

**Terms of Reference (ToR)**  
**for**  
**Conducting an Investigation of the Incident for Occupational Health and Safety (OHS)**  
**measures in**  
**Turkey Energy Efficiency in Public Buildings Project (P162762)**  
**OHS Consultant**

**Background**

The Türkiye Energy Efficiency in Public Buildings (P162762) Project (the Project or EEPBP) was approved by the World Bank's Board of Executive Directors on November 5, 2019 and is effective since March 16, 2020. The Project closing date is December 31, 2025. The overall objective of the Project is to reduce energy use in central government buildings and develop a transition plan to develop and scale-up suitable sustainable financing and institutional mechanisms to support a national program. The Project has been implemented by the General Directorate of Construction Affairs (GDCA) of the Ministry of Environment, Urbanization and Climate Change (MoEUCC). The Project Implementation Unit (PIU) of the GDCA, which has been established for the Project, is responsible for overall implementation, management and coordination of the Project.

One of the subprojects of the EEPBP is being implemented at the Pamukkale University in the Denizli province. This subproject covers a total of 35 building blocks with a total construction area of 202.273 m<sup>2</sup>. The main activities carried out within the scope of the subproject are insulation of the outer facades of some of the university buildings, heating and cooling system renovation, replacing luminaires with LEDs, photovoltaic panel installation, and establishment of a building automation system and energy monitoring system. The subproject activities on site started on September 8, 2023, and are currently ongoing, and are planned to be completed in September 2024.

An Environmental and Social Management Framework (ESMF) was prepared for the Project before appraisal in compliance with the World Bank's (WB) Operational Policies; and based on the ESMF, a site-specific Environmental and Social Management Plan<sup>1</sup> (ESMP) has been prepared and disclosed on the project webpage on January 3<sup>rd</sup>, 2023.

**Scope of work**

The scope of work covers investigations of 3 incidents that occurred at the Pamukkale University renovation site in Denizli.

The following tasks are required to be undertaken:

**Task 1: Site visit**

---

**Task 2:** Identify and analyze the root cause of the three accidents and define corrective actions,

**Task 3:** Identify immediate measures to be taken to improve the safety at the Pamukkale renovation site and extend these measures to other Project sites as applicable in the light of the observations made

**Task 4:** Identify effective preventive and mitigation measures to be implemented to reduce OHS risks at the Pamukkale renovation site and extend these measures to other Project sites as applicable in the light of the observations made at the specific site

**Task 5:** Review the OHS capacity and procedures of all relevant parties (PIU, Consultant, Contractor) for supervision, monitoring and reporting and define improvement measures if required for the Pamukkale renovation site and extend these measures to other Project sites as applicable in the light of the observations made at the specific site.

It should be noted that Task 1-3 are aimed for the investigation of the specific accidents and Task 4 and 5 are aimed for the evaluation of the broader OHS performance at project site(s). The consultant is expected to conduct the tasks in parallel and start evaluation of documentation before the site visit.

Following the preparation of the report, the work may involve responding to questions and queries (including from the World Bank) on the report and the recommendations it contains.

All reasonable lines of enquiry should be explored to gather information about the incidents, to establish the sequence of events and conditions that led up to the incident.

The details of scope of the work are:

- **Conduct visit to the subproject site (Task 1).** where the accidents happen and make the required observations and complete data collection including interviews with relevant parties to be able to execute the following defined tasks.
- **Root Cause Analysis (RCA) (Task 2).** Conduct RCA of the incident according to the internationally accepted methods and identify the sequence of events and factual circumstances, and the immediate, underlying and root causes that led to the incident. The analysis would include what exactly happened, the unsafe acts, conditions or practices that contributed to the incident occurring, and the planning, organization and system failings that led to the accident. It would be important to find out what health and safety measures were at that site regarding to work with electricity, use of PPE, working permit as well as any community safety measures. The risk information/training provided to workers on site and level of supervision on unskilled labor should also be assessed. The incident analysis should also address the accident responsiveness and if there were better practices that could have been followed in dealing with the incident.
- **Define corrective actions in relation to accidents (Task 2 and 3).** Recommend actions to be taken to rectify the failure(s) that led to the incident. The actions should consider the workers, supervisor consultants, the PIU and the overall management system(s) such as training, sub-contracting, supervision, auditing, reporting, etc.

