



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Shri Maruthi 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

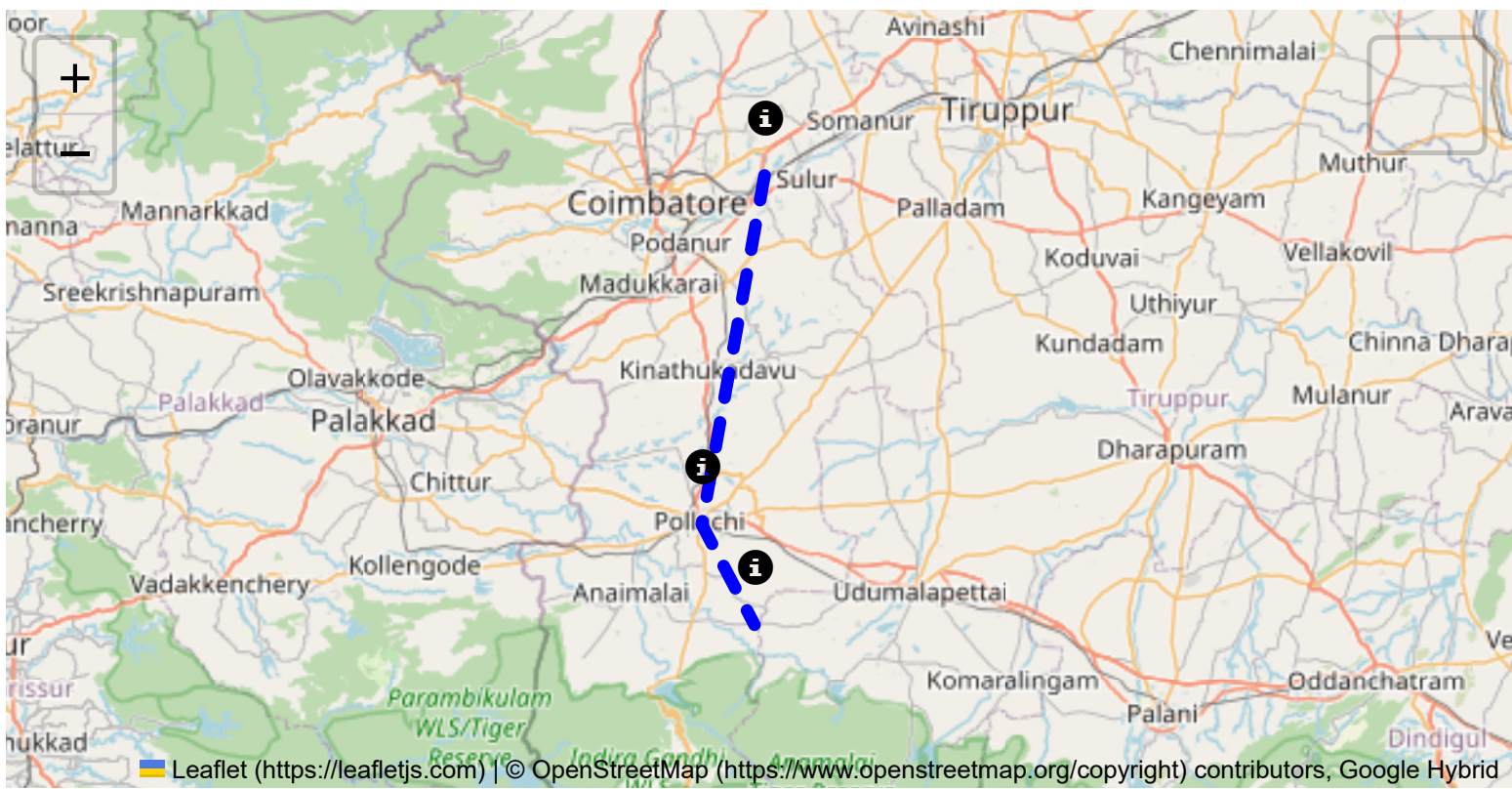
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

