

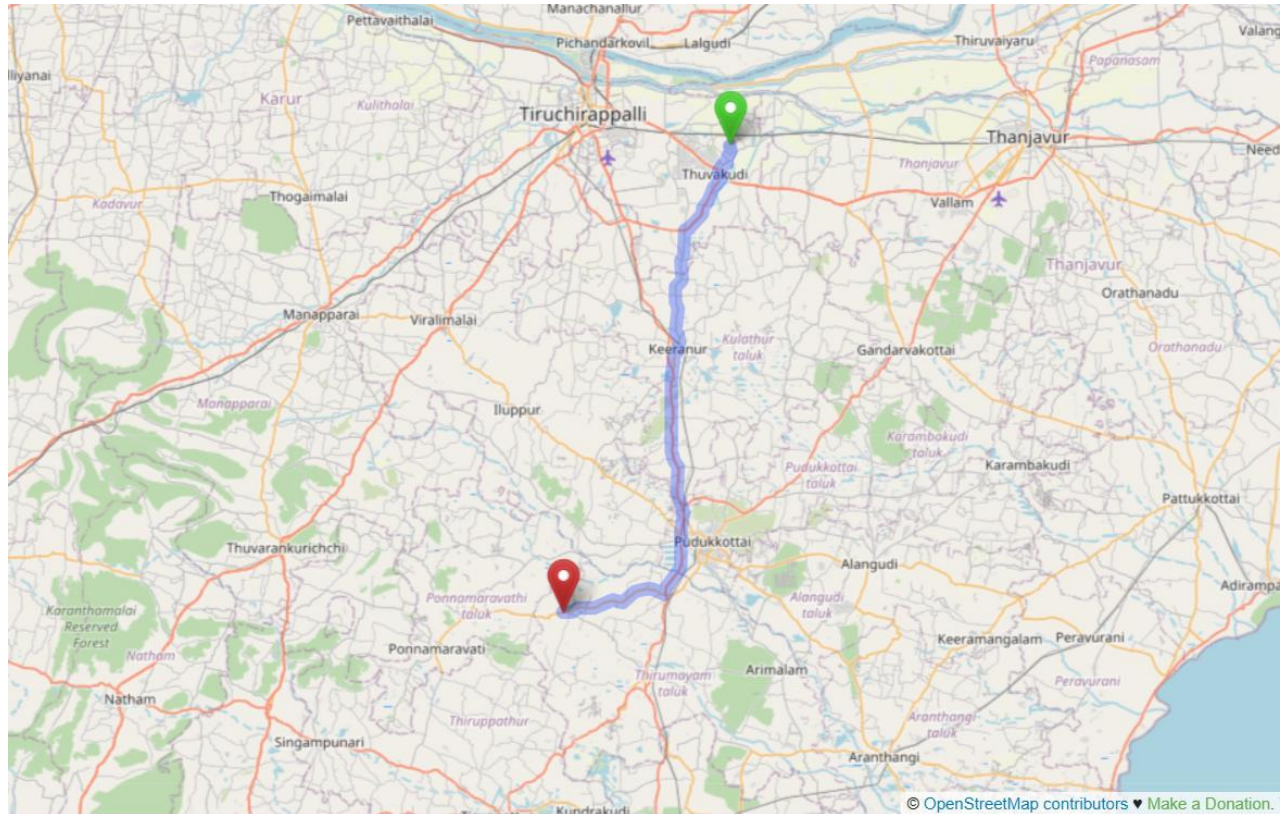


IndianOil

WELCOME TO JOURNEY
RISK MANAGEMENT (JRM)
STUDY USING ARTIFICIAL
INTELLIGENCE (AI)
FOR IOCL TRICHY
TERMINAL

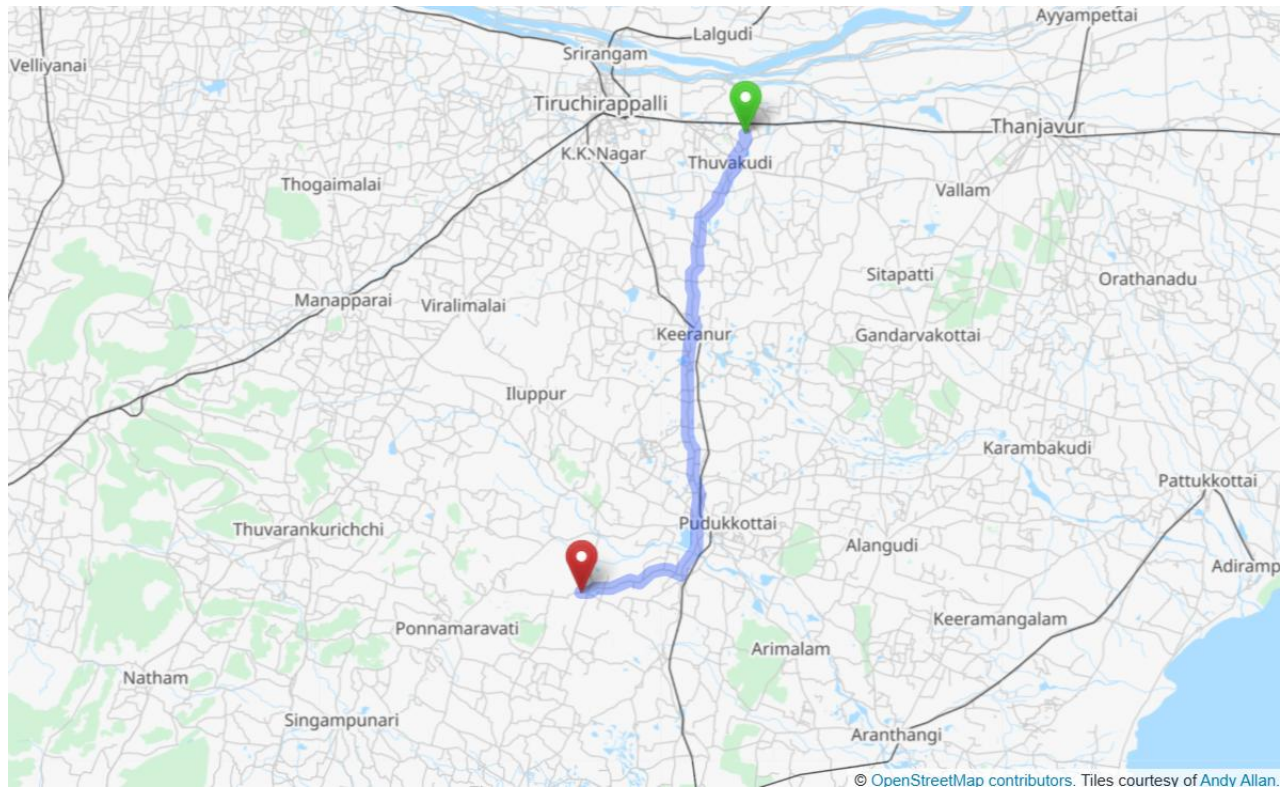
JOURNEY RISK MANAGEMENT REPORT

**IOCL TIRCHY TERMINAL (10.7753, 78.8368) TO BARAKATH AGENCIES
(10.31137 , 78.668103) TOTAL DISTANCE – 66.8 KM**



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Welcome to the Journey Risk Management Study for BARAKATH AGENCIES

Total distance: 66.8 KM; Start with: (10.7753 , 78.8368), End with: (10.31137 , 78.668103)

- Route Safety Analysis Report

1. Overview of the Route Map

The route from Trichy Terminal (T.N) TO BARAKATH AGENCIES. The Route passes Through Several key point Including Take IS Take SIDCO to Indian oil Storage to NH 83 in Thuvakudi, At Jude Digital Studios, continue

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onto Thuvakudi to SIDCO& Indian oil Storage, Take Outer Ring Rd/Trichy Bypass to Kanthalur Rd in Sooriyur, Continue on Kanthalur Rd to Pallathuppatti, Turn left at AMMAN CARS& BIKES onto NH336, Turn right onto SH 20. and Total distance from Trichy Terminal To BARAKATH AGENCIES IS 66.8 KM.

