

Development of Highway-side Truck Terminals to Prevent Fatal Accidents due to Illegal Roadside Parking

A Flagship Road Safety & Logistics Reform Initiative of Government of Odisha



1. Background & Problem Analysis

Illegal roadside parking of **Heavy Motor Vehicles (HMVs)** along **National and State Highways** has emerged as a **silent but deadly contributor to road fatalities**, particularly during **night-time and low-visibility conditions**.

Odisha-specific Evidence (Last 3 Years)

- **2,194 road accidents** occurred due to collision with parked vehicles
- **914 fatalities** recorded
- Parked-vehicle crashes account for a **disproportionately high share of night-time deaths**, despite relatively fewer incidents compared to moving-vehicle crashes

Typical Risk Factors Identified

- High-speed vehicles colliding with **stationary trucks parked on carriageway/shoulder**
- Poor illumination, lack of **retro-reflective markings**
- Long-haul drivers forced to park unsafely due to **absence of authorised resting & parking infrastructure**

At the national level, accident analysis by **Ministry of Road Transport & Highways (MoRTH)** consistently shows that:

- **Stationary/parked vehicle crashes contribute disproportionately to fatal outcomes**
- **Night-time highway crashes (6 PM – 6 AM)** account for **over 55% of highway fatalities**, even though traffic volumes are lower

This establishes that **enforcement alone cannot solve the problem**; **infrastructure-based preventive intervention** is essential.

2. Strategic Rationale: Why Truck Terminals?

Roadside truck parking is **not a behavioural issue alone**, but a **systemic infrastructure gap**.

Truck drivers often:

- Drive continuously for long hours due to delivery pressures
- Have **no safe, legal alternative** for rest or night halt
- Are compelled to park on shoulders or service roads, exposing other road users to fatal rear-end crashes

Hence, the **Government of Odisha** adopted a **structural road safety solution**, rather than relying only on challans, towing, or penalties.

3. Odisha's Intervention: State-Funded Truck Terminal Programme

Salient Features

- **24 Truck Terminals** planned across **19 districts**
- Located along **high-density freight corridors** on NH & SH networks
- Fully funded under **State Budget** as a **road safety investment**
- Explicit objective: **Elimination of unauthorised highway-side truck parking**

Policy Alignment

- MoRTH Road Safety Action Plan
- National Logistics Policy
- Vision Zero (elimination of preventable fatalities)

This positions Odisha as a **State that treats road safety as infrastructure, not enforcement alone**.

4. Road Safety Impact Mechanism (Analytical Explanation)

The intervention breaks the **crash causation chain** at source:

- ✓ **Removes stationary trucks** from carriageway & shoulders
- ✓ Prevents **high-severity rear-end collisions** at night
- ✓ Reduces **driver fatigue & microsleep** risks
- ✓ Improves **Lane discipline, sight distance & traffic flow**
- ✓ Lowers burden on police, emergency & trauma care systems

Expected Outcome:

A **substantial and sustained reduction** in fatal highway crashes caused by collision with parked vehicles.

5. Facilities: Safety Through Driver Welfare

Each Truck Terminal is designed as a **Highway Safety & Logistics Hub**, not merely a parking yard.

Planned Amenities

- Dedicated **HGV parking bays**
- Dormitories / resting rooms for drivers
- Toilets, bathing & drinking water
- Food courts / Dhaba
- **Primary health care & emergency response**
- Repair garages & tyre shops
- Fuel stations and **EV charging** (where feasible)
- Driver training & skill-upgradation facilities

Evidence-based insight:

MoRTH and international studies confirm that **driver fatigue, dehydration, and sleep deprivation** significantly increase crash risk—making welfare infrastructure a **direct safety intervention**.

6. Institutional Framework & Professional Execution

To ensure **technical robustness and sustainability**, the **State Transport Authority, Odisha** has entered into an MoU with **National Highways Logistics Management Limited (NHLML)**, a wholly owned entity of **National Highways Authority of India (NHAI)**.

Scope of NHLML

- Feasibility assessment & site planning
- Development & O&M structuring
- Transparent bidding under MoRTH models
- Escrow-based revenue sharing
- Compliance with national SOPs for wayside amenities

This ensures **institutional credibility and replicability**.

7. Implementation Status (Updated & Analytical)

- O&M contracts floated for **13 Truck Terminals**
- **DBOT model** adopted for **5 terminals**
- Engagement initiated with **Oil PSUs (IOCL, BPCL, HPCL)** to leverage their highway service expertise and operational efficiency

8. Financial Analysis & Justification

- **Approximate cost per terminal:** ₹25 crore
- Cost justified by:
 - High **fatality-reduction potential**
 - Reduced enforcement, towing & accident response costs
 - Improved logistics efficiency & freight reliability
 - Long-term socio-economic savings from avoided fatalities

Road safety economics principle:

Even a **10–15% reduction in fatal highway crashes** yields benefits far exceeding capital investment.

9. Innovation, Best Practice & Replicability



Transport Nagar: A Vital Hub

Odisha's initiative is among the **few State-led structured programmes** in India that:

- Directly targets **parked-vehicle fatalities**
- Integrates **road safety + logistics + driver welfare**
- Uses **institutional partnerships** rather than ad-hoc facilities

The model is **scalable and adaptable** for other States and freight corridors.

10. Conclusion

By systematically removing unauthorised roadside truck parking and replacing it with **safe, dignified, and well-managed infrastructure**, Odisha is addressing a **major yet under-recognised cause of highway fatalities**.

The **Truck Terminal Development Programme** represents a **forward-looking, evidence-based road safety best practice** with clear national relevance.

This initiative will be showcased by the **Principal Secretary, Government of Odisha** at the **Transport Development Council Meeting** organised by **MoRTH**, for information and possible adoption by other States.