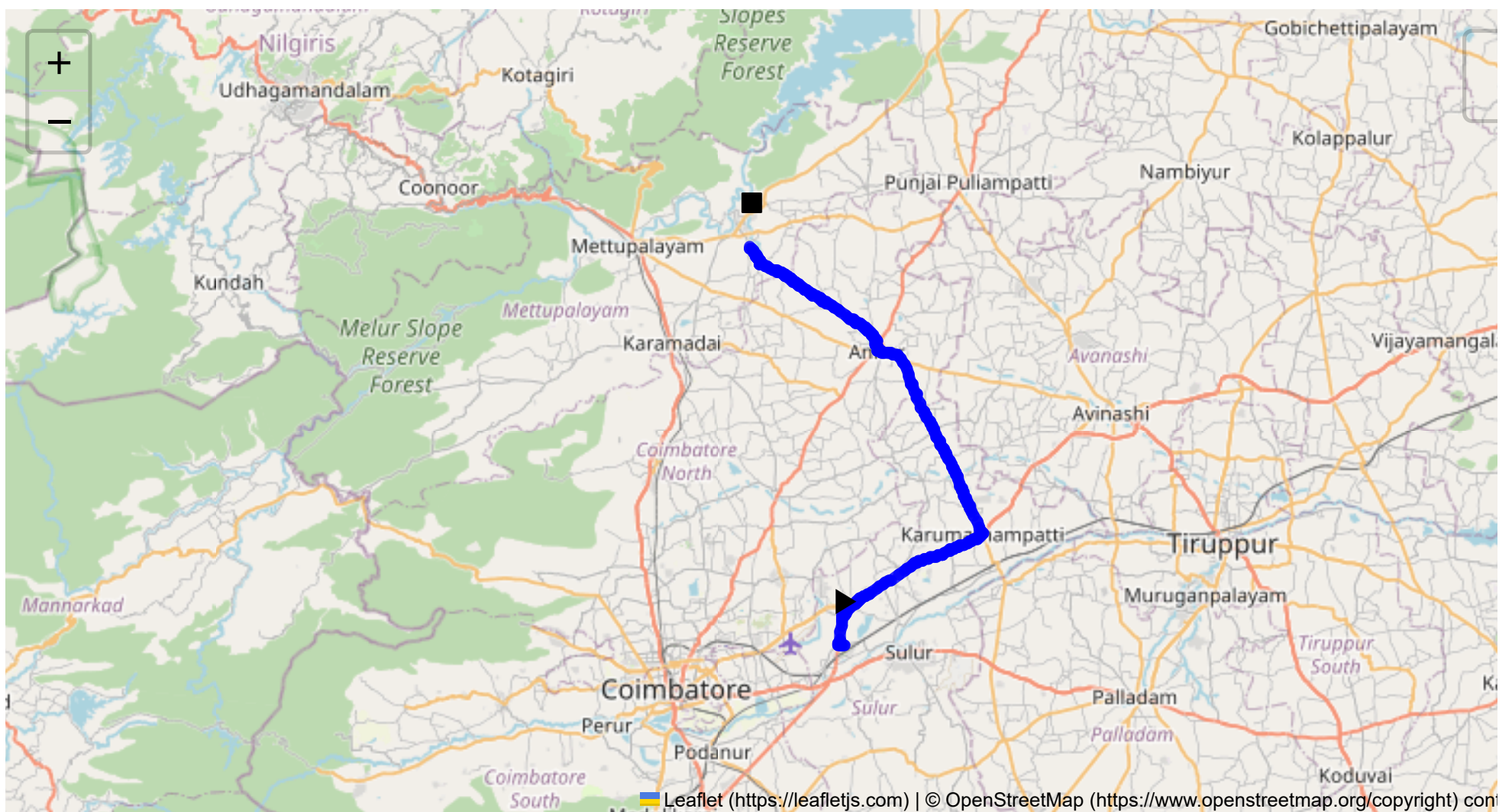
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 45.00 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.2 hours
Start: (11.0315, 77.0797)
End: (11.3045208, 77.0143348)



Welcome to the Journey Risk Management Study

Route Safety Analysis Report

Route Overview: The journey from Athappagoundenpudur (23JH+HR8) to Vellikuppampalayam (8237+MPX) covers approximately 45 kilometers, typically requiring just under an hour for heavy vehicles, depending on traffic conditions. The route primarily uses state highways and rural roads, passing through several small towns and agricultural areas.

