SEISMIC RESILIENCE AND ENERGY EFFICIENCY
IN PUBLIC BUILDINGS PROJECT
(SREEPB PROJECT)

HATAY MUSTAFA KEMAL UNIVERSITY (HKMU) TAYFUR SOKMEN CAMPUS
FACULTY OF ARTS AND SCIENCES
VOCATIONAL SCHOOL OF HEALTH SERVICES
FACULTY OF AGRICULTURE
FACULTY OF EDUCATION

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

JULY
2024

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Abbreviations

BMS	Building Management System
BP	Bank Procedure
CİMER	Presidency's Communication Center
Consultant	NKY Architecture Engineering
dBA	Noise Reduction and Control
dBC	Noise Rating Measure
E&S	Environmental and Social
EA	Environmental Assessment
EHS	Environment, Health, and Safety
EIA	Environmental Impact Assessment
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
GM	Grievance Mechanism
HMKU	Hatay Mustafa Kemal University
ILO	International Labor Organization
LOTO	Lock Out-Tag Out
M&E	Monitoring and Evaluation
MoEUCC	Ministry of Environment, Urbanization, and Climate Change
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
PUB	Project Implementation Unit
PV	Photovoltaic Panel
SEF	Stakeholder Participation Framework
SPP	Solar Power Plant
SREEPB	Seismic Resilience and Energy Efficiency in Public Buildings
WB	World Bank
WMP	Workforce Management Plan

Executive Summary

Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project focuses on seismic strengthening and energy efficiency in public buildings such as higher education buildings, dormitories, social service institutions, hospitals, and government buildings located in high seismic risk areas with low energy efficiency. Under the reference number DES-SUB-02, this project covers 4 structures orderly Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture, Faculty of Education in Hatay Mustafa Kemal University Tayfur Sokmen Campus.

This document provides information about the structural retrofitting and energy efficiency-oriented improvement works of the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture, Faculty of Education in Hatay Mustafa Kemal University Tayfur Sokmen Campus and addresses the national and international legislation that is subject to the works in question, and also provides information on possible risks that may occur during the works. It includes the measures to be taken to keep or eliminate negative environmental and social impacts at an acceptable level and the measures to be taken regarding occupational health and safety. Additionally, this Environmental and Social Management Plan (ESMP) includes details about stakeholder engagement activities, and the establishment of a Grievance Mechanism (GM), and outlines the responsibilities of relevant parties within the project scope

Introduction

This Environmental and Social Management Plan (ESMP) has been prepared within the scope of the Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPB) for the seismic retrofitting and energy efficiency-focused renovation activities to be carried out in the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture, Faculty of Education in Hatay Mustafa Kemal University Tayfur Sokmen Campus. It aims to outline the measures to be taken to maintain or eliminate the potential adverse environmental and social impacts and risks at an acceptable level.

First and foremost, this ESMP has been prepared in accordance with Turkish legislation and, in addition, aligns with the policies, standards, and measures of the World Bank (WB). It clearly outlines who will implement the measures, when, how frequently, and in what manner during the various stages of project implementation.

1. General Project and Project Site Information

1.1 Project Definition

1.1.1. General Information & Objectives

The general purpose of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project; is to strengthen public buildings (educational buildings, dormitories, hospitals and administrative buildings) that are inefficient in terms of energy use and have a high earthquake risk, against earthquakes and to ensure energy efficiency.

The aim of the project is to determine the behavior of the ground and structural systems of existing public buildings with different uses against earthquakes and to eliminate the risks by structurally strengthening them, as well as to make improvements in terms of energy efficiency, to reduce energy consumption and CO2 emissions, to monitor and control energy consumption, to close the current deficit due to energy, and to develop the sector and raise awareness by creating a model for making all public buildings in Türkiye energy efficient after the project.

SREEPB Project ensures that existing buildings are strengthened against earthquakes and made more efficient, as well as increasing social awareness about earthquakes and energy efficiency.

Throughout the project, structural strengthening works include building load-bearing system improvements and additions, as well as soil improvement if needed (*limited only to the floors of the buildings in scope*). Studies focused on energy efficiency include facade and roof insulation, replacement of facade components such as windows and doors, mechanical system revisions, air conditioning system replacements, ventilation system revisions and replacements, integration of building energy monitoring and automation systems into the existing electrical system, electricity generation through solar panel installation.

Within the scope of the Environmental and Social Standards defined in the World Bank's Environmental and Social Framework (ESF), the SREEPB Project must ensure that the activities to be carried out will not create irreversible negative environmental and social impacts and risks and that the possible impacts/risks are temporary and reversible. The Environmental Risk Rating is accepted as "Moderate" level since it is at a moderate level in terms of size and quality and the sub-project sites are not in sensitive areas in terms of environmental, social risks and impacts. They are also not expected to have serious adverse effects on human health and the environment.

