



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Abiga 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

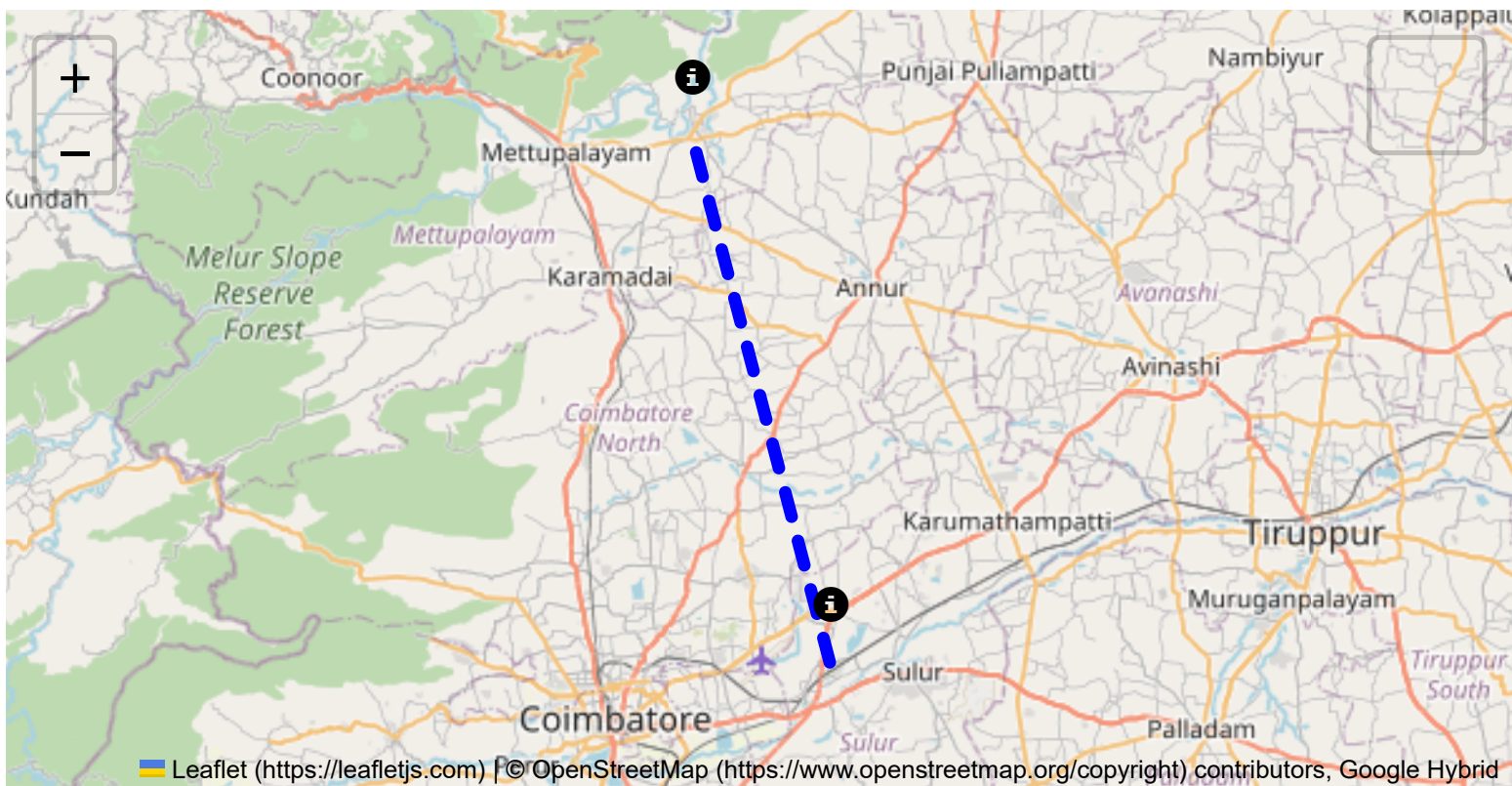
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