Typical Weather Conditions and Potential Weather-Related Hazards

Weather Conditions: Trichy Terminal (T.N) To BARAKATH AGENCIES experiences a tropical climate with heavy monsoon rains from June to September, high humidity, and moderate temperatures throughout the year ,The summers are short and sweltering; the winters are short, cool, and dry; and it is mostly clear year-round. Over the course of the year, the temperature typically varies from 60.8°F to 110°F and is rarely below 60.8°F to 110°F.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Nov	Oct	Dec	Year
Record high °C (°F)	33.0 (91.4)	38.0 (100.4)	41.0 (105.8)	43.0 (109.4)	43.0 (109.4)	42.0 (107.6)	40.0 (104.0)	39.0 (102.2)	38.0 (100.4)	37.0 (98.6)	34.0 (93.2)	33.0 (91.4)	43.0 (109.4)
Average high °C (°F)	30.27 (86.49)	32.88 (91.18)	36.0 (96.8)	38.27 (100.89)	38.79 (101.82)	36.78 (98.2)	36.17 (97.11)	35.4 (95.72)	35.03 (95.05)	32.9 (91.22)	30.38 (86.68)	29.34 (84.81)	34.35 (93.83)
Daily mean °C (°F)	26.57 (79.83)	28.67 (83.61)	31.87 (89.37)	34.46 (94.03)	35.18 (95.32)	33.45 (92.21)	32.92 (91.26)	32.18 (89.92)	31.78 (89.2)	29.86 (85.75)	27.44 (81.39)	26.32 (79.38)	30.89 (87.6)
Average low °C (°F)	19.88 (67.78)	20.93 (69.67)	24.04 (75.27)	27.62 (81.72)	28.89 (84.0)	27.59 (81.66)	27.04 (80.67)	26.45 (79.61)	25.95 (78.71)	24.64 (76.35)	22.43 (72.37)	20.93 (69.67)	24.7 (76.46)
Record low °C (°F)	16.0 (60.8)	17.0 (62.6)	19.0 (66.2)	22.0 (71.6)	25.0 (77.0)	25.0 (77.0)	24.0 (75.2)	23.0 (73.4)	22.0 (71.6)	21.0 (69.8)	18.0 (64.4)	17.0 (62.6)	16.0 (60.8)
Average precipitation mm (inches)	12.32 (0.49)	20.82 (0.82)	26.34 (1.04)	57.63 (2.27)	102.32 (4.03)	61.68 (2.43)	63.88 (2.51)	124.75 (4.91)	141.74 (5.58)	231.04 (9.1)	159.62 (6.28)	71.08 (2.8)	89.44 (3.52)
Average precipitation days (≥ 1.0 mm)	3.09	3.27	5.36	7.36	16.73	12.36	13.55	18.91	19.64	22.73	17.55	9.73	12.52
Average relative humidity (%)	72.01	65.19	58.27	53.97	51.56	50.59	51.14	56.11	60.33	70.18	77.39	76.61	61.95
Mean monthly sunshine hours	11.19	11.34	11.34	11.63	12.65	12.68	11.83	11.24	11.05	9.11	7.68	8.29	10.84

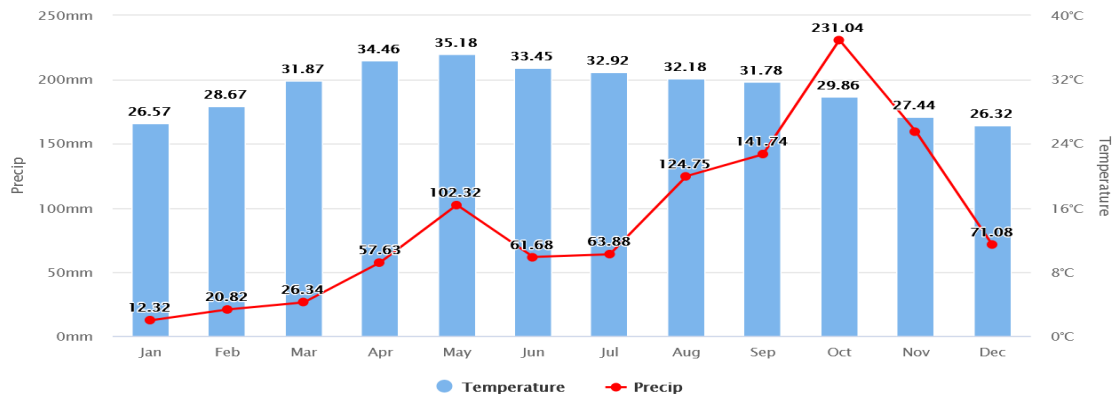
Weather-Related Hazards: Trichy Terminal (T.N) To BARAKATH AGENCIES Providing a local hourly weather forecast of rain, sun, wind, humidity and temperature.