The structure covered by this ESMP is located within the boundaries of Antakya District, Hatay province. Because the buildings are evacuted, except for the the Faculty of Arts and Sciences, Vocational School of Health Services, Facultyof Agriculture, Faculty of Education in the district are not directly affected by the project activities. Additionally, the structures within the scope will be temporarily out of use during the construction activities. Therefore, four is no overlap between the project activity schedule and the daily activities of the structures within the scope.

This ESMP has been prepared as a guidance document for the SREEPB Project to eliminate or, if not entirely possible, reduce to an acceptable level its environmental impacts such as waste generation (hazardous and non-hazardous), air and water pollution, as well as its impacts and risks on public health, safety, and occupational health and safety (OHS), in compliance with the requirements of the World Bank (WB) and relevant national legislation.

The project, funded by the World Bank (WB), will be carried out by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC) General Directorate of Construction Affairs (GDCA). GDCA will be responsible for the overall implementation, control, management, and coordination of the project. The consulting firm will be responsible for preparing and supervising the implementation of the Environmental and Social Management Plan (ESMP), while the contractor will be responsible for the on-site implementation of the ESMP.

1.1.2 Project Information

Within the scope of the project, satellite images and detailed information about the buildings of the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education located in Tayfun Sökmen Campus of Hatay Mustafa Kemal University are given in Figure 1 and Table 1, respectively. The Solar Power Plant project will be built to meet some of the energy needs not only for the four buildings within the scope of this project, but also for the other three faculties (Faculty of Sports Sciences, Faculty of Economics and Administrative Sciences, Faculty of Veterinary Medicine) located on the same campus. The environmental and social impact assessment of the SPP project is given in detail in the "SREEPB | Hatay Mustafa Kemal University, Tayfur Sökmen Faculty of Sports Sciences, Faculty of Economics and Administrative Sciences, Faculty of Veterinary Medicine) Environmental and Social Impact Assessment report.

