



SYRIAN MINISTRY OF ENERGY

PUBLIC ESTABLISHMENT FOR TRANSMISSION AND
DISTRIBUTION OF ELECTRICITY (PETDE)

SYRIA EMERGENCY ELECTRICITY PROJECT (SEEP)

Annex E - Traffic Management Plan (TMP)

Final

January 2026

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LIST OF ACRONYMS & GLOSSARY

Acronym	Full Term	Brief Definition / Relevance to TMP
CHSP	Community Health and Safety Plan	Plan addressing non-traffic community safety measures at work fronts (barriers, lighting, exclusion zones). Interfaces closely with TMP.

Acronym	Full Term	Brief Definition / Relevance to TMP
CESMP	Construction Environmental and Social Management Plan	Contractor's integrated E&S management plan for construction; must incorporate and operationalize this TMP.
DESMP	Decommissioning Environmental and Social Management Plan	Plan for dismantling/clearance phase; includes a Decommissioning TMP for load-out and traffic controls.
EBRD	European Bank for Reconstruction and Development	Reference for worker accommodation / transport GIIP where relevant.
EHS	Environment, Health and Safety	Collective term for environmental, health, and safety management requirements.
EMF	Electromagnetic Fields	Exposure associated with OHTLs/substations (linked to CHSP, not directly to TMP).
EPC	Engineering, Procurement and Construction Contractor	Main works contractor(s) responsible for preparing and implementing package-specific TMPs under this framework.
ERW/UXO	Explosive Remnants of War / Unexploded Ordnance	Legacy munitions potentially affecting access corridors; controlled via ERW clearance + certificates by UNMAS and ERW Chance-Finds Procedure.
ESCP	Environmental and Social Commitment Plan	Binding commitments between GoS and World Bank; requires implementation of TMP and related CHSS controls.
ESF	Environmental and Social Framework (World Bank)	WB policy framework (ESS1–ESS10) guiding E&S management for SEEP.
ESIA	Environmental and Social Impact Assessment	Core assessment for SEEP; Chapter 22 (CHSS) and Chapter 26 (ESMIP) define TMP-related commitments.
ESMIP	Environmental and Social Management Implementation Plan	ESIA Chapter 26 matrix consolidating control plans, KPIs and monitoring, including TMP requirements.
ESS	Environmental and Social Standard	Individual standards under WB ESF (ESS4 is primary for traffic and community safety).
GBV / SEA/SH	Gender-Based Violence / Sexual Exploitation and Abuse / Sexual Harassment	Risks linked to worker transport, routing and stops; controlled under SEA/SH Action Plan and SEA/SH-sensitive routing.
GIIP	Good International Industry Practice	Internationally recognized good practice (e.g., WBG EHS Guidelines) applied to traffic and road safety.
GM	Grievance Mechanism	Community and worker mechanisms to receive, track, and resolve complaints, including traffic and road-safety concerns.
HM/WMP	Hazardous Materials & Waste Management Plan	SEEP Annex on hazardous materials/waste; interfaces with TMP for transport of hazardous materials (e.g., oils, SF ₆ , PCBs).
HSE	Health, Safety and Environment	Contractor and PETDE organizational functions responsible for implementing the TMP.
IFC	International Finance Corporation	Provides relevant GIIP (e.g., EHS Guidelines; worker accommodation/transport guidance).
LMP	Labor Management Procedures	Plan governing worker conditions, including safe transport to/from work sites.

Acronym	Full Term	Brief Definition / Relevance to TMP
NTS/TS	Non-Technical Survey / Technical Survey	ERW survey stages used to classify and clear work and access corridors.
OESMP	Operational Environmental and Social Management Plan	PETDE's plan for operational phase; includes Maintenance TMP provisions.
OHTL	Overhead Transmission Line	400/230 kV lines under SEEP; associated with linear access and haul routes.
OE	Owner's Engineer / Supervision Consultant	Entity providing technical and E&S supervision; reviews and audits TMP implementation.
O&M	Operation and Maintenance	PETDE's post-construction activities; require a simplified Maintenance TMP.
PETDE	Public Establishment for Transmission and Distribution of Electricity	Implementing Agency responsible for SEEP implementation and TMP oversight.
PMT	Project Management Team	PETDE's dedicated team coordinating ESMP/TMP implementation, monitoring and reporting.
PPE	Personal Protective Equipment	Includes high-visibility clothing required for traffic marshals and road workers.
ROW	Right-of-Way	Corridor for OHTLs, defined by national norms; includes tracks and access paths.
SEP	Stakeholder Engagement Plan	Defines engagement and notification processes, including traffic notices and road-access coordination.
SMP	Security Management Plan	ESS4-aligned plan for any security personnel; TMP must be consistent with SMP when convoys/escorts are used.
TMP	Traffic Management Plan	This plan; defines controls for project-related traffic on and off site.
WB / WBG	World Bank / World Bank Group	Financier and issuer of ESF and General/sector EHS Guidelines.

1. PURPOSE AND SCOPE

This Traffic Management Plan (TMP) sets out the minimum requirements for planning, controlling, and monitoring all SEEP-related traffic to protect communities, workers, and other road users during rehabilitation and operation of 400/230 kV Overhead Transmission Lines (OHTLs) and existing substations in Syria.

It operationalizes the commitments and mitigation measures contained in the SEEP ESIA—specifically Community Health, Safety and Security (Chapter 22) and the ESMIP (Chapter 26), which explicitly requires implementation of a Traffic Management Plan for “traffic interface with communities.”

