

**Occupational Health and Safety Guideline for Road Infrastructure Development and
Management, 2080
(Departmental Guideline)**

**Government of Nepal
Ministry of Physical Infrastructure and Transport
Department of Roads
Lalitpur
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Preamble

The Department of Roads (DoR) intends to protect the fundamental right to work in a safe and healthy workplace for all employees and workers. To promote, regulate and maintain Occupational Health and Safety (OHS) as per the prevailing benchmarks, it is essential to follow all applicable OHS laws. Promoting good culture of safety at work, enhancing accident-free working environment, reducing the rate of work-related accidents injuries and diseases are the intention of OHS interventions. The Government of Nepal, Ministry of Physical Infrastructure and Transport has issued “**Occupational Health and Safety Guideline for Road Infrastructure Construction, 2080**” (Departmental Guideline) to safeguard employees' rights, interests and benefits.

Chapter - 1

Preliminary

1. Short Title and Commencement:

- a) This guideline shall be called as “**Occupational Health and Safety Guideline for Road Infrastructure Development and Management, 2080**”, (Departmental Guideline).
- b) This guideline shall be applicable to all road infrastructure development and management works under the Department of Roads (DoR) including but not limited to Road, Bridge, Tunnel and Flyover.
- c) This guideline will enter into force immediately after the date of approval by the Ministry of Physical Infrastructure and Transport

2. Definitions:

Unless the subject or the context otherwise requires, throughout the guidelines;

- a) ‘Accident’ means an unexpected, unplanned and undesired event that results in injuries, deaths, damages to equipment or machine and property loss. Also, the unpleasant result emerged due to the failure of the natural or built environment and anthropogenic phenomena e.g. landslides, explosions, vehicular collisions etc.
- b) ‘Auditor’ means the person in charge of the Monitoring and Evaluation (M&E) works independently for Occupational Health and Safety (OHS) performance including labor audit as per labor rule 2075, duly appointed by the DoR or contractor/sub-contractor or consultant.
- c) ‘Community’ means the area nearby the construction site or work zone e.g. settlement area including people living around.



- d) 'Construction' means construction and maintenance activities that DoR arranges to undertake the planning and execution of such activities on strategic roads, bridges, tunnels, and other transport related infrastructure.
- e) 'Contractor' means any person or organization or the party whose bid to carry out the works has been accepted by the Employer (DOR).
- f) 'DoR' means the Department of Roads.
- g) 'DoR Project' means work, activity and other activities related to the construction of roads, bridges, tunnels and other transport related infrastructure executed under DoR.
- h) 'Employee' means contractor personnel and labors.
- i) 'Employer' means any organization that undertakes construction of infrastructure projects
- j) 'Guidelines' means Occupational Health and Safety Guidelines for Road Infrastructure Development and Management, 2080.
- k) 'Hazard' means a source, situation or act with a potential for harm in terms of human injury or ill health or a combination of these and equipment damages. This includes defective machinery, working at height, confined space work, dust and noise emitting operation, etc.
- l) 'Inspection' means any inspection or investigation undertaken by the authorized inspector or the health and safety officers from concerned government agencies.
- m) 'Inspector' means the person in charge of the inspections and audit, duly appointed by the DoR and or Consultant and Contractor.
- n) 'OHS Policy' means a policy document developed by the DoR to demonstrate its overall commitment to promoting and regulating OHS at work sites.
- o) 'Project' means physical works such as i) construction, operation and rehabilitation works, ii) pre-feasibility, feasibility, design, or concept plan or study undertaken to ascertain the desirability of proceeding with physical works and associated activities such as road network development, transport sector, sectors including road, bridge and tunnel.
- p) 'Organization' means the institution such as contractor, consultant etc. directly affiliated with the execution of construction project under DOR.
- q) 'Permit to work' means the work, operation and machinery dangerous to the health of the workers and requires special permission given by the employer or its management systems used for the work or operation of a machine dangerous to the health and safety of the workers, to ensure that work is done safely and efficiently.
- r) 'Risk' means the probability-of injury or danger to a person, property or environment. This includes unsafe acts, handling of hazardous materials, chemical release and spillage etc.
- s) 'Safety' means freedom from danger, risk, or threat of harm, injury, or loss to personnel and/or property, whether caused deliberately or by accident.