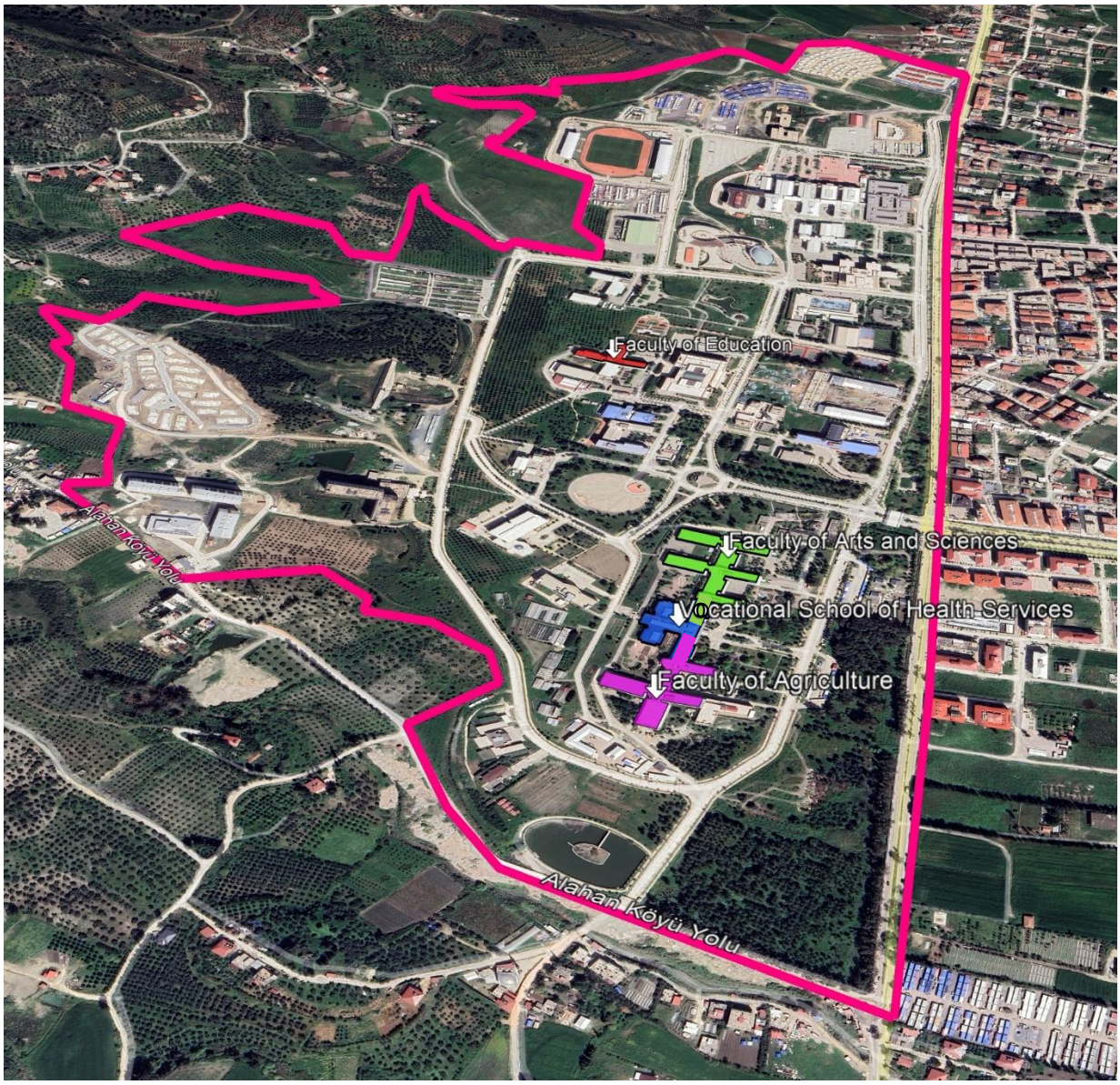


Figure 1: Buildings within the Scope of the Project

Table 1. General Information of Buildings

<table>
<tr><td>CAMPUS NAME</td><td colspan="2">Hatay Mustafa Kemal University Tayfur Sokmen Campuss</td></tr>
<tr><td>BUILDING NAMES
(included in the project)</td><td>Faculty of Education(8146,00 m^2)
D1 Block
D2 Block
D3 Block
E Block
K Block</td><td>Vocational School of Health Services (6.830,00 m^2)
A Block
B Block
C Block
D Block</td></tr>
<tr><td></td><td>Faculty of Agriculture (12.830,00 m^2)
D1 Block
D2 Block
K1 Block
K2 Block
L1 Block
L2 Block
E1 Block
E2 Block</td><td>Faculty of Arts and Sciences (17150,00 m^2)
D1 Block
D2 Block
D3 Block
K1 Block and K1 ladder Block
K2 Block and K2 ladder Block
K3 Block and K3 ladder Block
L1 Block
L2 Block
E1 Block
E2 Block
E3 Block</td></tr>
<tr><td>PROVINCE</td><td colspan="2">Hatay</td></tr>
<tr><td>DISTRICT</td><td colspan="2">Antakya</td></tr>
<tr><td>NUMBER OF USERS</td><td colspan="2"><table><tr><th rowspan="2">FACULTY</th><th colspan="2">NUMBER OF USERS (PERSON)</th></tr><tr><th>STUDENT</th><th>STAFF</th></tr><tr><td>Faculty of Education</td><td>2050</td><td>82</td></tr><tr><td>Vocational School of Health Services</td><td>1193</td><td>16</td></tr><tr><td>Faculty of Agriculture</td><td>887</td><td>101</td></tr><tr><td>Faculty of Arts and Sciences</td><td>2528</td><td>119</td></tr></table></td></tr>
<tr><td colspan="3">BUILDING INFORMATION</td></tr>
<tr><td>CONSTRUCTION AREA</td><td colspan="2">~44.956 m^2</td></tr>
<tr><td colspan="3">THE PLANNED WORKS TO BE CARRIED OUT IN ALL BUILDINGS INCLUDED IN THE PROJECT</td></tr>
<tr><td>STRUCTURAL REINFORCEMENT</td><td colspan="2">Existing load-bearing system reinforcement
Floor, ceiling, wall and door renovations due to structural strengthening activities
Within the scope of structural strengthening works to be carried out in four blocks, drainage work will be carried out only in the Faculty of Agriculture and its neighboring blocks.</td></tr>
<tr><td>ENERGY EFFICIENCY</td><td colspan="2">The following works will be carried out within the scope of the base scenario of building envelope insulation of the Faculty of Education;
Insulation of 4,066.09 m2 wall structure with 6 cm rock wool insulation material
Suggestion to eliminate 645 double-glazed window hinge deteriorations and wick leaks and to cover the outer glass with a film
Unused attic 15 cm thick glass wool roof mat facility with one side covered with aluminum foil (0.035 ≤ Thermal conductivity ≤ 0.040W/(mK)) (Application area 2.545,
At the Faculty of Agriculture, the following works will be carried out within the scope of the base scenario of building envelope insulation;
Insulation of 6,370.17 m2 wall structure with 6 cm rock wool insulation material
834 single-glazed existing windows (4+11+4) with a total area of 1,890.48 m2 in the Facultyof Agriculture with new ones with double glass and plastic joinery with a U value of 1.75.</td></tr>
</table>