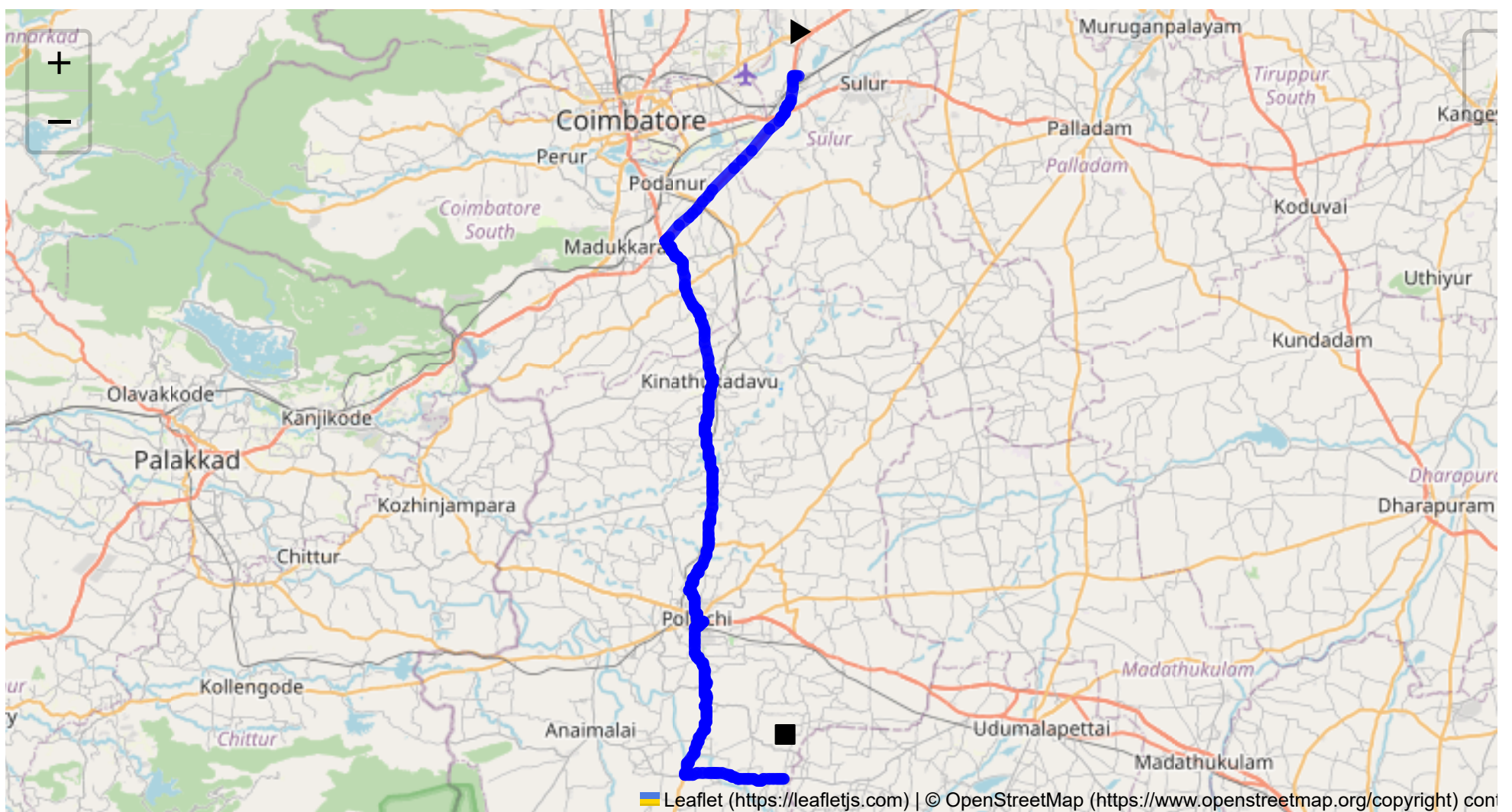
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 68.27 km
Estimated Duration: 1.5 hours
Adjusted Duration (Heavy Vehicle): 1.9 hours
Start: (11.0315, 77.0797)
End: (10.548156, 77.069421)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Athappagoundenpudur to Maylapuram via State Highway 19 passes through Uthukadu Rd and Puliampatti, ultimately reaching Pollachi before proceeding to Anamalai - Dhali Rd. This stretch of approximately 68.27 kilometers involves both rural and semi-urban areas and is subject to varying road conditions and traffic types.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Tamil Nadu typically experiences a tropical climate. Important aspects to consider:

- **Summer (March to June):** High temperatures could lead to road surface issues or driver fatigue.
- **Monsoon (July to September):** Heavy rains can lead to water-logging, reduced visibility, and increased risk of landslides or road surface damage.
- **Winter (November to February):** Generally mild and less problematic, though occasional fog in rural areas might affect visibility.