- t) 'Safety Committee' means the committee formed at the department level or project /division level as well as at the construction worksite comprised of interdisciplinary persons/staffs who are responsible to improve the safety and health of workers.
- u) 'Safety Officer' means project staff-member with specific qualification and training on OHS hired by the DoR or Contractor/sub-contractor or-supervision consultant.
- v) 'Stakeholder' means Department of Roads, Government Agencies, Contractors, Consultants, based Organizations, Non-government Organization, private investors, employees/workers and visitors etc. directly affiliated with Infrastructure Development and Management
- w) 'Sub-contractor' means a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- x) 'Service provider' means any person or organization who is responsible for supplying services along with associated goods/ works and other resources.
- y) 'Worker' means an employee or self-employed person or person who works under the supervision of the employer. Such a person is deemed to be at work during the time that he/she is in the course of work required by the employer
- z) 'Workplace OHS policy" means a document prescribed by the DoR to demonstrate its overall commitment to promoting OHS in the workplace.
- aa) 'Workplace' means any premises or place or construction worksite where a person or self-employed person performs work in the course of his employment.



Chapter - 2

Institutional capacity and strengthening

- 3. Institutional set-up:** Enforcement of OHS at works requires OHS unit (GESU shall act as OHS unit unless OHS unit is established) to comply with and give effect to the provisions and commitments stipulated in “**Occupational Health and Safety Policy for Road Infrastructure Development and Management, 2080**” (Departmental Policy). In making effective implementation of the OHS Policy, the Department shall,
- a) Formulate standards, code of practices, operating manual, memorandum of understanding, performance evaluation score sheet, Standard Bidding Document (general condition of contract, special condition of contract), and worksite-specific OHS policy for effective operation and management of OHS in road infrastructure development and management
 - b) Establish OHS unit and the provisions applicable to respective Project Directorate, Federal Road Supervision and Monitoring Offices (FRSMO), Road Division Offices and Project Offices as a needful basis for operation and management of OHS.
Note: For ad-hoc periods, the DoR may designate GESU, responsible for OHS implementation. Organogram and Role and responsibility as stated in OHS Operating Manual for Road Infrastructure Development and Management, 2080 (Departmental Manual)
 - c) Form a Directive and Advisory Committee headed by Director General, DOR, Monitoring and Evaluation Committee, headed by FRSMO Chief, and Project Cooperation and Implementation tee, headed by DRO/Project Implementation Office of respective project offices (as presented in **Occupational Health and Safety Policy for Road Infrastructure Development and Management, 2080**).
 - d) Formulate an advisory support team for backstopping OHS implementation.
 - e) Establish OHS Unit to work for:
 - i) Capacity building, appropriate material selection, and application of safety
 - ii) On-site health surveillance such as first aid and other related secondary care facility against work-related injuries, illness and diseases.
 - iii) Database management on worksite incidents/accidents and occupational diseases related to construction work,Note: The operational modality for incidents/accidents and health surveillance will be described according to chapter 3, clause 14.
 - f) The DoR may amend functions of OHS Unit as per the need
 - g) The DoR will develop Terms of Reference for independent OHS auditors to carry out OHS Supervision, Monitoring and Evaluation (M&E) in the construction projects.
- 4. Organizational set-up in contractor/sub-contractor, supervision consultant and service provider:** For effective compliance with OHS, the responsible organizations shall make the following arrangements:

- a) Establish Organization's OHS policy based on the template developed by the DoR presented in OHS Operating Manual for Road Infrastructure Development and Management, 2080).
- b) Establish functional OHS unit at every contractor, subcontractor, supervision consultant's organization and service provider's organization at the construction site.
- c) Establish a Joint OHS committee comprised of the representation of contractor representatives/management staff and workers at each worksite.
- d) Provision for OHS officers, supervisors and inspectors at a respective worksite.

5. Institutional capacity development: To strengthen institutional capacity and optimize quality service through safe and healthy practices the respective organizations shall carry out the following activities:

a) Training need assessment:

- i. Training need assessment (TNA) shall be carried out by the DoR OHS unit
- ii. Based on OHS Operating Manual for Road Infrastructure Development and Management, 2080 appropriate resources, content for deliberation shall be finalized before commencing the construction activities.
- iii. Experts may be invited to carry out this task whenever necessary.

b) Training to employee:

- i) The employer and organization shall carry out short-term and long-term courses such as induction, job-specific training, refresher courses, skill development courses (including safe operation of machines and new technological aids)
- ii) The employer and organization shall carry out on-site awareness programs (at least once in every 3 months) toolbox talks (daily) and on-job-specific programs on OHS related issues as necessary. If, in case of a smaller project less than 3 months shall carry out onsite awareness activity within one month of project commencement.
- iii) The DoR OHS unit shall develop the standard operational modality, frequency and content for all categories of training and awareness programs. The details shall be included in the OHS Training Manual to be developed by DoR.
- iv) The organization shall carry out the aforementioned courses (identified by TNA) either by itself or with support from the OHS experts. Reports about such courses shall be submitted to the DoR-OHS unit.
- v) The DoR-OHS unit is responsible for developing and distributing applicable information, and educational and communication (IEC) material related to OHS to all construction projects
- vi) The DoR OHS unit shall maintain a record of all training and awareness programs conducted.

c) **Training impact assessment:** The DoR -OHS unit itself or with support from the outsourced expert/team of experts will carry out training impact assessment for each training conducted during commencing of the project. The following activities shall be carried out:

- i) The unit shall list out the key changes in the work practices and other radical changes at the work site.
- ii) The unit may recommend new interventions regarding capacity-building activities.
- iii) The unit shall make sure impact assessment shall be done based on the standard checklist.

6. **Coordination, collaboration and communication:** Ensure strong cooperation, coordination and collaboration among concerned stakeholders (e.g., public- public, public-private, private -private organizations, based on the nature and service requirement) to carry out the safe and smooth operation of projects and handle worksite emergency. Following activities shall be carried out:

- a) The DoR shall have appropriate coordination and communication network among all concerned stakeholders including provincial and local authorities for effective OHS performance and emergency management.
- b) The OHS focal point provisioning in each organization shall be ensured. DoR- OHS unit shall work as the central focal point responsible for communication within or among stakeholders.
- c) The DoR OHS unit shall have the list of stakeholders related to road infrastructure development and the unit shall set procedures for their engagement and partnership.
- d) The DoR shall develop a standard protocol for information collection and disclosure. The department shall communicate OHS related information to all concerned stakeholders.
- e) The DoR shall facilitate communications at three different phases such as pre-bid (new contract), ongoing construction and project completions.
- f) The DoR shall have a mandate to identify concerned national and international organizations and cooperation modality for OHS strengthening.
- g) The OHS unit shall maintain the documentation of all communications and shall ensure that the communications are easily accessible to the OHS committee and other stakeholders.
- h) The employer and organizations shall introduce national and international best OHS practices to respective construction sites. Also, shall demonstrate to other construction sites adopting intellectual property protocol.
- i) The execution of all these processes shall be carried out through a designated safety officer

7. **Management of database on OHS:** OHS improvement plan requires effective database management to find the current status and the deviations. The OHS Unit shall carry following actions:

- a) Integrated database management systems shall be developed.



- b) The standard database shall include a detailed profile of the construction project, human, material, machine/equipment, accident/injuries/disease, training, course material, emergency condition, responsible person/user, stakeholder's detail, applicable provisions on OHS, practices at worksite and other relevant aspects of OHS.
- c) The stakeholders shall provide the data to the central database system in three intervals such as monthly, biannually and annually, besides any emergency notifications. The DoR OHS unit will review and update accordingly.

8. Mainstreaming of OHS: The OHS unit shall manage as follows:

- a) The DoR-OHS unit shall facilitate collaborative research on construction safety to strengthen the knowledge base center.

Note: Collaborative research represents research on the core thematic areas of intervention jointly by the OHS unit with academia such as university, vocational/technical education centers, schools as well as researchers. The operational modality shall be defined by MoU as presented in OHS Operating Manual for Road Infrastructure Development and Management, 2080.

- b) The OHS unit shall introduce interventions on OHS to road infrastructure development and management project in regard to safe and cost-effective construction, technology, equipment, materials, and facility.
- c) The organization shall establish a standard system/provision for social security, insurance and social development to develop and management project.

Note: Social security and insurance apply to all employees and staff as indicated by provisions defined by the government.

- d) The OHS unit shall be,
 - i. Equipped with required facilities for research and development and strengthening other collaborating organizations
 - ii. Strengthened with OHS Management System integrating with relevant national and international systems such as Occupational Health and Safety Management System (ISO 45001), Environmental Management System (ISO 14001), Community Health and Safety, Grievance Redress Mechanism, Gender-based Violence and Exploitation.