	• 3 pieces of 26.23 m2 in the Facultyof Agriculture with metal insulated doors with U = 4.0 and 5.9 m2 with new ones with automatic transition or good heat insulation with a U value of 2.5. • 10 cm thick glass wool roofing mat facility with one side covered with aluminum foil in the unused attic located at the Facultyof Agriculture (0.035 ≤ Thermal conductivity ≤ 0.040W/(mK)) (Application area 4.660.50 m 2) The following works will be carried out within the scope of the base scenario of building envelope insulation of **Vocational School of Health Services**; • Insulation of 2,522.42 m2 wall structure with 6 cm rock wool insulation material • Replacement of 360 single-glazed existing windows (4+11+4) with a total area of 805.24 m2 with new ones with double glass and plastic joinery with a U value of 1.75 • Unused attic 16cm thick glass wool roof mat facility with one side covered with aluminum foil (0.035 ≤ Thermal conductivity ≤ 0.040W/(mK)) (Application area 2640.00 m 2) The following works will be carried out within the scope of the base scenario of building envelope insulation after reinforcement at the **Faculty of Arts and Sciences** ; • Insulation of 4,783.44 m2 wall structure with 6 cm rock wool insulation material • 904 single-glazed existing windows (4+11+4) with a total area of 2,351 m2 with new ones with double glass and plastic joinery with a U value of 1.75 • Unused attic 16 cm thick glass wool roof mat facility with one side covered with aluminum foil (0.035 ≤ Thermal conductivity ≤ 0.040W/(mK)) (Application area 5.910,00m 2) In addition, in the sub-project involving the Faculty of Sports Sciences, Faculty of Economics and Administrative Sciences and Faculty of Veterinary Medicine within Hatay MKU, the installation of a Solar Power Plant (SPP) for energy efficiency was brought to the agenda. Solar Power Plant, which is stated in detail in the ESMP-1 prepared for the project in question, will serve all four faculties within the scope of this ESMP.
DURATION AND SEASON OF ACTIVITIES	
All work to be carried out within the scope of the project will realize in between Q3 of 2024 and Q2 of 2025. The Contractor is obliged to complete the works in the buildings within the planned time as stated in the Job Description. At the same time, the Contractor will clearly and in advance inform all stakeholders about the timeline of construction activities before starting any construction work.	
EXPECTED NUMBER OF WORKERS	
The total estimated number of workers in the buildings is expected to be around 230 personnel per day.	

1.1.3 Locations of Campus & Buildings

Because some of the campus employees lost their homes during the earthquake, container cities were established within the University campus. In these container cities, MKU personnel stay with their families. Container cities 1 and 2 in Figure-2 are located near the four faculties in question. The distances of container cities to faculties and the number of inhabitants are given below.

Container City	Number of Living People	Nearest Faculty Building	Distance to the Nearest Faculty Building (m)
Container City No. 1	45	Faculty of Agriculture	30m (Within major domain)
Container City No. 2	180	Faculty of Education	236m

The satellite visual of the buildings where retrofit and energy efficiency work will be carried out is shown in Figure-1. Satellite images showing the individual coordinates of the four buildings are given in Figures 3-4-5 and Figure 6.