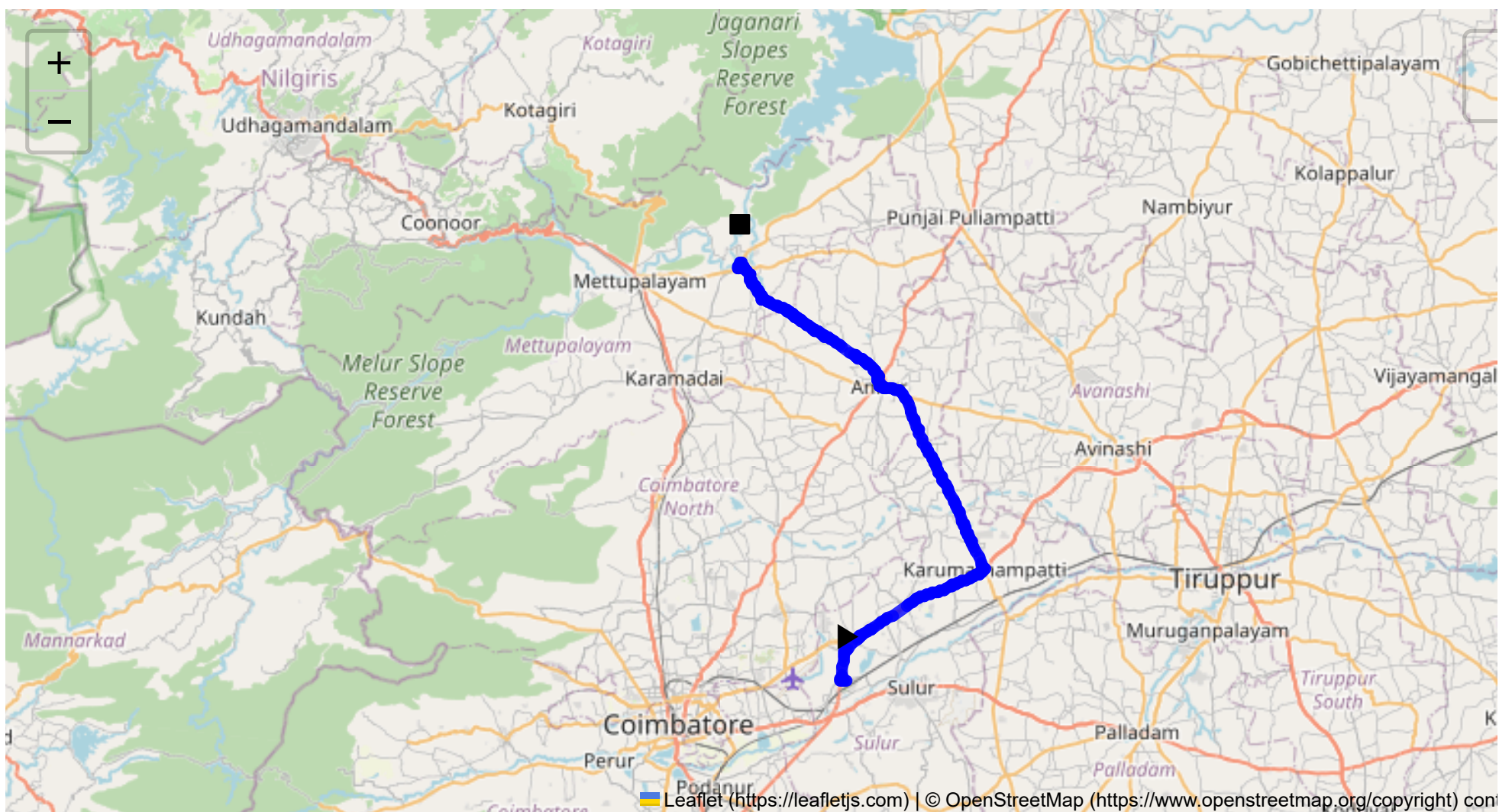
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 47.32 km
Estimated Duration: 1.1 hours
Adjusted Duration (Heavy Vehicle): 1.3 hours
Start: (11.0315, 77.0797)
End: (11.314214, 77.00419)



Welcome to the Journey Risk Management Study

Route Overview

The route from Athappagoundenpudur to Sirumugai spans approximately 47.32 kilometers and involves traveling primarily on regional roads. These roads typically pass through a mix of rural, semi-urban, and forested regions, making it important to remain vigilant for varying road conditions and environments.