3. Analysis of Traffic Patterns

- **Peak Hours:** Morning (7-9 AM) and evening (5-7 PM) are generally busier, especially as you approach Pollachi due to local commuter traffic.
- **Congestion-Prone Areas:** Expect slowdowns in Pollachi, particularly near markets and intersections.

4. Assessment of Road Quality and Infrastructure

- **State Highway 19:** Generally well-paved but can have narrow stretches and occasional potholes.
- **Rural Roads (Uthukadu Rd):** Narrower with possible abrupt turns and less maintenance.
- **Polachi Area:** Better infrastructure but increased traffic and potential for pedestrian crossings.

5. Suggestions for Alternative Routes for Emergencies

In case of closures or heavy congestion:

- **Alternative Route:** Consider using the Coimbatore-Pollachi road (NH209) as another major corridor, though it might add to the distance.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- **Tamil Nadu Traffic Rules:** Tankers and trucks carrying hazardous materials must adhere to specific time frames for city entry and exit, usually restricted at peak hours.
- **Safety Compliance:** Ensure all safety protocols and material-specific regulations are strictly followed.

7. Overview of Historical Incidents

- **Pollachi Area:** Reports of occasional accidents due to congestion and road conditions, but not typically involving hazardous materials.
- **State Highway Accidents:** General incidents involving heavy vehicles due to road surface issues.

8. Environmental Considerations and Sensitive Areas

- The route skirts around ecological zones; any potential spillages or accidents could affect local agriculture or water bodies.
- Awareness and caution near Anamalai Tiger Reserve to minimize habitat disturbance.

9. Analysis of Communication Coverage

- **Urban Areas (Pollachi):** Good coverage for most major carriers.
- **Rural Sections:** Possible dead zones in remote stretches, especially on Uthukadu Rd.

10. Estimated Emergency Response Times

- **Rural Stretches:** Response might be delayed (approximately 30-45 minutes) due to distance to major facilities.
- **Urban Centers (Pollachi):** Typically quicker response times (15-20 minutes).