The TMP:

- Applies to all project phases, with emphasis on construction:
 - Pre-construction and mobilization.
 - Construction and commissioning for OHTLs and substations.
 - Operation and routine maintenance (Maintenance TMP).
 - Decommissioning or major dismantling (Decommissioning TMP).
- Covers all SEEP-related traffic, including:
 - Heavy and light vehicles, cranes, low-bed trailers, fuel and waste trucks, buses, pickups, and motorcycles used by Engineering, Procurement and Construction Contractor (EPC) Contractors, subcontractors, Public Establishment for Transmission and Distribution of Electricity (PETDE), Owner's Engineer (OE) and third parties acting on their behalf.
 - Movements to/from and within substations, OHTL Right-of-Ways (ROWs), laydown areas, camps, and Explosive Remnants of War (ERW)-cleared access corridors.
 - Transport of materials, hazardous substances, wastes, equipment (including transformers and abnormal loads), and workers.
- Applies on:
 - Public roads (national highways, governorate and municipal roads).
 - Unpaved roads/tracks and temporary access routes opened for SEEP.
 - Internal substation roads and worksites.

Contractors will prepare package-specific TMPs (within their Construction Environmental and Social Management Plans (CESMPs)), and PETDE will maintain a Maintenance TMP within the OESMP to cover Operation and Maintenance (O&M) traffic. This TMP provides the overarching framework and minimum requirements.

2. OBJECTIVES

The objectives of the TMP are to:

- Prevent fatalities and serious injuries from SEEP-related traffic accidents involving workers, community members, and other road users.

- Minimize traffic conflicts, near-misses, and property damage along haul routes, access roads, and inside substations and work fronts.
- Maintain safe access to homes, businesses, farms, schools, clinics, and markets during construction and maintenance, with particular attention to vulnerable groups (children, older people, persons with disabilities, IDPs, and women/girls).
- Comply with Syrian traffic legislation and road-access regulations, as well as World Bank (WB) ESF, World Bank Group (WBG) Environment, Health and Safety (EHS) Guidelines, and GIIP for traffic and road safety.
- Implement ESIA CHSS mitigation measures and ESMIP KPIs for traffic interface with communities, including:
 - 0 project-related traffic fatalities.
 - Traffic Police liaison where required.
 - 100% of required traffic controls in place at active work fronts.
 - Speed compliance at spot checks.
- Integrate traffic risk management with:
 - OHS Plan and Community Health and Safety Plan (CHSP).
 - ERW risk management arrangements (safe corridors).
 - Security Management Plan (SMP).
 - SEA/SH Action Plan.
 - Community and worker GMs and Stakeholder Engagement Plan (SEP).

3. APPLICABLE LEGAL AND STANDARDS FRAMEWORK

3.1 SYRIAN LEGISLATION (AS APPLICABLE)

The TMP will be implemented in compliance with relevant Syrian laws and standards, including inter alia:

- Traffic & Vehicles Law No. 31 (2004, amended 2008)
- Establishes rules for licensing of drivers and vehicles, speed limits, road-safety obligations, signage for work zones, and requirements for escorts/permits for abnormal loads.
- Law No. 26 (Roads Classification & Protection, 2006)
 - Classifies public roads, sets load limits, road-occupancy conditions, and permit requirements for heavy-haul convoys transporting large transformers and equipment.
- Decision No. 818 (2013) – ESIA Executive Procedures
 - Requires implementation of mitigation and monitoring measures identified in the ESIA/ESMP, including traffic-management and community-safety controls.
- Environmental standards relevant to traffic (applied where road works or traffic cause emissions/noise):
 - National Ambient Air Quality Standard No. 2883 (2011) – dust and vehicle emissions.
 - Maximum Permissible Ambient Noise Levels No. 3829 (2003) – noise along transport routes.
 - Syrian Drinking-Water Standard No. 45 (2007) and Treated Waste-water for Irrigation No. 2752 (2003) – relevant when treated wastewater is used for dust suppression.

Contractors must ensure all required permits, notifications, and escorts are obtained from the Ministry of Transport, Traffic Police, and relevant local authorities for heavy/abnormal loads, road closures, and diversions.

3.2 WORLD BANK ESF

Key WB ESF standards guiding this TMP include:

- ESS1 – Assessment and Management of Environmental and Social Risks and Impacts
 - Requires systematic assessment of traffic risks and integration into ESMPs and CESMPs.
- ESS2 – Labor and Working Conditions
 - Requires protection of workers' health and safety during transport (journey management, driver fatigue, safe vehicles).
- ESS3 – Resource Efficiency and Pollution Prevention and Management
 - Applies to emissions/dust generated by vehicles and construction traffic.
- ESS4 – Community Health and Safety
 - Core standard for traffic and road safety, security, and ERW risks; CHSS chapter and ESMIP explicitly call for a TMP and Maintenance TMP.
- ESS10 – Stakeholder Engagement and Information Disclosure
 - Requires timely notification of road closures, diversions, and access constraints; use of GMs for traffic complaints.

3.3 WBG EHS GUIDELINES

The TMP is aligned with:

- WBG General EHS Guidelines (2007)
 - Traffic safety, occupational road safety, and community safety sections.
- EHS Guidelines for Electric Power Transmission and Distribution
 - Traffic and access management for line and substation works, particularly in populated areas.
- IFC/ European Bank for Reconstruction and Development (EBRD) Worker Accommodation guidance (2009)
 - Interfaces with worker transport arrangements and buses between camps and worksites.

Where national requirements differ from WBG EHS Guidelines, the project will apply the more stringent provisions consistent with ESIA commitments.

3.4 SEEP ESIA, ESMPs AND OTHER E&S INSTRUMENTS

- SEEP ESIA:
 - CHSS baseline and impact assessment, highlighting damaged roads, mixed pedestrian/vehicle use, and the need for traffic-safety plans.
 - Impact/mitigation tables (Table 22-2 to 22-6) specifying TMP, CHSP, SEP, and SMP controls.
 - ESMIP matrix (Table 22-8) and CHSS monitoring plan (Table 22-3) defining TMP-related KPIs and monitoring frequencies.