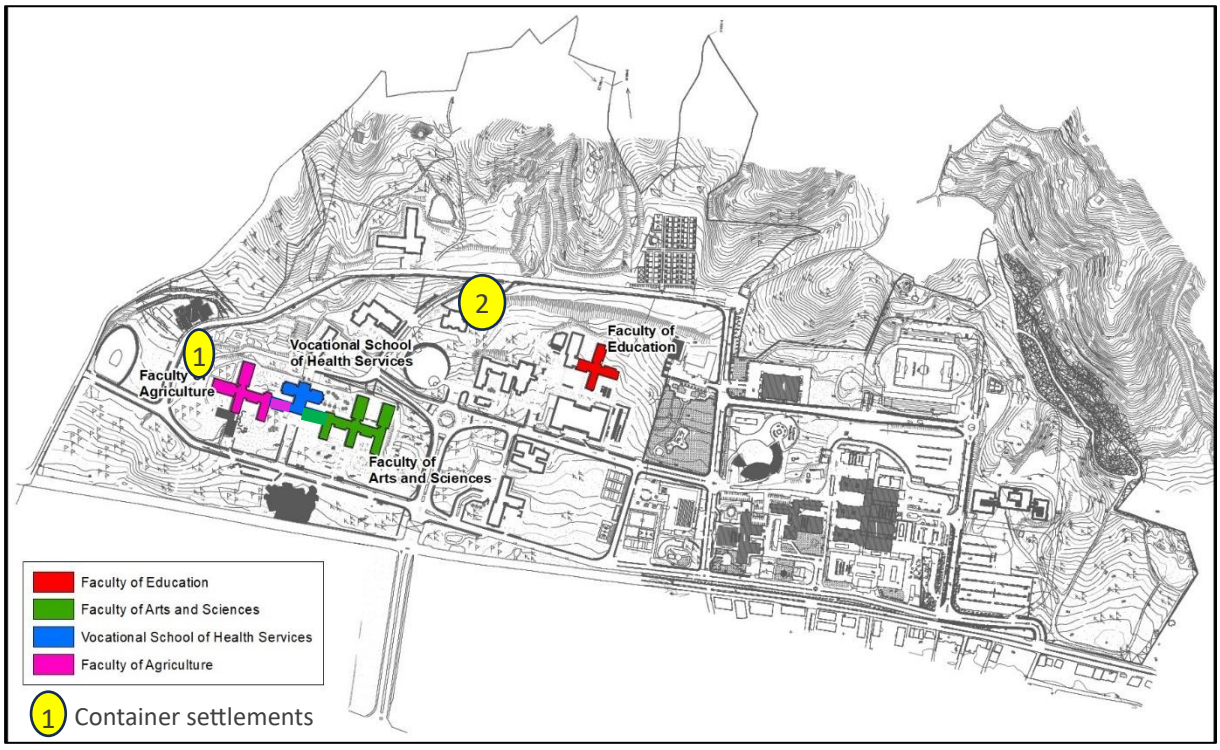


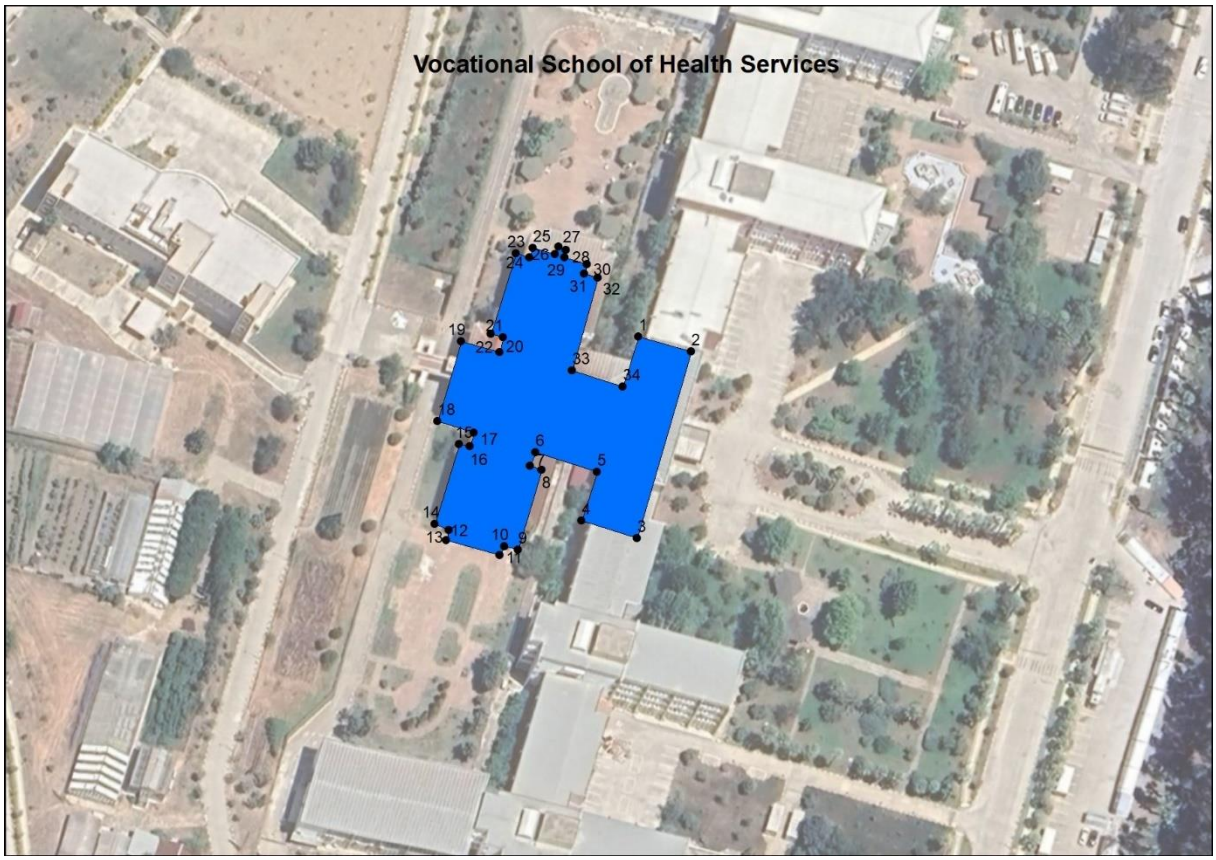
Figure 2. Container settlements within the campus (Sensitive area)