The Long-range 12 day forecast also includes detail for weather today. Live weather reports from Trichy Terminal (T.N) To BARAKATH AGENCIES weather stations and weather warnings that include risk of thunder, high UV index and forecast gales.

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Climate Graph

The chart below shows the mean monthly temperature and precipitation of Tiruchirappalli in recent years.



Analysis of Traffic Patterns

Peak Hours:

Typically, Trichy Terminal (T.N) To BARAKATH AGENCIES peak traffic hours are from 8:00 AM to 11:00 AM and 4:00 PM to 8:00 PM on weekdays.

Congestion-Prone Areas:

- Old Burma Colony
 - TIRUCHY PUBLIC SCHOOL
 - Wonder World Theme Park
 - Goverment TB Hospital
 - Km food product
 - BHARAT PETROLEUM CORPORATION LIMITED BOTTLING PLANT,
 - Government Higher Secondary School
-
- Assessment of Road Quality and Infrastructure

Road Quality: Generally, the roads are well-maintained but can suffer from potholes and water logging on State Highway during the monsoon season.

Infrastructure: Adequate signage, street lighting, and traffic signals are present, but some areas may lack proper drainage systems, leading to water logging.

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- **Suggestions for Alternative Routes for Emergencies**

Alternative Route 1-). The route from Trichy Terminal (T.N). TO GANESG PETROL BUNK Take IS Take SIDCO to Indian oil Storage to NH 83 in Thuvakudi, At Jude Digital Studios, continue onto Thuvakudi to SIDCO& Indian oil Storage, Take Outer Ring Rd/Trichy Bypass to Kanthalur Rd in Sooriyur, Continue on Kanthalur Rd to Pallathuppatti, turn left at AMMAN CARS& BIKES onto NH336, Turn right onto SH 20.

Alternative Route 2 -). Take SIDCO to Indian oil Storage to NH 83 in Thuvakudi, At Jude Digital Studios, continue onto Thuvakudi toSIDCO& Indian oil Storage, Take NH336 to SH 201 in Namanasamuthiram, Turn right onto SH 201.

Summary of Local Regulations Affecting Hazardous Material Transport

Regulations: Transport of hazardous materials is regulated by the Petroleum and Explosives Safety Organization (PESO) and the Motor Vehicles Act. Specific routes and timings may be restricted for hazardous material transport.

Permits: Ensure all necessary permits and documentation are in place.

- **Overview of Historical Incidents**

Historical Incidents: There have been occasional incidents involving heavy vehicles, particularly during the monsoon season due to waterlogging and poor visibility. No major incidents involving hazardous materials have been reported recently.

- **Environmental Considerations and Sensitive Areas**

- **Sensitive Areas:** Old Burma Colony, TIRUCHY PUBLIC SCHOOL, Wonder World Theme Park, Goverment TB Hospital, Km food product, BHARAT PETROLEUM CORPORATION LIMITED BOTTLING PLANT.
- **Educational institutions:** State Institute Of Hotel Management and Catering Technology, Arasu Education - Jcb Institute in Trichy, Gnanam School of Business.
- **Hospital:** Dr Kamali's Home Clinic, Aruna Hospital,

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- **Gas Station:** IndianOil, Nayara Petrol Pump Nayara Petrol Pump, IndianOil, HP Petrol Pump, IndianOil, Bharat Petroleum, Petrol Pump -Raj Agency, Indian Oil.
- **Environmental Impact:** Minimize noise and air pollution, especially in residential and sensitive areas.
- **Air pollution:** Volatile chemicals evaporate during the filling and discharge process, or from leaks.
- **Loss of habitats:** Oil and gas operations can degrade animal habitats and disrupt migratory pathways.
- **Oil spills:** Oil spills can be devastating for animals and humans.
- **Greenhouse gas emissions:** Oil and gas operations can emit greenhouse gases like methane.
- **Analysis of Communication Coverage**

Communication Coverage: Generally good throughout the route, but potential dead zones may exist densely built-up areas or underpasses.