- ESMPs for OHTLs and Substations (Annex A & Annex B), which already identify “Traffic Management Plan” as a core control for community health, safety and traffic.
- Other SEEP instruments:
 - Occupational Health and Safety Plan (OHSP) and CHSP (CHSS controls).
 - HM/WMP (for hazardous materials and waste transport).
 - ERW risk management arrangements and associated Non-Technical Survey / Technical Survey (NTS/TS) and safe-corridor procedures as well as ERW Chance-Finds Procedure.
 - Security Management Plan (SMP).
 - LMP and Code of Conduct, including SEA/SH Action Plan.
 - SEP and community/worker GMs.
 - OESMP for operation and Maintenance TMP.

4. ROLES AND RESPONSIBILITIES

4.1 INSTITUTIONAL OVERVIEW

Traffic management is a shared responsibility. PETDE/ Project Management Team (PMT) retains overall accountability for TMP implementation and compliance with the ESIA/ESMP and ESCP, while EPC Contractors are responsible for day-to-day execution on their work fronts, including subcontractor oversight. The OE provides supervision and assurance; PETDE O&M takes over TMP implementation for operation and maintenance.

4.2 RESPONSIBILITIES BY ENTITY

Table 4-1 defines the division of responsibilities for Traffic Management Plan implementation across PETDE/PMT, PETDE O&M, EPC Contractors, subcontractors, the Owner’s Engineer, ERW and security providers, and relevant authorities. It clarifies who does what in planning, executing, supervising, and reporting traffic and road-safety controls so that ESIA/ESMP commitments and WB ESF requirements are consistently met across all SEEP components and phases.

Table 4-1. Roles and Responsibilities for TMP Implementation

Entity / Role	Key TMP Responsibilities
PETDE / PMT	<ul style="list-style-type: none"> - Overall accountability for TMP implementation and compliance with ESIA/ESMP, ESCP and WB ESF. - Ensure this TMP is annexed to bidding documents and contracts for all SEEP packages (OHTLs and substations). - Require each EPC Contractor to prepare a package-specific TMP as part of its CESMP, aligned with this Annex and ESIA commitments. - Review and approve contractor TMPs (with OE support) before mobilization; require revisions where gaps are identified. - Coordinate with Ministry of Transport, Traffic Police, municipalities and governorates on permits, abnormal loads, and road-occupancy arrangements. - Consolidate traffic-related monitoring data (KPIs, incidents, grievances) and report to the World Bank through periodic E&S reports and immediate serious-incident notifications.

	<ul style="list-style-type: none"> - Convene coordination meetings with municipalities and other projects to manage cumulative traffic impacts, as recommended in ESIA Table 22-7.
PETDE O&M	<ul style="list-style-type: none"> - Develop and implement a Maintenance TMP for O&M activities in the OESMP, consistent with this Annex and ESIA operational CHSS controls. - Ensure PETDE maintenance crews and vehicles comply with the Maintenance TMP (speed limits, controls at short-duration works, signage, spotters). - Maintain records of maintenance-phase journeys, controls, and incidents; integrate CHSS-related complaints into the project GM and operational monitoring.
EPC Contractors	<ul style="list-style-type: none"> - Prepare and implement a detailed, site-specific Construction TMP for each contract package (OHTLs and/or substations), aligned with this Annex, the ESMPs and ESIA commitments. - Conduct route surveys and risk assessments for all haul routes and access roads; classify segments by risk. - Define and implement traffic controls at work fronts and along haul routes (signage, speed limits, flaggers, barriers, pedestrian routing, etc.). - Nominate a Traffic Supervisor (or Logistic Manager with traffic responsibilities) for each package. - Ensure subcontractors and hired transport providers fully comply with the TMP; include TMP clauses in subcontracts. - Maintain a Traffic and CHSS Incident Register and report incidents and near-misses to PETDE/PMT and OE; investigate and implement corrective actions. - Coordinate with PETDE Social Team on community notifications, access arrangements and GM handling for traffic-related complaints.
Subcontractors and Transport Providers	<ul style="list-style-type: none"> - Comply with the Contractor TMP and national laws. - Ensure drivers are duly licensed, trained and briefed; vehicles are roadworthy and appropriately insured. - Allow contractor and PETDE audits and spot checks; cooperate fully in investigations and corrective actions.
Owner's Engineer (OE)	<ul style="list-style-type: none"> - Support PETDE/PMT in reviewing and clearing contractor TMPs and any significant updates. - Monitor contractor TMP implementation through site inspections, audits and review of traffic KPIs and incident registers. - Advise on additional controls where risks are higher than anticipated or residual incidents occur.
Contractor Traffic Supervisor	<ul style="list-style-type: none"> - Manage daily implementation of the TMP for each work front/segment. - Ensure appropriate placement and maintenance of signs, barriers, speed-limit markings, and pedestrian routes. - Organize and supervise flaggers/banksmen, convoy movements, and lane closures. - Conduct and document daily traffic-control inspections and weekly speed-check spot checks, consistent with ESIA monitoring.
Contractor HSE Manager / Site Managers	<ul style="list-style-type: none"> - Integrate TMP requirements into Job Safety Analyses, method statements and site-specific risk assessments. - Ensure workers and drivers receive induction and refresher training on traffic hazards and controls. - Lead or support incident investigations and lessons-learned dissemination.
Community Liaison Officers (Contractor / PETDE)	<ul style="list-style-type: none"> - Coordinate with local leaders, municipalities, schools/clinics and affected households on road closures, diversions, and access arrangements. - Implement SEP notice protocols (≥48–72 hours advance notice for significant disruptions). - Register and follow up on traffic-related grievances through the community GM.