Container campus no. 1, 45 people,

Container campus no. 2: 180 people,

Faculty of Arts and Sciences									
	UTM ED50		GEOGRAFIC			UTM ED50		GEOGRAFIC	
	DOM:39 ZON:37		WGS84			DOM:39 ZON:37		WGS84	
NAME	EAST	NORTH	LATITUDE	LONGITUDE	NAME	EAST	NORTH	LATITUDE	LONGITUDE
F.1	248352,55	4025816,76	36,327794	36,195955	F.23	248411,84	4025672,30	36,326508	36,196661
F.2	248394,22	4025804,06	36,327690	36,196423	F.24	248362,63	4025686,82	36,326626	36,196109
F.3	248392,87	4025799,22	36,327646	36,196409	F.25	248367,31	4025701,82	36,326763	36,196156
F.4	248396,05	4025798,27	36,327639	36,196445	F.26	248370,65	4025701,03	36,326756	36,196193
F.5	248396,68	4025799,85	36,327653	36,196451	F.27	248380,81	4025734,84	36,327063	36,196296
F.6	248445,50	4025784,93	36,327531	36,196999	F.28	248377,87	4025735,72	36,327071	36,196263
F.7	248441,05	4025770,33	36,327399	36,196955	F.29	248378,82	4025739,77	36,327107	36,196272
F.8	248409,54	4025779,37	36,327472	36,196601	F.30	248375,33	4025740,88	36,327116	36,196233
F.9	248407,56	4025773,42	36,327418	36,196581	F.31	248373,03	4025733,73	36,327051	36,196209
F.10	248411,45	4025771,99	36,327406	36,196625	F.32	248331,36	4025746,12	36,327152	36,195742
F.11	248405,17	4025751,04	36,327216	36,196562	F.33	248337,79	4025767,39	36,327345	36,195806
F.12	248401,44	4025752,07	36,327224	36,196520	F.34	248379,38	4025755,24	36,327247	36,196273
F.13	248399,38	4025745,56	36,327165	36,196499	F.35	248378,03	4025750,24	36,327201	36,196260
F.14	248430,65	4025736,04	36,327087	36,196850	F.36	248381,52	4025749,13	36,327192	36,196299
F.15	248426,61	4025721,43	36,326955	36,196810	F.37	248382,08	4025750,72	36,327207	36,196305
F.16	248395,49	4025730,64	36,327029	36,196460	F.38	248384,85	4025749,77	36,327199	36,196336
F.17	248393,11	4025724,21	36,326971	36,196436	F.39	248395,33	4025783,50	36,327505	36,196442
F.18	248396,60	4025723,02	36,326961	36,196475	F.40	248392,16	4025784,61	36,327515	36,196406
F.19	248390,01	4025701,82	36,326769	36,196409	F.41	248393,19	4025788,82	36,327553	36,196416
F.20	248386,76	4025702,70	36,326776	36,196372	F.42	248389,93	4025789,69	36,327560	36,196379
F.21	248384,70	4025696,67	36,326721	36,196351	F.43	248387,39	4025782,63	36,327495	36,196353
F.22	248416,13	4025687,14	36,326643	36,196704	F.44	248346,20	4025795,25	36,327598	36,195891

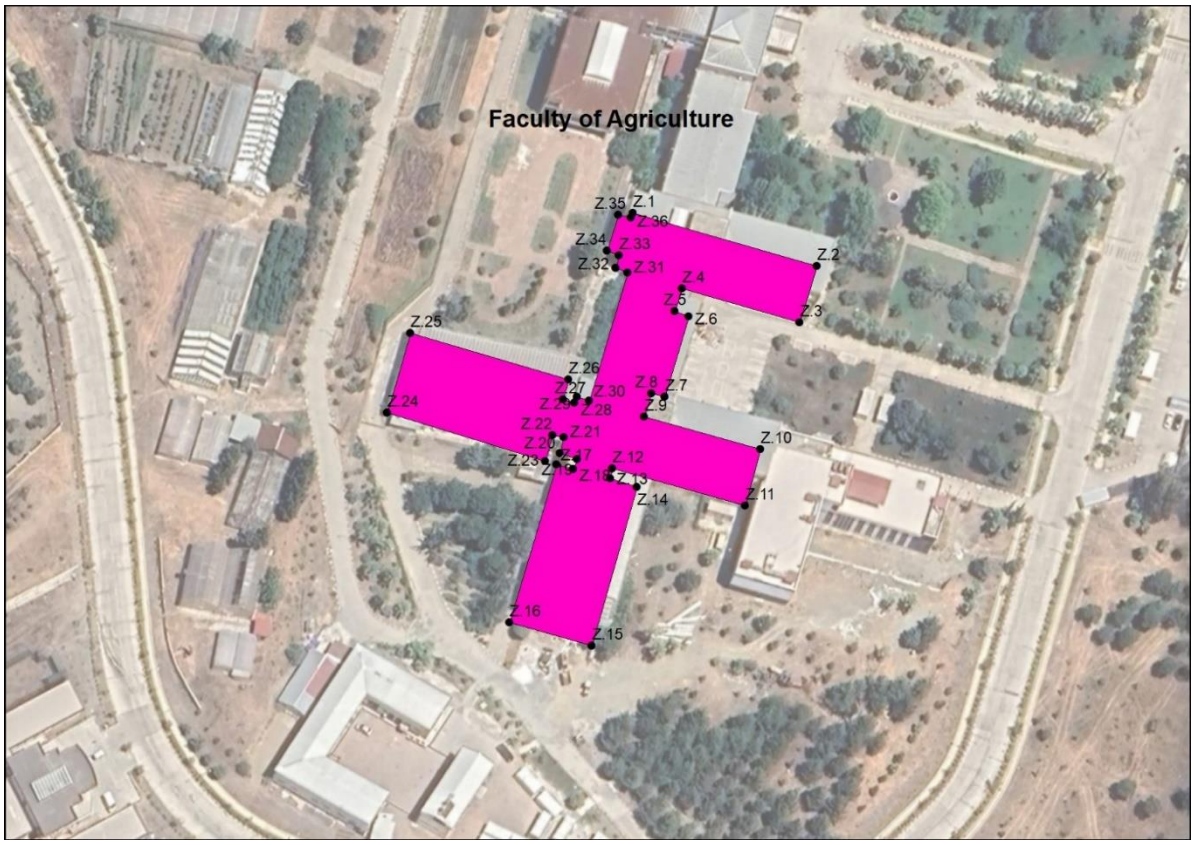
Figure 3. View and Coordinates of Faculty of Arts and Sciences