Dead Zones: Monitor for any communication blackouts, especially in underpasses or near large buildings.

- **Estimated Emergency Response Times:-** Old Burma Colony, TIRUCHY PUBLIC SCHOOL, Wonder World Theme Park, Goverment TB Hospital, Km food product, BHARAT PETROLEUM CORPORATION LIMITED BOTTLING PLANT.areas like have quicker response times (15- 20 minutes). Congested areas may experience delays (up to 30-40 minutes).

Overall Summary of Risk Assessment

- **Risk Level:** Moderate to High, especially during monsoon season.
- **Key Risks:** Water logging, traffic congestion, and potential communication dead zones.

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- **Mitigation Measures:** Plan travel during non-peak hours, ensure proper vehicle maintenance, and have alternative routes and emergency contacts ready and control on the speed limit of the vehicle.
- **Road Signage for TT/PT Driver**

Road Traffic Signs in India

Mandatory/Regulatory Signs

			
Stop	Give way	No entry	Straight prohibited
			
One way	One way	Vehicles prohibited in both directions	Horn prohibited
			
Pedestrians prohibited	Cycles prohibited	Right turn prohibited	Left turn prohibited
			
U-turn prohibited	Overtaking prohibited	Trucks prohibited	Tonga prohibited

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 <p>All motor vehicles prohibited</p>	 <p>Hand cart prohibited</p>	 <p>Bullock cart prohibited</p>	 <p>Bullock and hand carts prohibited</p>
 <p>No parking</p>	 <p>No parking or stopping</p>	 <p>Speed limit</p>	 <p>Axle load limit</p>
 <p>Width limit</p>	 <p>Weight limit</p>	 <p>Length limit</p>	 <p>Load limit</p>
 <p>Restriction ands</p>			




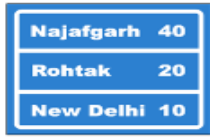
















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Cautionary signs

 <p>Right hand curve</p>	 <p>Left hand curve</p>	 <p>Right hand pin bend</p>	 <p>Left hand pin bend</p>
 <p>Right reverse bend</p>	 <p>Narrow bridge</p>	 <p>Gap in median</p>	 <p>Cycle crossing</p>
 <p>Pedestrian crossing</p>	 <p>School</p>	 <p>Men at work</p>	 <p>Roundabout</p>
 <p>Narrow road</p>	 <p>Road widens</p>	 <p>Side road left</p>	 <p>Side road right</p>

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Information signs

			
Advance direction	Map type advance direction	Rotary intersection	Reassurance
			
Direction	Direction	Place identification	Truck lay bay
			
Toll booth ahead	Parking this side	Parking both sides	Cycle stand
			
Scooter and motor cycle stand	Taxi stand	Auto-rickshaw stand	Cycle-rickshaw stand
			
Public telephone	Filling station	Hospital	First aid post

Conclusion

The route for Trichy Terminal (T.N) To BARAKATH AGENCIES is generally manageable but poses several risks, particularly during the monsoon season. Proper planning, adherence to regulations, and awareness of potential hazards can significantly mitigate these risks.