Accredited ERW / EOD Organization (UNMAS)	<ul style="list-style-type: none"> - Classify ERW risks for each new front and access corridor (NTS/TS). - Define cleared and restricted corridors; the TMP must adhere to these and prohibit off-route driving in suspect areas.
Security Provider / Security Focal Points	<ul style="list-style-type: none"> - Ensure security escorts and vehicles comply with this TMP (speed limits, routing, no intimidation of communities). - Coordinate with SMP and TMP to avoid unnecessary convoy presence near sensitive receptors and to manage check-points appropriately.
Traffic Police and Local Authorities	<ul style="list-style-type: none"> - Issue permits and approvals for abnormal loads, road-occupancy and diversions. - Coordinate with PETDE and contractors on convoy timing, alternative routes, and joint public information where needed. - Support enforcement of speed limits and traffic rules.

5. TRAFFIC RISK SAFETY

5.1 METHODOLOGY

Contractor-specific TMPs will be underpinned by a traffic risk assessment that:

- Identifies key hazards along all relevant routes and at work fronts.
- Considers sensitivity of receptors (e.g. villages, schools, markets, IDP settlements).
- Assesses likelihood and consequence to derive qualitative risk levels (e.g., Low, Medium, High) consistent with the ESIA.
- Proposes control measures per Sections 6–9 and integrates them into method statements and journey plans.
- Is updated when conditions change (seasonal changes, new fronts, concurrent projects, security/ERW conditions).

5.2 OHTL-SPECIFIC TRAFFIC RISKS

Key risks associated with OHTL packages include:

- Movement of stringing equipment, cranes, concrete trucks, and material trucks along narrow rural roads and village streets.
- Use of unpaved or degraded roads with potholes, erosion, or debris, increasing rollover and loss-of-control risks.
- Shared roads with pedestrians, cyclists, children, livestock and informal vehicles (motorcycles, tractors).
- Temporary blockage or partial closure of local roads during tower construction, conductor stringing, or crane operations.
- Limited sight distances at curves, crests and junctions; absence of existing signage or formal traffic controls.
- Short work windows during which multiple heavy vehicles move in quick succession.

5.3 SUBSTATION ACCESS AND INTERNAL TRAFFIC RISKS

Within and near substations, key risks include:

- Heavy lifting and maneuvering of transformers and equipment in confined yards with limited turning radii.
- Reversing of vehicles and plant, with potential for pedestrian strikes.
- Congestion in combined laydown, parking and work areas.
- Interface between public roads and substation access roads (gate areas).

5.4 COMMUNITY TRAFFIC INTERFACE AND VULNERABLE GROUPS

Risks at the community interface include:

- Vehicle-pedestrian conflicts near schools, clinics, markets and mosques.
- Children playing near access roads or intrigued by construction vehicles.
- Older persons and persons with disabilities requiring longer crossing times.
- IDPs and returnees walking along road shoulders where footpaths are absent.
- Women and girls experiencing heightened anxiety or SEA/SH risks around worker convoys, drop-off points, and bus stops.

The ESIA identifies these locations as High-sensitivity receptors requiring dedicated TMP and CHSP controls (safe crossings, marshals, accessible routing and communications).

5.5 URBAN/PERI-URBAN VS RURAL/REMOTE RISKS

- Urban/peri-urban segments (e.g., around some substations and villages along OHTLs):
 - Lower speeds but higher density of pedestrians, shops, junctions, and parked vehicles.
 - Greater SEA/SH and nuisance concerns if worker transport or security vehicles congregate in neighborhoods.
- Rural/remote segments:
 - Fewer pedestrians but higher speeds and poorer road conditions.
 - Delayed emergency response times in case of accidents.
 - Increased Explosive Remnants of War / Unexploded Ordnance (ERW/UXO) risk where off-road driving or new tracks are considered.

5.6 UXO/ERW-RELATED ACCESS CONSTRAINTS

ERW/UXO presence can significantly constrain route options. Per the ERW RMP and ESMIP:

- All new fronts and access routes must undergo NTS/TS classification by an accredited EOD organization (UNMAS).
- Only cleared and approved corridors may be used; off-route driving in suspect areas is prohibited.
- Parking, lay-bys and turn-round areas must be within cleared zones.
- ERW awareness (EORE) for drivers and traffic marshals is mandatory.

5.7 SUMMARY RISK MATRIX

Table 5-1 provides an overview of the typical traffic-related hazards, sensitive receptors, and pre-mitigation risk levels expected across different SEEP contexts, ranging from village

segments and community facilities to rural access tracks, substation approaches, internal yards, and ERW-constrained areas. It helps prioritize where enhanced controls are required and guides contractors in tailoring site-specific TMP measures to the actual risk environment.

Table 5-1. Illustrative Traffic Risk Matrix by Context

Context / Location Type	Key Hazards	Main Receptors	Pre-Mitigation Risk (Qualitative)	Key Control References
Village segments along haul routes	Speeding, mixed traffic, uncontrolled crossings, parked vehicles	Residents, shop customers, children	High	- Sections 6.2-6.4, 6.5, 6.8 - CHSP - SEP
Access roads near schools/clinics/markets	Peak-hour congestion, children and patients crossing	Children, patients, older persons, PwD	High	- Sections 6.3, 6.4, 6.5, 6.8 - CHSP - SEA/SH Plan
Rural unpaved roads and tracks	Poor surface, limited visibility, livestock, off-road shortcuts	Drivers, passengers, livestock owners	Medium-High	- Sections 6.1-6.4, 6.7, 7, 8
Approach to substations	Turning across traffic, queuing trucks, poor signage	Road users, substation neighbors	Medium	- Sections 6.1-6.5, 6.10
Internal substation yards	Reversing, blind spots, interaction with pedestrians	Workers, visiting staff	High	- Sections 6.1, 6.5, 7 - OHSP
New access tracks in ERW-suspect areas	Off-route driving into uncleared zones	Drivers, passengers	High	- Sections 5.6, 6.1, 9.1 - ERW RMP

6. TRAFFIC CONTROLS

6.1 ACCESS ROAD HIERARCHY AND CONDITIONS

Contractor TMPs must classify and map a hierarchy of roads:

- Primary haul route: main paved roads/highways used to transport heavy loads between depots, ports, and governorates.
- Secondary access roads: smaller paved or unpaved roads connecting primary routes to substations, laydown areas, or OHTL fronts.
- Tertiary tracks / temporary access routes: unpaved tracks and any new access opened within the ROW, subject to ERW clearance and environmental restrictions.