1. Route Map Overview: The path primarily follows the Coimbatore-Pollachi Highway (NH83) initially and then diverges onto more localized roads as it approaches Vellikuppampalayam. Key landmarks include intersections near Pollachi and smaller village roads leading into Vellikuppampalayam.

2. Weather Conditions: This region experiences a tropical climate. The monsoon season from June to September can present significant hazards due to heavy rainfall, leading to possible road flooding and reduced visibility. Summers can witness high temperatures and occasional heat waves, while winters are mild.

3. Traffic Patterns:

- **Peak Hours:** Tend to be from 7:30 AM to 10:00 AM and 5:00 PM to 8:00 PM.
- **Congestion-Prone Areas:** Traffic jams are common near market towns and intersections along NH83 during rush hours and during local events or festivals.

4. Road Quality and Infrastructure:

- **Highways:** Generally, state highways are in good condition, but drivers should be cautious of speed breakers and uneven surfaces.
- **Rural Roads:** Variable quality; can be narrow with occasional potholes. Maintenance tends to be lower compared to major roads.

5. Alternative Routes: In emergencies, an alternative is to use the route via NH209 intersecting with local roads towards Vellikuppampalayam. Note, this might add distance and time but could offer less congested paths.

6. Local Regulations for Hazardous Material Transport:

- **Restrictions Apply:** Transport of hazardous materials typically requires permits and adherence to designated routes.
- **Timings:** Movement at night might be restricted; local regulations may require that transport be completed during daylight hours.

7. Historical Incidents: While specific historical data for exact incidents on this route may be limited, common issues include vehicle breakdowns due to inadequate road maintenance, accidents due to sharp turns and narrow lanes, particularly in rural segments.

8. Environmental Considerations: The route passes through agricultural zones; caution is advised to avoid contamination and spillage of hazardous materials. Some sections may be close to water bodies, amplifying environmental risks.

9. Communication Coverage: Mobile network coverage is generally reliable on major highways but can be patchy in remote rural segments, resulting in potential dead zones, especially closer to Vellikuppampalayam.

10. Emergency Response Times:

- **Urban Segments (near Coimbatore):** Approximately 15-20 minutes due to proximity to hospitals and emergency services.
- **Rural Segments:** May reach 30-45 minutes; limited facilities and services increase response time.

11. Overall Summary of Risk Assessment: This route presents moderate risk, primarily due to:

- Weather impacts during the monsoon,
- Potential for traffic congestion near urban areas,
- Variable road quality in rural sections affecting vehicle handling,
- Environmental susceptibility in agricultural zones.

Adherence to traffic laws, regular updates on weather conditions, and proper preparation for vehicle and cargo integrity are essential for safe travel. Continuous communication with local authorities can aid in real-time route management, emphasizing preparedness for emergency response given the varying times based on location.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	High	11.03211, 77.07640	15 KM/Hr
1	Turn	Medium	11.10499, 77.17299	30 KM/Hr
2	Turn	Medium	11.10527, 77.17318	30 KM/Hr
3	Turn	High	11.10777, 77.17700	15 KM/Hr
4	Turn	Medium	11.22872, 77.12009	30 KM/Hr
5	Turn	High	11.23330, 77.10347	15 KM/Hr
6	Turn	High	11.23499, 77.10349	15 KM/Hr
7	Turn	Medium	11.24077, 77.10268	30 KM/Hr
8	Turn	Medium	11.29254, 77.02192	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Royal Care Hospital, Coimbatore	11.059106, 77.0893479	30 km/h	Medium
5	hospital	Government Hospital, Annur	11.2325, 77.102249	30 km/h	Medium
6	hospital	NM Hospital	11.23271, 77.10187	30 km/h	Medium
7	hospital	Shanthi Medical Foundation	11.232428, 77.1016701	30 km/h	Medium
8	police	Annur Police Station	11.2315485, 77.1014321	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	college	PSG Institute of Technology and Applied Research	11.0677118, 77.0945744	30 km/h	Medium
2	school	GRD-CPF Matriculation Higher Secondary School	11.0610217, 77.0933504	30 km/h	Medium
3	school	M. Nanjappa Chettiar Matriculation Hr. Sec. School	11.0715394, 77.1039133	30 km/h	Medium
4	marketplace	Annur saturday market (weekly market)	11.2349165, 77.1028197	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.10499, 77.17299



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.10527, 77.17318



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.10777, 77.17700



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.22872, 77.12009



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.23330, 77.10347



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.23499, 77.10349



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.24077, 77.10268



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.29254, 77.02192