Typical Weather Conditions

The region usually experiences a tropical climate with temperatures ranging from mild to hot. Monsoon season, typically from June to September, can cause heavy rain leading to slippery roads and reduced visibility. This may increase the risk of hydroplaning and accidents. In contrast, the dry season can increase dust levels, affecting visibility and air quality.

Traffic Patterns

Traffic patterns in this region are influenced by the local economy and daily commuting habits. Peak traffic hours generally occur between 7:30 AM - 9:30 AM and 5:00 PM - 7:00 PM, especially near towns and industrial areas. Congestion-prone areas include the entry and exit points of towns along the route.

Road Quality and Infrastructure

The road conditions vary but are generally considered to be moderate. There are sections with well-maintained tarmac, while some areas may feature potholes and narrow shoulders, particularly in rural segments. Signage might not be sufficient in some parts, making it crucial to be familiar with the route beforehand.

Alternative Routes for Emergencies

In case of emergencies, an alternative route can be taken via the NH181, though this may increase travel time. Additionally, local roads through nearby towns like Annur could serve as detours if the primary route is obstructed.

Local Regulations for Hazardous Material Transport

Transport of hazardous materials in Tamil Nadu requires permits, and vehicles must comply with safety standards, including proper labeling and equipment for containment and spill control. Restrictions are stricter near populated areas and environmentally sensitive zones.

Historical Incidents

While the specific route does not have a high incidence rate, nearby regions have reported occasional accidents involving heavy vehicles due to poor road conditions and erratic weather. Such incidents often emphasize the need for cautious driving and adherence to speed limits.

Environmental Considerations

The route passes near sensitive areas, including small forested patches, which demand adherence to environmental protocols. Ensure that noise and emissions are minimized to protect local wildlife and ecosystems.

Communication Coverage

Mobile network coverage can be spotty in rural and forested regions along the route. Known dead zones are prevalent in more isolated sections, where carrying satellite communication devices could be beneficial for continuous connectivity.

Estimated Emergency Response Times

Response times can vary significantly, ranging from 15 to 45 minutes depending on proximity to town centers or emergency response stations. Remote sections may experience longer delays due to accessibility issues.

Overall Summary of Risk Assessment

The route presents moderate risk factors primarily due to road quality and variable weather conditions. Attention to peak traffic times, rigorous adherence to safety standards, and alternate route planning are essential. Preparation for handling communication interruptions and increased vigilance in sensitive environmental zones will further enhance travel safety. Ensuring that all regulatory requirements for transporting hazardous materials are met is critical for compliance and public safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	High	11.03211, 77.07640	15 KM/Hr
1	Turn	Medium	11.10527, 77.17318	30 KM/Hr
2	Turn	High	11.10777, 77.17700	15 KM/Hr
3	Turn	Medium	11.22872, 77.12009	30 KM/Hr
4	Turn	High	11.23330, 77.10347	15 KM/Hr
5	Turn	High	11.23499, 77.10349	15 KM/Hr
6	Turn	Medium	11.24077, 77.10268	30 KM/Hr
7	Turn	Medium	11.29254, 77.02192	30 KM/Hr
8	Turn	Medium	11.31097, 77.01227	30 KM/Hr
9	Blind Spot	Blind Spot	11.31822, 77.00654	10 KM/Hr
10	Blind Spot	Blind Spot	11.31492, 77.00429	10 KM/Hr
11	Turn	High	11.31488, 77.00444	15 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
9	clinic	Loga Clinic, Sirumugai	11.3191, 77.006544	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: 11.10527, 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



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.31097, 77.01227



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.31822, 77.00654



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.31492, 77.00429



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.31488, 77.00444