For each segment, contractors will:

- Conduct a pre-construction condition survey (photographs, notes) to record pavement condition, shoulder width, bridges/culverts, signage, and existing traffic patterns.

- Identify hazard points (sharp curves, narrow bridges, steep grades, informal crossings, markets) and incorporate appropriate controls (speed reductions, marshals, signage).
- Agree the network and any needed upgrades/reinforcements with PETDE/PMT and authorities; document this in a Haul Route Plan (see Section 14).

6.2 HAUL ROUTE PLANNING

Haul routes must:

- Prioritize safety and minimize interface with sensitive receptors, not purely shortest distance.
- Respect road classifications, load limits, bridge capacities, and clearances as per Law No. 26.
- Avoid, where practicable, densely populated streets, school zones, and congested markets.
- Where no reasonable alternative exists, implement enhanced controls (Section 6.5 and 6.8).

For each route, contractors will:

- Prepare a Route Risk Assessment and Haul Route Plan including:
- Map, segment descriptions, and identified hazards.
- Control measures and signage requirements.
- Emergency pull-off locations and recovery arrangements.
- Obtain required permits and escorts for abnormal loads in line with Traffic & Vehicles Law No. 31 and Law No. 26.

6.3 CONVOYS, HEAVY AND ABNORMAL LOADS

Transformers and other abnormal loads require special arrangements:

- Conduct a route survey with relevant authorities before each abnormal load movement.
- Use pilot/escort vehicles (front and rear) where required.
- Limit convoy size and spacing to avoid excessive congestion (e.g., small groups of trucks, safe spacing to maintain visibility and braking distance).
- Restrict abnormal load movements to daylight hours and, as far as practicable, off-peak traffic periods in populated areas.
- Coordinate with municipalities and Traffic Police regarding temporary parking, road closures and diversions, and joint public communication.

6.4 SPEED LIMITS

Project speed limits will apply as the more stringent of:

- National posted limits under the Traffic & Vehicles Law, and
- SEEP project limits set in this TMP.

Indicative project speed limits (subject to local adjustment and signage) are provided in Table 6-1.

Table 6-1. Indicative Project Speed Limits

Location / Road Type	Project Speed Limit (Maximum)
Inside substations, laydown yards, work fronts, camps	- 10-20 km/h (as signposted; Never > 20 km/h)
Within villages / dense residential streets	- 30 km/h - 20 km/h near schools/clinics and active work fronts
Rural paved local roads	- 60 km/h for light vehicles - 40 km/h for heavy vehicles
Main highways (where allowed by law)	- ≤ national limit, and in any case ≤ 80 km/h for light vehicles and ≤ 60 km/h for heavy vehicles
Unpaved / rough tracks	- Speed adjusted to conditions: Typically ≤ 40 km/h, lower where visibility or surface is poor

Additional rules:

- Reduce speeds by at least 50% in poor visibility (dust, rain, fog) or congested conditions.
- Approach all pedestrian crossings, junctions and sensitive receptors at crawling speed, prepared to stop.

Contractors must perform weekly speed spot checks and enforce disciplinary measures for exceeding limits, in line with ESIA CHSS monitoring.

6.5 SIGNAGE, BARRICADES AND BANKSMEN

At all active work fronts and road interfaces, contractors will:

- Install appropriate road signs (temporary where needed) including "Road Works," "Slow," "Men at Work," speed limits, and directional arrows.
- Use conspicuous barriers, cones, tape, and delineators to separate work zones from traffic lanes and pedestrian routes.
- Provide high-visibility clothing and stop/slow paddles for all banksmen/flaggers.
- Place warning signs and barriers sufficiently in advance of the work zone to allow braking distance appropriate to the speed limit.
- Ensure night-time visibility of barriers and signs through retro-reflective materials and/or lighting where night traffic continues past inactive but constrained zones.

Banksmen/flaggers must be present at:

- Single-lane traffic controls.
- Junctions where construction vehicles enter/exit main roads.
- Crossings near schools, clinics, markets during work hours.

Any location with poor sight distance where heavy vehicles maneuver or reverse.

6.6 ROAD SHOULDERS, TURNING RADII AND BLIND CURVES

Where heavy vehicles and cranes will be used:

- Assess turning radii and, if needed, construct temporary turning areas or widen corners (with landowner consent and environmental controls).

- Stabilize and, where necessary, widen road shoulders used for parking or passing.
- Prohibit parking in blind-curve zones, crests, or other high-risk points.
- Use temporary mirrors or look-outs at compound exits with restricted sight lines.

6.7 DUST CONTROL AND VISIBILITY

To maintain visibility and minimize nuisance:

- Apply dust suppression on unpaved haul roads and tracks using water that meets relevant quality criteria (e.g., treated wastewater where used must comply with national reuse standards and HM/WMP requirements).
- Limit vehicle speed on dusty roads (Section 6.4).
- Maintain vehicle lights, wipers and windows in good condition.
- Avoid convoy driving that generates prolonged dust clouds around following vehicles.

6.8 COMMUNITY WARNINGS, ENGAGEMENT AND ACCESS

Consistent with the SEP and ESIA ESMIP:

- Provide advance notice (≥ 48 -72 hours) for any works causing road closures, diversions, or significant access constraints.
- Use locally appropriate channels: local leaders, mosques, community boards, mobile messaging, and house-to-house notifications for directly affected households.
- Develop access management plans for schools, clinics, businesses and farms to ensure safe entry/exit during works.
- Conduct brief community outreach around high-risk locations, especially to children and guardians, on safe behavior near heavy vehicles and work zones.
- Ensure traffic-related grievances can be raised through the community GM, with targets of $\geq 90\%$ CHSS-related grievances (including traffic complaints) closed within 30 days.