Vocational School of Health Services

	UTM ED50 DOM:39 ZON:37		GEOGRAFIC WGS84			UTM ED50 DOM:39 ZON:37		GEOGRAFIC WGS84	
NAME	EAST	NORTH	LATITUDE	LONGITUDE	NAME	EAST	NORTH	LATITUDE	LONGITUDE
S.1	248358,03	4025657,89	36,326365	36,196067	S.17	248315,16	4025632,93	36,326129	36,195598
S.2	248371,84	4025654,04	36,326334	36,196222	S.18	248305,72	4025635,86	36,326153	36,195492
S.3	248357,71	4025605,38	36,325892	36,196080	S.19	248311,83	4025656,74	36,326342	36,195553
S.4	248343,25	4025609,87	36,325928	36,195918	S.20	248321,83	4025653,88	36,326319	36,195665
S.5	248347,39	4025622,69	36,326045	36,195960	S.21	248322,78	4025657,69	36,326354	36,195675
S.6	248331,20	4025627,77	36,326086	36,195778	S.22	248319,69	4025658,57	36,326361	36,195640
S.7	248329,93	4025624,28	36,326055	36,195765	S.23	248326,12	4025679,68	36,326552	36,195705
S.8	248332,94	4025623,24	36,326046	36,195799	S.24	248329,69	4025678,65	36,326544	36,195745
S.9	248326,67	4025602,45	36,325857	36,195736	S.25	248330,64	4025681,03	36,326566	36,195755
S.10	248323,10	4025603,32	36,325864	36,195696	S.26	248336,36	4025679,52	36,326554	36,195819
S.11	248321,91	4025600,86	36,325842	36,195683	S.27	248337,23	4025681,35	36,326570	36,195828
S.12	248307,94	4025604,75	36,325873	36,195527	S.28	248339,21	4025680,47	36,326563	36,195850
S.13	248308,65	4025607,45	36,325897	36,195534	S.29	248338,82	4025678,65	36,326546	36,195846
S.14	248305,00	4025609,11	36,325911	36,195493	S.30	248344,61	4025676,82	36,326532	36,195912
S.15	248311,35	4025629,83	36,326100	36,195557	S.31	248343,98	4025674,36	36,326509	36,195905
S.16	248314,13	4025629,28	36,326095	36,195588					

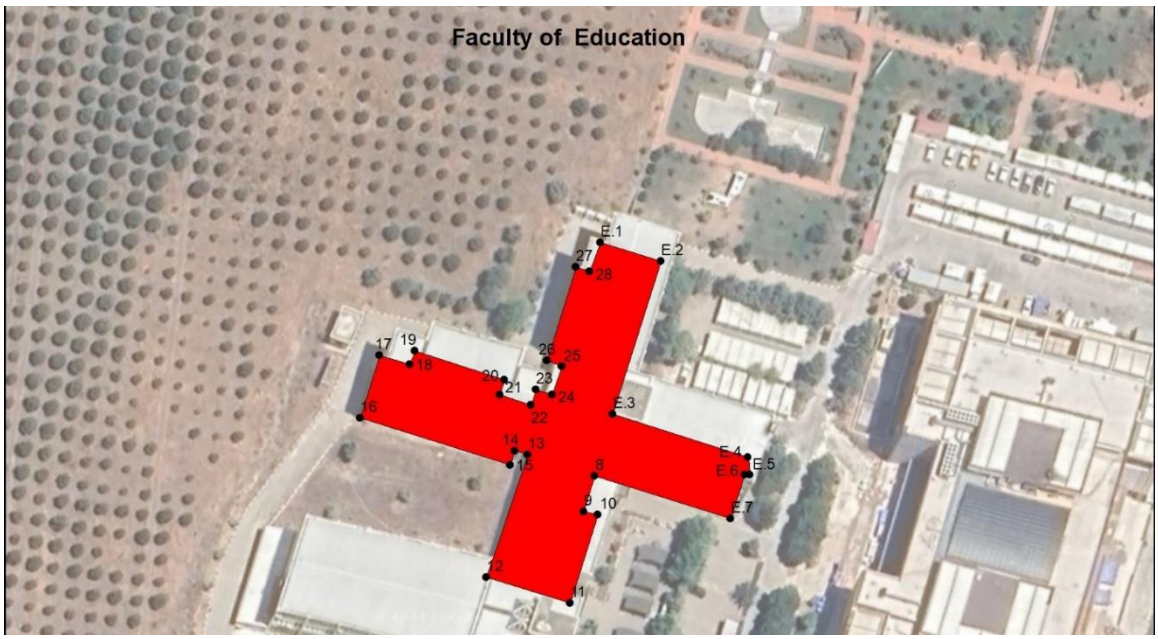
Figure 4. View and Coordinates of Vocational School of Health Services