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- **Risk Assessment - Sharp Turns**

Risk Type	Risk Level	Coordination	Distance From Start	Recommendation Speed
Sharp turn	Medium	10.769517372474736, 78.83735063199906	650 M	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.76584461192607, 78.8361700257199	1.1 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.764182189802032, 78.83459588401435	1.3 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.75826698538096, 78.83349398474651	2 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.756372549032195, 78.83034570133539	2.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.751346435623256, 78.8252297405902	3.2 KM	10km/hr TO 15 Km/Hr
Sharp turn	High	10.749451955814655, 78.83046376176118	3.8 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.739322086318483, 78.83809834927386	5.2 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.73638358720799, 78.85765706064745	7.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.733122814995076, 78.87540261560731	9.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.730613315581481, 78.9075879625983	12.9 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.723935824957472, 78.92931083702165	15.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.720496466902269, 78.93941529718165	16.6 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.718227178328238, 78.94244663522967	17 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.716915238110442, 78.94868974811423	17.7 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.717034532262224, 78.95121165756625	18 KM	20km/hr TO 30 Km/Hr

JOURNEY RISK MANAGEMENT REPORT

Sharp turn	High	10.717266449544763, 78.95436593524407	18.3 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.720766270598597, 78.96376439526372	19.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.71945911325298, 78.96003076046141	19.9 KM	10km/hr TO 15 Km/Hr
Sharp turn	High	10.718657949508776, 78.95859309648579	20.1 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.717241891210914, 78.95508572420601	20.5 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.716950198660903, 78.95453759661429	20.6 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.71088808615262, 78.9558416688753	21.3 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.710656163985194, 78.95781577463286	21.5 KM	10km/hr TO 15 Km/Hr
Sharp turn	High	10.708611024458909, 78.95824492805842	21.7 KM	10km/hr TO 15 Km/Hr
Sharp turn	High	10.672882868891097, 78.98920221330918	27 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.668686633204702, 78.98958845139218	27.5 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.66839141846377, 78.98960990906346	27.6 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.643015219065195, 78.99498654103147	30.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.625206404186365, 78.99565428827928	32.4 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.62478460858532, 78.9957401189644	32.5 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.574357794339809, 79.01368001472272	38.5 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.573825676264207, 79.01064867667473	38.9 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.555280810368673, 78.99235389940597	41.4 KM	20km/hr TO 30 Km/Hr

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Sharp turn	High	10.55375530802717, 78.98932256135797	42.2 KM	10km/hr TO 15 Km/Hr
Sharp turn	High	10.546659848677978, 78.98491990351165	43.2 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.536473949790345, 78.97096810505661	45.1 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.412339485186124, 78.78920089118412	52.7 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.335665002605996, 78.77101286261642	61.8 KM	20km/hr TO 30 Km/Hr
Sharp turn	High	10.330166446394514, 78.7714595409741	62.4 KM	10km/hr TO 15 Km/Hr
Sharp turn	Medium	10.33607715138335, 78.75257678995929	64.7 KM	20km/hr TO 30 Km/Hr
Sharp turn	Medium	10.32256680524487, 78.72802921364006	67.9	20km/hr TO 30 Km/Hr

**IOCL TIRCHY TERMINAL (10.7753, 78.8368) TO BARAKATH AGENCIES
(10.31137 , 78.668103) TOTAL DISTANCE – 66.8 KM**

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JOURNEY RISK MANAGEMENT REPORT



IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.769073692604486,
78.83720120889187



IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI:
10.764113439530249, 78.83446118711721

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.758209570013967,
78.83344387884853**



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.751314343624747,
78.82530656733346**

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JOURNEY RISK MANAGEMENT REPORT



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.75126610223314,
78.82518044583597**



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.749591316479634,
78.83018387464983**

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.749104378396837,
78.83128038055115**



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI:
10.739027364156707, 78.83807729846241**

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10.723600498494587, 78.92918549372726



IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.716821349530969,
78.95251175926562

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IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.711197851415859,
78.95596724397815

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.600833535970231,
78.76120460878047**



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.699496414281612,
78.73237308824935**

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IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.692360156306822,
78.79247909334298



IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.329569956553442,
78.77141468463395

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.329713399680223,
78.76810876871559**

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.334199076303689,
78.75582058532736**

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**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.322200316699462,
78.72867930039916**