6.9 NIGHT-TIME DRIVING RESTRICTIONS

To reduce risks and noise, and consistent with ESIA guidance:

- Limit routine construction works in populated areas to daytime hours (e.g., 07:00–19:00).
- Avoid night-time heavy haulage through settlements unless strictly necessary and approved by PETDE/PMT and authorities, with reinforced controls (lighting, marshals, community notification).
- Night driving in remote areas may be allowed where security or logistics require, but only with:
 - Two-vehicle rule (convoys); functioning lights; appropriate communications.
 - Reduced speed limits and heightened vigilance for wildlife and pedestrians.

6.10 MANAGEMENT OF CROSSINGS AND SHARED ROADS

Where OHTLs crossroads or tracks, or where works temporarily occupy public roads:

- Implement safe crossings with marshals and clearly marked pedestrian routes.
- Use portable barriers and cones to demarcate areas under overhead work or lifting.

- Where possible, stage works in short windows with rapid set-up/clear-down to minimize road-occupancy times.
- Provide alternative routes or safe passage for pedestrians and non-project vehicles where direct routes are blocked.

7. DRIVER AND VEHICLE REQUIREMENTS

7.1 LICENSING AND RECRUITMENT

- All drivers must hold a valid Syrian driving license appropriate for the vehicle class; evidence must be recorded by contractors.
- Drivers of heavy goods vehicles, cranes, buses and abnormal loads must have demonstrable experience and, where applicable, additional permits/certifications.
- Subcontractors must provide lists of drivers and license details; unlicensed or suspended drivers are prohibited.

7.2 COMPETENCY AND TRAINING

- All drivers will receive project-specific induction covering:
 - TMP requirements and route-specific hazards.
 - Speed limits and defensive driving.
 - Rules on pedestrians, schools, markets, livestock, and vulnerable groups.
 - ERW/UXO awareness relevant to corridors (EORE).
- Annual refresher training and targeted toolbox talks (e.g., before new haul routes or seasonal risk changes) will be conducted.

7.3 FATIGUE MANAGEMENT

- Maximum continuous driving time without a break: typically 2 hours, followed by at least a 15-minute rest.
- Maximum total driving time per day: normally ≤ 10 hours, including breaks.
- Night-time driving (where permitted) must be tightly controlled; no driver may operate vehicles for extended hours beyond national labor law and ESS2-aligned good practice.
- Drivers must report any fatigue or health issues; supervisors must adjust assignments accordingly.

7.4 VEHICLE INSPECTION AND ROADWORTHINESS

- All project vehicles must undergo:
 - Daily pre-use checks by drivers (brakes, lights, tires, steering, mirrors, horn, seatbelts, conspicuity markings).
 - Periodic inspections in accordance with national roadworthiness requirements and contractor fleet policies.
- Defective vehicles must be taken out of service until repaired.

- Vehicles transporting hazardous materials or waste must meet additional HM/WMP requirements (e.g., spill kits, secondary containment, appropriate labeling).

7.5 SEATBELTS, MOBILE PHONES AND OCCUPANCY

- Seatbelts are mandatory for all occupants in all vehicles where installed.
- Use of mobile phones while driving is prohibited (including hands-free, unless unavoidable emergency communications are needed and safety is not compromised).
- Riding in open cargo beds, on roof racks or other unsafe positions is prohibited.
- Passenger limits must not exceed manufacturer specifications; buses transporting workers must not be overloaded.

7.6 SUBSTANCES AND DISCIPLINARY MEASURES

- Zero tolerance for driving under the influence of alcohol, illegal drugs or misused prescription medications.
- Contractors will apply clear disciplinary procedures, up to removal from the project, for repeated or serious traffic violations (speeding, dangerous driving, disregard of TMP).

8. JOURNEY MANAGEMENT PROCEDURES

8.1 JOURNEY RISK CLASSIFICATION

Contractors will classify journeys (and routes) as Low, Medium, or High risk based on:

- Road type/condition and length.
- Traffic density and presence of sensitive receptors.
- ERW and security context.
- Weather/season (rain, fog, dust storms).
- Load type (hazardous/abnormal vs normal).

High-risk journeys (e.g., abnormal loads, convoys through dense settlements, ERW-suspect areas with limited alternatives) will require additional planning and senior approval.

8.2 PRE-TRIP PLANNING

For all journeys, especially Medium and High risk:

- Confirm route and alternative paths (if primary route becomes untenable).
- Check weather and security conditions for the route.
- Confirm that vehicle and driver are suitable (requirements in Section 7).
- Verify permits/escorts for abnormal loads and any need for police coordination.
- Ensure adequate communication means (mobile, radio) and emergency contacts.

A Journey Management Plan / Authorization Form must be prepared for High-risk journeys (see templates in Section 14).

8.3 VEHICLE DISPATCH AND CHECK-IN/OUT

- Maintain a dispatch log recording vehicle, driver, departure time, route, destination, passengers, and expected arrival time.
- Require check-in/check-out calls or messages for long-distance or high-risk trips at pre-defined milestones.
- Escalate to supervisors if check-ins are missed or delays are unexplained.

8.4 CONTROLS FOR HIGH-RISK ROUTES

For designated High-risk routes, contractors will:

- Limit driving hours to daylight where feasible.
- Apply stricter speed limits and increased banksmen presence at critical points.
- Use two-vehicle convoys in remote/isolated areas where security allows.
- Coordinate with security providers and ERW organizations where necessary (Section 9).
- Consider rest points and driver rotation to manage fatigue.