Chapter - 3

Occupational Health and Safety Management

9. Identification of workplace hazard:

- a) Identify and register all the potential threats or hazards in the construction, demolition and maintenance of road infrastructures development and management, that can affect health, environment, economy and society.
- b) Develop standard protocol as presented in OHS Operating Manual for Road Infrastructure Development and Management, 2080).
- c) Aware all employees of potential hazards

10. Assessment of workplace risk:

- a) Carry out a risk assessment for assessing potential impacts on human population or ecological system under specific conditions and timeframe.
- b) Develop a risk map for each construction worksite for the entire project period and characterize the significance of impact as most significant, significant and less significant.
- c) Conduct comprehensive workplace risk assessment at least every year.
- d) Preparation of risk assessment report and Submit to OHS Unit.

11. Control of workplace risk:

- a) Develop a construction site specific risk mitigation plan including applicable resources (tools and techniques etc.) based on a hierarchical approach.
- b) Develop standard operation procedures (SOP).
- c) Follow Permit to Work (PTW) protocol when carrying out hazardous work as listed by DoR and presented in OHS Operating Manual for Road Infrastructure Development and Management, 2080.
- d) Ensure all employees are communicated with and familiar with and aware of the existing control devices and facilities.

12. Management at the emergency situation: The organization shall:

- a) Understand, familiarize as well as prepare a list of all construction sites related to potential emergencies and disasters such as fire, high wind, flood, chemical explosion, earthquake, structure collapse, landslide, road crashes/accidents, drowning, pandemic/epidemic.
- b) Standardize site-specific emergency preparedness and management framework including plans for human resources and facilities.
- c) Provide adequate facilities for emergency management such as fire extinguishers, water boats etc., the detail will be as identified and listed by DoR based on the nature of the project
- d) Facilitate conducting annual mock drills for possible emergencies.

- e) Develop procedures for specific compensation including emergency claim registration process, legal obligatory requirement, handling team, financial claim and reporting.
- f) Contact details of concerned government offices, local government, contractor personnel, consultants, community health services, police station, fire brigade, ambulance, nearby hospitals and other relevant institutions.

13. Welfare facilities for employees at worksite: The organization shall ensure and manage the minimum requirements for the welfare of workers to comply with the provisions of labor law:

- a) Water and sanitation facility at the worksite.
- b) Separate toilets for males and females
- c) Canteen and mess for all employees.
- d) Collection and disposal of garbage and refuse.
- e) Standard norms of the labor camp will be prepared and implemented.
- f) Labor camp operation and management plan shall be approved by DoR and communicated to the concerned stakeholders.
- g) Pest and vermin control measures against Insects, rodents, birds and reptiles are mostly present in labor camp and worksites. So, insect screening, self-closing doors, nets, flaps on chutes, air curtains, pesticide spray and other applicable measures may be introduced.
- h) Compensation modality/scheme for all workplace accidents and diseases (based on the labor act) to all employees along with the provision of applicable health and accidental insurance shall be developed.
- i) Local transport facility shall be provided to female workers during the night shift. This applies for the female workers as per the labour act, the timing is after sunset or before the sun rises.
- d) Personal protective equipment (PPE) or safety gears for all employees, visitors, suppliers and authorized persons entering into the construction worksites.

14. Management of Occupational Health: To fulfill the precondition of fitness to work requires physical, mental and social fitness of every person on the job, the organization shall ensure:

- a) Onsite occupational health management plan health check-ups, and response to accidents and diseases.
- b) Onsite first aid clinic equipped with basic facilities as mentioned in the OHS Operating Manual for Road Infrastructure Development and Management, 2080 developed by DoR.
- c) Easy access to ambulances, oxygen cylinders, and other basic facilities
- d) Contact details of contractor personnel, consultants, community health services, fire brigade, ambulances, nearby hospitals for secondary treatment.
- e) Preliminary health checkup before commencement of the job and periodic health checkup at least once a year for all employees.

- f) Facility to keep in isolation and care for all communicable diseases
- g) Employees to have health insurance/social security coverage against normal illness in terms of accidental and routine medical benefits.
- h) A standard procedure for handling and compensation against accident and diseases with financial compensation will in accordance to budget clause 18
- i) The record of all medical reports and fitness certificates for each employee to be provided by respective organizations to DoR OHS unit upon their request.