12. Overall Summary of Risk Assessment

Traveling from Athappagoundenpudur to Maylapuram for a heavy vehicle carrying hazardous materials presents moderate risks primarily due to road quality, weather conditions, and traffic congestion. The driver should be aware of peak traffic times, maintain communication with authorities, especially in less accessible areas, and follow local regulations carefully. Emergency plans should be established, considering alternative routes and rapid response coordination. Environmental sensitivities must be highlighted to mitigate any potential ecological damage. Regular updates on weather and traffic conditions are recommended to optimize safety and timeliness.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	10.65920, 77.00836	15 KM/Hr
1	Roundabout	High	10.65652, 77.01253	15 KM/Hr
2	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
3	Blind Spot	Blind Spot	10.91785, 76.98617	10 KM/Hr
4	Turn	Medium	10.66190, 77.00822	30 KM/Hr
5	Turn	Medium	10.65707, 77.01156	30 KM/Hr
6	Turn	Medium	10.65704, 77.01162	30 KM/Hr
7	Turn	Medium	10.65698, 77.01166	30 KM/Hr
8	Turn	High	10.65695, 77.01166	15 KM/Hr
9	Turn	High	10.65643, 77.01141	15 KM/Hr
10	Blind Spot	Blind Spot	10.65461, 77.01107	10 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
11	Turn	High	10.65494, 77.01008	15 KM/Hr
12	Turn	High	10.65420, 77.00966	15 KM/Hr
13	Turn	Medium	10.65418, 77.00954	30 KM/Hr
14	Blind Spot	Blind Spot	10.65451, 77.00837	10 KM/Hr
15	Blind Spot	Blind Spot	10.55131, 77.00068	10 KM/Hr
16	Turn	Medium	10.55311, 77.02250	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
4	hospital	Ambal Malumichampatty, Coimbatore	10.90265, 76.997586	30 km/h	Medium
11	hospital	Sri Venkateswara Kinnathukadavu	10.8241085, 77.0191884	30 km/h	Medium
12	hospital	Government Hospital, Kinathukadavu	10.82107, 77.017406	30 km/h	Medium
13	hospital	The Pollachi Cardiac Center	10.6742907, 77.0081305	30 km/h	Medium
14	hospital	K.G.M. Hospital Paavhai Women's Cente, Pollachi	10.67023, 77.007418	30 km/h	Medium
15	hospital	Arathana Hospital	10.6682257, 77.0070174	30 km/h	Medium
16	clinic	Andavar Clinic and Nursing Home	10.6679726, 77.0081641	30 km/h	Medium
17	clinic	A.S.D. Nursing Home	10.6665361, 77.0084792	30 km/h	Medium
18	clinic	Neuro Poly Clinic, Pollachi	10.6662216, 77.0073506	30 km/h	Medium
19	hospital	Vasan Eye Care Hospital, Pollachi	10.6643938, 77.0057119	30 km/h	Medium
20	hospital	Siva Meds Multispeciality Hospital	10.6633006, 77.0100774	30 km/h	Medium
21	clinic	Ram Poly Clinic	10.6627299, 77.0090626	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
22	hospital	MRS Hospital & Fertility centre	10.6647489, 77.0050326	30 km/h	Medium
23	clinic	Prabhu Poly Clinic	10.6627285, 77.0096353	30 km/h	Medium
24	hospital	Prabhu Hospital, Pc Pollachi	10.66269, 77.009684	30 km/h	Medium
25	hospital	Kowsalya Medical Centre, Pollachi	10.66299, 77.010025	30 km/h	Medium
26	hospital	Thirumalai Hospital	10.6650579, 77.005872	30 km/h	Medium
27	clinic	Rc Poly Clinic, Pollachi	10.66442, 77.005669	30 km/h	Medium
28	hospital	Pills Hospital	10.66419, 77.010376	30 km/h	Medium
29	clinic	Sindhia Ortho Clinic	10.6634521, 77.0105284	30 km/h	Medium
30	hospital	Sakthi Hospital, Pollachi	10.6629552, 77.0106019	30 km/h	Medium
31	hospital	Government Hospital, Pollachi	10.6581617, 77.0098249	30 km/h	Medium
32	police	Police Station	10.6571159, 77.0083512	30 km/h	Medium
33	clinic	PKD Nursing Home	10.65723, 77.0074748	30 km/h	Medium
34	clinic	Pkd Nursing Home	10.6577822, 77.011376	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	school	Kadri Mills Higher Secondary School	11.0058181, 77.0664118	30 km/h	Medium
2	college	Karpagam Academy of Higher Education	10.9175939, 76.9882369	30 km/h	Medium
3	college	Karpagam Polytechnic College	10.9185202, 76.99131	30 km/h	Medium
5	college	DJ Academy of Design and Management	10.8740175, 77.0042594	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
6	college	Coimbatore Marine College	10.8627423, 77.0107491	30 km/h	Medium
7	school	Sasi Creative School for Architecture	10.8613583, 77.0118878	30 km/h	Medium
8	school	Vivek Vidyalaya Matric Hr. Sec. School	10.8451346, 77.015443	30 km/h	Medium
9	school	Vivek Vidya Mandir	10.8448467, 77.01614	30 km/h	Medium
10	college	VSB College of Engineering Technical Campus=Coimbatore	10.8430943, 77.0180336	30 km/h	Medium
35	school	Govt. Girls Higher Secondary School	10.6534699, 77.0088777	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65920, 77.00836



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65652, 77.01253



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.91785, 76.98617



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.66190, 77.00822



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.65707, 77.01156



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.65704, 77.01162



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.65698, 77.01166



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65695, 77.01166



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65643, 77.01141



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.65461, 77.01107



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65494, 77.01008



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.65420, 77.00966



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.65418, 77.00954



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.65451, 77.00837



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.55131, 77.00068



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.55311, 77.02250