- **Identify overall effective preventive and mitigation measures (Task 4).** Review the OHS measures in Safeguards instruments and plans in construction tender/bidding documents/contracts and recommend enhancements as needed.
- **Identify effective preventive and mitigation measures (Task 4).** Review and assess all relevant site-based documents including but not limited to procedures, instructions, training records, risk analysis, vehicle and equipment maintenance records and logs, incident registers, grievance logs, regular monitoring reports to supervision consultant and the PIU, supervision, inspection and audit reports by any regulatory authority, notices/warnings from the supervision consultant to the contractor, any records/reports regarding investigation of this incident etc. The assessment should identify what the existing procedures and OHS commitments for safe performance of construction activities (working with electricity, excavation, scaffolding, working at heights, welding, etc.) are together with gaps in implementation of these procedures and commitments. The assessment should also recommend appropriate and relevant enhancements for these procedures.
- **Identify effective preventive and mitigation measures (Task 4).** Taking into consideration the completeness of the relevant management systems, procedures and processes, identify corrective actions to address the immediate, underlying and root causes of the incident. The corrective actions should have 'SMART' objectives (i.e. Specific, Measurable, Actionable by the project, Realistic and with clear Timescale for implementation), and be prioritized according to the risk control they provide. For each action, a responsible person and timeline should be identified.
- **Identify effective preventive and mitigation measures (Task 4):** In addition to collection of evidence, documents, information, hold interviews with relevant parties to do a proper assessment including the construction contractor, environmental, social and OHS experts, present personnel at the time of the incident, project manager, supervision consultant's project manager, environmental, social and OHS experts and any other relevant people/institution as needed, such as eyewitnesses.
- **Identify effective preventive and mitigation measures (Task 4):** Assess the sufficiency of the measures that the PIU, Contractor and sub-contractors take to minimize risk on the local communities and communicate with them. Recommend improvements, as necessary.
- **Review the OHS capacity and procedures of all relevant parties (Task 5)** Review the capacity of the PIU to implement the OHS requirements of the Project regarding to WB safeguards policies and national OHS legislation. The assessment should review PIU organization chart, monitoring and supervision schemes, trainings, approval process to access to the site to begin work, etc.
- **Review the OHS capacity and procedures of all relevant parties (Task 5):** Review the capacity of Contractor and supervision consultants to implement OHS standards. The assessment should review the training plans for skilled and unskilled labor for

effectiveness and propose improvements to the training and communication program so that workers are adequately guided to safely perform their work.

- **Review the OHS capacity and procedures of all relevant parties (Task 5).** Review the number of designated OHS staff/experts of the contractor and supervision consultant, their working arrangements (part/full time) and their frequency of conducting site visits to assigned construction sites.
- **Review the OHS capacity and procedures of all relevant parties (Task 5).** Review the existing arrangements for recruiting labor and what type of insurance (life or injuries and occupational health risks) and compensations are provided.

**Review the OHS capacity and procedures of all relevant parties (Task 5).** Review compliance with the Labor Law and other international treaties by the PIU, Contractor and Subcontractors.

### **The brief methodology for the RCA**

The work requires a structured, thorough and unbiased investigation into the incident to identify the immediate, underlying and root causes of the incidents. The root cause is a fundamental, underlying, system-related reason why an incident occurred that identifies one or more correctable system failures. The reoccurrence of a similar incident can be prevented through the RCA which will be addressing the root causes of this incident. It involves collecting information, identifying and analysing causes, recommending corrective actions, and preparing an incident report that summarizes the investigation and logically presents the findings, setting out clearly what has been done during the investigation, what is known about the incident, and what is not known.

The main steps of the RCA are:

1. Identify and define the incidents
2. Gather data
3. Determine possible causal factors
4. Identify the root cause(s)
5. Recommend and implement solutions (e.g. corrective actions)
6. Put a monitoring system in place and verify solution effectiveness

### **Output**

The consultant shall prepare the following outputs as a single report:

- A root-cause incident investigation report describing the incident and the immediate, underlying and root causes of the incident, together with recommended corrective action to prevent recurrence. The report is to be a concise and accurate record of the incident and shall be accompanied by photographs, maps and drawings as necessary. A separate annex of evidence and supporting information will be provided.

- A diagnostic analysis of OHS measures and recommended measures for improvements for the reduction of the OHS risks at the specific sub-project site and the other sites as applicable in the light of the observations made at the specific sub project site. The report should include the list of the documents reviewed, personnel interviewed, photographs as applicable,

The language of the report will be English.

### **Timing**

A draft report shall be provided within 12 days from the commencement of contract. The draft report shall be updated and clarified to reflect comment following the review of the draft report, with the update being completed within three (3) days of receipt of comment.

Following the receipt of the final report, the consultant shall respond to any questions about the incident that may arise while implementing the response to the incident, including any queries that may come from the World Bank.

### **Qualifications for the Independent Consultant(s)**

- At least bachelor's degree in Engineering, Architecture or other technical field,
- A minimum of 10 years of work experience as an OHS specialist in construction projects,
- A minimum of three (3) years of work experience in the OHS assessment and management in projects financed by the international organizations or other international donors, preferably the World Bank,
- Experience in carrying out RCA according to the internationally accepted standards and methods,
- Possessing a certification in an OHS-related field (A or B Class OHS Certificate of the Ministry of Labor and Social Security of Turkiye), or NVQ Level 5-6 or GradIOSH-CMIOSH or equivalent,
- Possessing an International Certificate (NEBOSH, OSHA, etc.) will be an asset.
- Complete understanding of Occupational Health and Safety Law No. 6331, Labour Law No.4857, Social Security and General Health Insurance Law No. 5510, and all relevant applicable regulations of Turkiye, as well as the ILO Code of Practice,
- Knowledge of World Bank Operational Policies, Environmental and Social Framework and respective World Bank Group Environmental, Health, and Safety Guidelines or other internationally accepted standards will be an asset,
- Ability to travel without restriction to the renovation site,
- Excellent interpersonal and communication skills, and
- Fluency in English is required.

### **Confidentiality**

All documents provided to the Consultant for carrying out this task should be considered confidential. Except as needed to fulfill the tasks required in this ToR, the incident shall not be discussed or information communicated to any other organization or individual.