Chapter - 4
Monitoring and Evaluation

15. Project performance monitoring committee: The Directive and Advisory Committee described in clause 3 (c) shall work as overall project performance monitoring committee. The Monitoring and Evaluation committee mentioned in clause 3 (c) shall work for monitoring and evaluation of ongoing project whereas, project cooperation and implementation committee mentioned in clause 3(c) shall be applicable for cooperation and implementation of ongoing project.

16. Project OHS performance monitoring and evaluation shall:

- a) Arrange a technical committee comprised of OHS experts for comprehensive monitoring and inspection.
- b) Arrange for planning and coordinating audit includes pre-commencement meeting, mobilization and commencement monitoring and evaluation (M&E).
- c) Ensure internal M&E is carried out by contractors and others and are subjected to M&E from DoR/ subordinate offices such as provincial office, project office and division office as applicable.
- d) Ensure organizations carry out M&E in yearly basis from independent OHS auditor and periodic performance evaluation carried out every three months.
- e) Develop and categorize organizations based on workplace key performance indicators.
- f) Develop M&E method, frequency, techniques, standard checklist and score sheet.
- g) Implement corrective measures three months to the deviations identified by M&E.
- h) Maintain records of the M&E, other finding and OHS performance certificate may be issued if required.
- i) Documentation of M&E findings and reporting to the concerned stakeholders (when applicable).



Chapter - 5

Budget

17. Allocation of budget: The budget allocation shall be as follows:

- Cost estimate for OHS activities based on employers' requirements, project size and OHS risk for each project shall be assessed.
- The OHS cost shall be included in BoQ as a separate item.
- The inclusion of OHS cost in BoQ shall be ensured through GATE REVIEW.

18. Payment for OHS Compliances: The DoR shall

- Develop special criteria and operational procedures for payment for OHS compliance related cost (17 a).
- Set a standard criterion for payment for OHS allocated budget based on the performance score obtained from section 16 (e). The proportion of the payment for OHS compliance shall be determined based on the scores obtained;

OHS compliance rating (Score)	Withheld % of certified IPC amount
Less than 60%	100%
Higher than 60% and less than or equal to 70%	75%
Higher than 70% and equal to or less than 80%	50%
Higher than 80% and less than or equal to 90%	25%
Higher than 90%	0%

Note: The organization shall mandate for OHS compliance even if they fail to quote the amount

- After improvement of the OHS compliance, the withheld amount will be released after deduction of OHS allocated amount in the schedule of requirement in pro rata with the IPC amount.

For example: if the total contract period is 'T' days and OHS is not complied for 'X' days then OHS deduction (D) shall be

$$D = X/T * (\text{Total allocated amount for OHS})$$

- Develop modality of expenditure in terms of workplace accidents and diseases with earmarked for compensation.



Chapter 6

Miscellaneous

19. Contractor management: The DoR shall carry out the following:

- a) Identify four different categories of contractors such as principal contractors, subcontractors, Labour and goods suppliers.
- b) Include OHS requirements in bid documents.
- c) Make mandatory requirement for the contractor to develop and submit for approval the Contractor's Occupational Health and Safety Plan (C-OHSP) prior to the commencement of construction activities for OHS Implementation (as presented in a separate book and format in the OHS Operating Manual for Road infrastructure Development and Management, 2080).
- d) Make mandatory requirements for contractors to develop a code of conduct.

20. Occupational Health and Safety Manual: OHS Operating Manual for road infrastructure development and management shall be developed and followed for the overall management of OHS issues in Road Infrastructure Development and Management works.

21. Limitations and Risks:

- a) Consideration of factors like human resources, institution, technology, finance, and legal provisions while devising and implementing programs.
- b) Internalization of factors like inclusion, mainstreaming, corporate responsibility, resources and surveillances mechanism, and contingency plans for overall OHS implementations.

22. Amendment: The organization shall do as follows:

- a) This guideline will be reviewed and updated every 3 years or as per requirement.
- b) The Ministry of Physical Infrastructure and Transport upon the recommendation of the Directive, Monitoring and Evaluation Committee and as per necessity, shall amend this guideline.
- c) The DoR shall interpret and clarify the provisions of this guideline in case of any ambiguity or contradictions. The DoR can declare any provision of this guideline not to apply to specific projects depending on the special nature of such projects.

23. Control and Disclosure: The OHS unit is responsible for control and disclosure relating to all the provisions mentioned in this guideline. For the Ad-hoc period, GESU shall be responsible.