8.5 JOURNEY MANAGEMENT PROGRAM INTERFACE

Journey management requirements are part of a wider Driver Safety and Journey Management Program referenced in the ESIA ESMIP under labor and CHSS topics.

9. INTERFACE WITH OTHER RISK AREAS

9.1 UXO/ERW CLEARANCE AND APPROVED ACCESS CORRIDORS

TMP implementation must remain fully consistent with the ERW risk management arrangements (ESIA Chapter 23, ERP and Contractor CESMPs) and associated permit-to-dig and clearance procedures:

- No off-road driving or new track opening is allowed in ERW-suspect areas without prior NTS/TS and clearance by an accredited EOD organization.
- ERW organizations will provide maps of cleared corridors, safe lay-down, parking and turn-around areas; these must be incorporated into the Haul Route Plan.
- Drivers and traffic marshals must receive ERW awareness (EORE) training and know what to do if suspicious items are observed (stop, mark, report, do not touch).

9.2 SECURITY RISK MANAGEMENT

Where security personnel or escorts are used, TMP measures must align with the Security Management Plan (SMP) and ESS4 requirements:

- Security vehicles must comply with TMP speed limits, routing, and convoy rules.
- Security presence in communities must avoid intimidation, unnecessary weapon display, or interference with public access.
- Any security incidents (e.g., confrontations at checkpoints) will be managed under both the SMP and TMP escalation procedures.

9.3 GBV/SEA/SH-SENSITIVE ROUTING AND CONTROLS

Traffic management interacts with SEA/SH risk in several ways, including worker transport to camps and worksites and routes through vulnerable communities.

Controls include:

- Designating pick-up/drop-off points that do not expose women and girls to harassment or intimidation.
- Prohibiting drivers from making unauthorized stops to interact with community members.
- Enforcing the Code of Conduct for drivers and security personnel, with clear sanctions for SEA/SH or harassment.
- Coordinating with the SEA/SH Action Plan and community GM for confidential reporting and survivor-centered response.

9.4 GM LINKAGE

Traffic and road-safety issues are explicitly covered in the community GM and CHSS incident tracking:

- GM channels (hotline, complaint boxes, local liaison, online) must accept traffic-related complaints (speeding, access issues, noise, driver behavior).
- PETDE's GM Focal Point and contractor CLOs will ensure:
- ≥ 90% CHSS-related grievances are closed within 30 days.

All traffic accidents and CHSS incidents linked to project activities are recorded and reviewed quarterly.

10. TRAFFIC INCIDENT MANAGEMENT

10.1 INCIDENT TYPES AND CLASSIFICATION

Traffic incidents include:

- Near-misses (no injury/damage but high potential).
- Minor incidents (no injury or minor first-aid injury / limited property damage).
- Recordable incidents (medical treatment, lost-time injuries).
- Serious incidents (multiple injuries, permanent disabling injury).
- Fatalities (any death attributable to project-related traffic).

All traffic incidents and high-potential near-misses at or near work fronts are considered CHSS incidents and must be recorded in the Community Health and Safety Incident Register, consistent with ESIA commitments.

10.2 IMMEDIATE RESPONSE

In the event of a traffic incident:

- Stop all work in the affected area and secure the scene.

- Provide first aid and call emergency services as required.
- Prevent further accidents by reinstating or strengthening barriers, signage and traffic controls.
- Deploy additional marshals/flaggers if crowds or congestion form.

For incidents involving security personnel, activate the SMP escalation procedure.

10.3 NOTIFICATIONS

- Contractor HSE/Traffic Supervisor must notify:
 - Site Manager and HSE Manager immediately.
 - PETDE PMT and OE within 24 hours for any recordable traffic incident.
- Serious incidents, fatalities, or incidents that may attract significant public or media attention must be reported by PETDE to the World Bank in line with ESCP and WB serious-incident requirements (typically within 48 hours), with follow-up investigation reports.

10.4 INVESTIGATION AND CORRECTIVE ACTIONS

- Conduct an incident investigation appropriate to severity, using root-cause analysis.
- Include PETDE/PMT and OE in investigations of serious incidents and fatalities.
- Identify corrective and preventive actions, which may include:
 - Route changes or additional controls (signage, marshals).
 - Revised speed limits or enforcement measures.
 - Enhanced driver training or disciplinary actions.
 - Engineering measures (e.g., improved shoulders, visibility).
- Track implementation and effectiveness of corrective actions through the Traffic Incident Register and KPI monitoring.

11. MONITORING, KPIS AND REPORTING

11.1 ROUTINE MONITORING

Contractors will implement traffic-related monitoring consistent with ESIA Table 22-3 and Table 22-8, including:

- Daily checks of:
 - Presence and condition of signage, barriers, lighting at work fronts.
 - Implementation of traffic controls at active fronts (speed limits, flaggers, safe crossings).
- Weekly:
 - Speed spot checks along haul routes and through settlements.
 - Review of driver and vehicle checklists.
- Monthly:
 - Review of traffic incident and near-miss records.
 - Summary of traffic-related grievances and resolution status.
- Quarterly:

- PETDE/PMT or OE audits of TMP implementation, including site inspections and review of logs.

11.2 KEY PERFORMANCE INDICATORS (CONSTRUCTION PHASE)

Indicative KPIs (to be refined in contractor TMPs) include:

- Zero project-related traffic fatalities per year.
- Zero high-potential traffic incidents at work fronts resulting from failure of controls.
- Traffic Police liaison in place where required.
- 100% of required controls (signage, barriers, speed limits, flaggers) in place at active fronts during working hours.
- Speed compliance at spot checks (e.g., $\geq 90\%$ of vehicles within limits; repeated exceedances trigger additional controls).
- 100% of drivers inducted in project traffic rules and defensive driving.
- 100% of heavy/abnormal load movements conducted under an approved Haul Route Plan and, where applicable, with valid permits and escorts.
- $\geq 90\%$ of CHSS-related grievances (including traffic complaints) closed within 30 days.
- 100% of traffic incidents and near-misses recorded and investigated at a level commensurate with severity.