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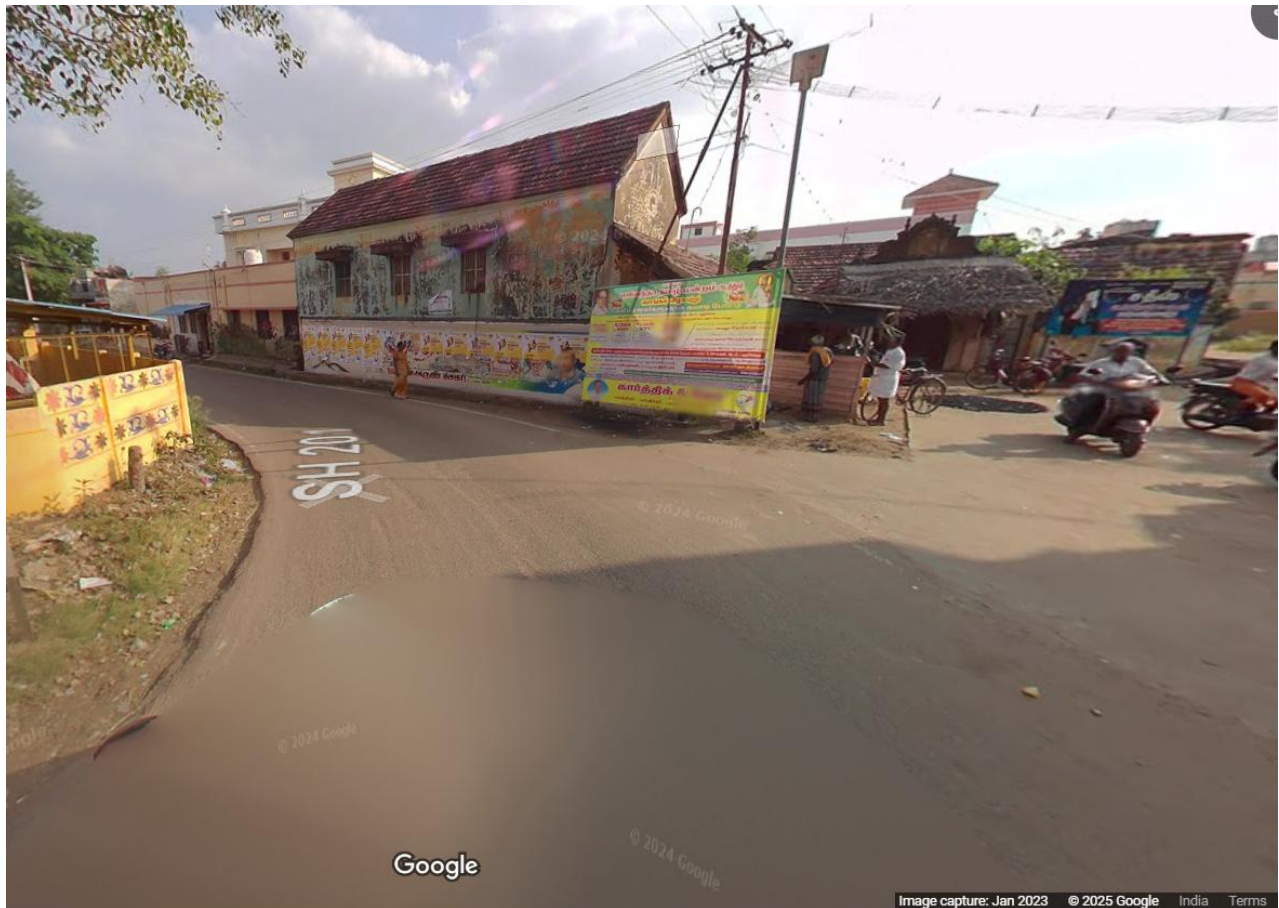


IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.322703706017208,
78.72263223185749

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JOURNEY RISK MANAGEMENT REPORT



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.323823738244002,
78.7189778906588**

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JOURNEY RISK MANAGEMENT REPORT



IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.312320549998391,
78.67421709934955

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JOURNEY RISK MANAGEMENT REPORT



**IMAGE :- SHARP TURN RISK LEVEL :- HIGH COORDI: 10.311498351787161,
78.6680352177619**

THANK YOU

YOUR DESTINATION IS HERE!

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