11.3 OPERATION, MAINTENANCE AND DECOMMISSIONING KPIs

For operation and maintenance, align with ESIA operational CHSS monitoring (ESIA Table 22-5):

- Maintenance TMP compliance checked for each maintenance activity.
- Zero high-potential near-misses during maintenance traffic.
- Security incident logs (if security used) reviewed monthly; zero substantiated misconduct.
- $\geq 90\%$ CHSS complaints (including maintenance-traffic complaints) closed within 30 days.

For decommissioning (ESIA Table 22-6):

- Decommissioning TMP implemented for load-out.
- Zero uncontrolled traffic incidents during dismantling and load-out.

11.4 REPORTING

- Contractors submit monthly traffic and CHSS monitoring reports to PETDE/PMT and OE summarizing:
 - TMP implementation status.
 - KPIs (including leading and lagging indicators).
 - Traffic incidents and corrective actions.
 - Traffic-related grievances and responses.
- PETDE/PMT consolidates data and includes it in quarterly ESMP implementation reports and semi-annual E&S reports to the World Bank.
- Serious incidents are reported ad-hoc as per Section 10.3.

12. TRAINING AND AWARENESS

Contractors and PETDE will implement a training program that includes:

- Induction training for:
 - All workers and supervisors on traffic hazards, TMP rules, and community interface.
 - All drivers on defensive driving, journey management, speed limits, and ERW awareness.
- Toolbox talks:
 - Before starting works at new fronts or along new routes.
 - Before abnormal load moves or shifts in traffic patterns (e.g., school term changes, market days).
- Refresher training:
 - At least annually for drivers, or more frequently if incident trends indicate need.
- Community awareness:
 - Short, targeted sessions near schools/clinics/markets as part of CHSP and SEP implementation, focusing on child safety and safe behavior near work fronts and heavy vehicles.

Training records must be maintained and reported as part of TMP monitoring.

13. LINKAGES TO OTHER SEEP INSTRUMENTS

This TMP is closely linked to and must be implemented in conjunction with:

- Occupational Health and Safety Plan (OHSP): worker safety, JSAs, emergency response, incident investigation.
- Community Health and Safety Plan (CHSP): barriers, work-front segregation, public-area protection.
- HM/WMP: requirements for transportation of hazardous materials, used oil, SF₆ and hazardous wastes.
- ERW risk management arrangements (ESIA Chapter 23, ERP and Contractor CESMPs): risk classification, clearance and safe corridors (no off-route driving).
- Security Management Plan (SMP): conduct of security personnel, escort arrangements and security-related incidents.
- SEA/SH Action Plan: SEA/SH-sensitive routing and driver behavior; confidential reporting.
- SEP and GMs: public information, notices, and handling traffic-related grievances.
- LMP: worker transport responsibilities and conditions.
- CESMPs, OESMPs and Decommissioning Environmental and Social Management Plans (DESMPs): where contractor-specific and PETDE O&M TMPs are embedded and operationalized.

14. TEMPLATES

Contractors and PETDE O&M will develop and maintain at least the following templates/forms, aligned with this TMP:

- T1: Route Risk Assessment and Haul Route Plan
 - Route map and segment list.
 - Segment hazards (geometry, surface, receptors).
 - Control measures (signage, speed limits, marshals, timing).
 - ERW/security constraints and safe corridors.
 - Approval signatures (Contractor, PETDE/PMT, OE; authorities as applicable).
- T2: Daily Traffic Control Checklist
 - Site/work front identification.
 - Checks for signage, barriers, lighting, banksmen, pedestrian routes.
 - Issues observed and corrective actions taken.
 - Signed by Traffic Supervisor/Site Supervisor.
- T3: Journey Management Plan / Authorization Form
 - Purpose and type of journey (risk classification).
 - Vehicle and driver details; passengers.
 - Route and alternatives; key hazard points.
 - Required controls (timing, escorts, communications).
 - Check-in/check-out schedule and contacts.
 - Approval (for Medium/High-risk journeys).
- T4: Traffic Incident and Near-Miss Report
 - Date, time, location, route segment.
 - Parties involved; vehicle details.
 - Description and immediate response.
 - Injury and damage summary.
 - Preliminary and root causes; corrective actions.
 - Linkage to GM case (if any).
- T5: Monthly Traffic KPI Summary
 - Number and type of journeys by route class.
 - Training and induction statistics for drivers.
 - Speed-check results and non-compliance.
 - Incident and near-miss statistics and trends.
 - Traffic-related grievances and resolution times.
- T6: Community Notification and Access Plan
 - Description of upcoming works and traffic changes.
 - Affected roads and communities.
 - Notification methods and schedule (≥48-72 h before impact).
 - Access arrangements for schools/clinics/markets.
 - Contact points for questions and grievances.

Standardized templates will facilitate consistent implementation across packages and ease consolidation of monitoring data.

15. PLAN REVIEW AND UPDATE

This TMP is a living document and will be reviewed and updated:

- Before contractor mobilization: to incorporate any additional ESCP commitments, permit conditions, or WB feedback.
- At least annually during construction: based on monitoring results, incident trends, community feedback, and any significant changes in project scope, routing, ERW/security context or legal framework.
- At key transition points: prior to commissioning/operation, to produce a streamlined Maintenance TMP, and prior to major decommissioning campaigns to produce a Decommissioning TMP consistent with ESIA Tables 22-4 and 22-6.

All revisions require approval by PETDE/PMT (with OE support) and must be communicated to EPC Contractors, subcontractors, PETDE O&M and other relevant parties. Updated TMP requirements must be integrated into CESMPs, OESMPs, work procedures, training materials and contracts as appropriate.