Faculty of Agriculture

	UTM ED50 DOM:39 ZON:37		GEOGRAFIC WGS84			UTM ED50 DOM:39 ZON:37		GEOGRAFIC WGS84	
NAME	EAST	NORTH	LATITUDE	LONGITUDE	NAME	EAST	NORTH	LATITUDE	LONGITUDE
Z.1	248331,91	4025582,60	36,325680	36,195801	Z.19	248317,15	4025517,28	36,325088	36,195657
Z.2	248380,73	4025568,55	36,325566	36,196348	Z.20	248312,46	4025518,87	36,325101	36,195605
Z.3	248376,20	4025553,47	36,325429	36,196303	Z.21	248313,50	4025523,07	36,325139	36,195615
Z.4	248345,01	4025562,60	36,325503	36,195953	Z.22	248310,56	4025523,63	36,325143	36,195582
Z.5	248343,02	4025556,49	36,325448	36,195933	Z.23	248308,58	4025516,72	36,325080	36,195562
Z.6	248346,68	4025555,14	36,325436	36,195974	Z.24	248266,59	4025529,50	36,325185	36,195091
Z.7	248340,33	4025533,71	36,325242	36,195910	Z.25	248272,86	4025550,69	36,325377	36,195154
Z.8	248336,91	4025534,74	36,325250	36,195872	Z.26	248314,77	4025538,31	36,325277	36,195624
Z.9	248334,93	4025528,55	36,325194	36,195852	Z.27	248313,34	4025533,15	36,325230	36,195610
Z.10	248365,80	4025519,90	36,325124	36,196198	Z.28	248316,43	4025532,20	36,325222	36,195645
Z.11	248361,68	4025504,90	36,324988	36,196157	Z.29	248317,07	4025533,71	36,325236	36,195651
Z.12	248326,43	4025514,74	36,325067	36,195762	Z.30	248320,32	4025532,76	36,325228	36,195688
Z.13	248325,96	4025512,04	36,325043	36,195757	Z.31	248330,56	4025566,81	36,325537	36,195791
Z.14	248333,02	4025509,82	36,325025	36,195837	Z.32	248327,39	4025568,00	36,325547	36,195755
Z.15	248320,96	4025467,67	36,324642	36,195716	Z.33	248328,26	4025571,33	36,325577	36,195764
Z.16	248299,13	4025473,78	36,324691	36,195471	Z.34	248325,01	4025572,60	36,325588	36,195727
Z.17	248311,51	4025515,77	36,325073	36,195595	Z.35	248327,94	4025582,13	36,325674	36,195757
Z.18	248316,04	4025514,58	36,325063	36,195646	Z.36	248331,36	4025581,41	36,325669	36,195795

Figure 5. View and Coordinates of Faculty of Agriculture



Faculty of Education

	UTM ED50 DOM:39 ZON:37		GEOGRAFIC WGS84	
NAME	**EAST**	**NORTH**	**LATITUDE**	**LONGITUDE**
E.1	248287,50	4026243,00	36,331620	36,195090
E.2	248301,30	4026239,00	36,331580	36,195250
E.3	248290,40	4026204,00	36,331270	36,195140
E.4	248321,20	4026195,00	36,331190	36,195480
E.5	248321,70	4026190,00	36,331150	36,195490
E.6	248320,50	4026190,00	36,331150	36,195480
E.7	248317,30	4026180,00	36,331060	36,195450
E.8	248286,30	4026190,00	36,331140	36,195100
E.9	248283,80	4026182,00	36,331070	36,195070
E.10	248287,00	4026181,00	36,331060	36,195110
E.11	248280,60	4026161,00	36,330880	36,195040
E.12	248261,60	4026167,00	36,330930	36,194830
E.13	248271,00	4026195,00	36,331180	36,194930
E.14	248268,00	4026196,00	36,331190	36,194890
E.15	248267,00	4026193,00	36,331160	36,194880
E.16	248232,70	4026204,00	36,331250	36,194500
E.17	248237,10	4026218,00	36,331370	36,194540
E.18	248244,00	4026216,00	36,331360	36,194620
E.19	248245,20	4026219,00	36,331390	36,194630
E.20	248265,60	4026212,00	36,331330	36,194860
E.21	248264,70	4026209,00	36,331300	36,194850
E.22	248271,70	4026206,00	36,331280	36,194930
E.23	248272,80	4026210,00	36,331310	36,194940
E.24	248276,50	4026209,00	36,331300	36,194980
E.25	248278,70	4026215,00	36,331360	36,195000
E.26	248275,40	4026217,00	36,331370	36,194970
E.27	248282,00	4026238,00	36,331570	36,195030
E.28	248285,10	4026237,00	36,331560	36,195070

Figure 6. View and Coordinates of Faculty of Education

Apart from the solar panels, the possible negative effects that may arise during the reinforcement and improvement construction of the other four buildings will primarily occur inside the building, and since there is no need forsoil improvement works, limited noise and dust formation, traffic increase, parking space shortage, vibration and visual effects will be reflected outside the building. The impact distance on surrounding buildings is limited to 100 m and the major impact area is shown in Figure-7.

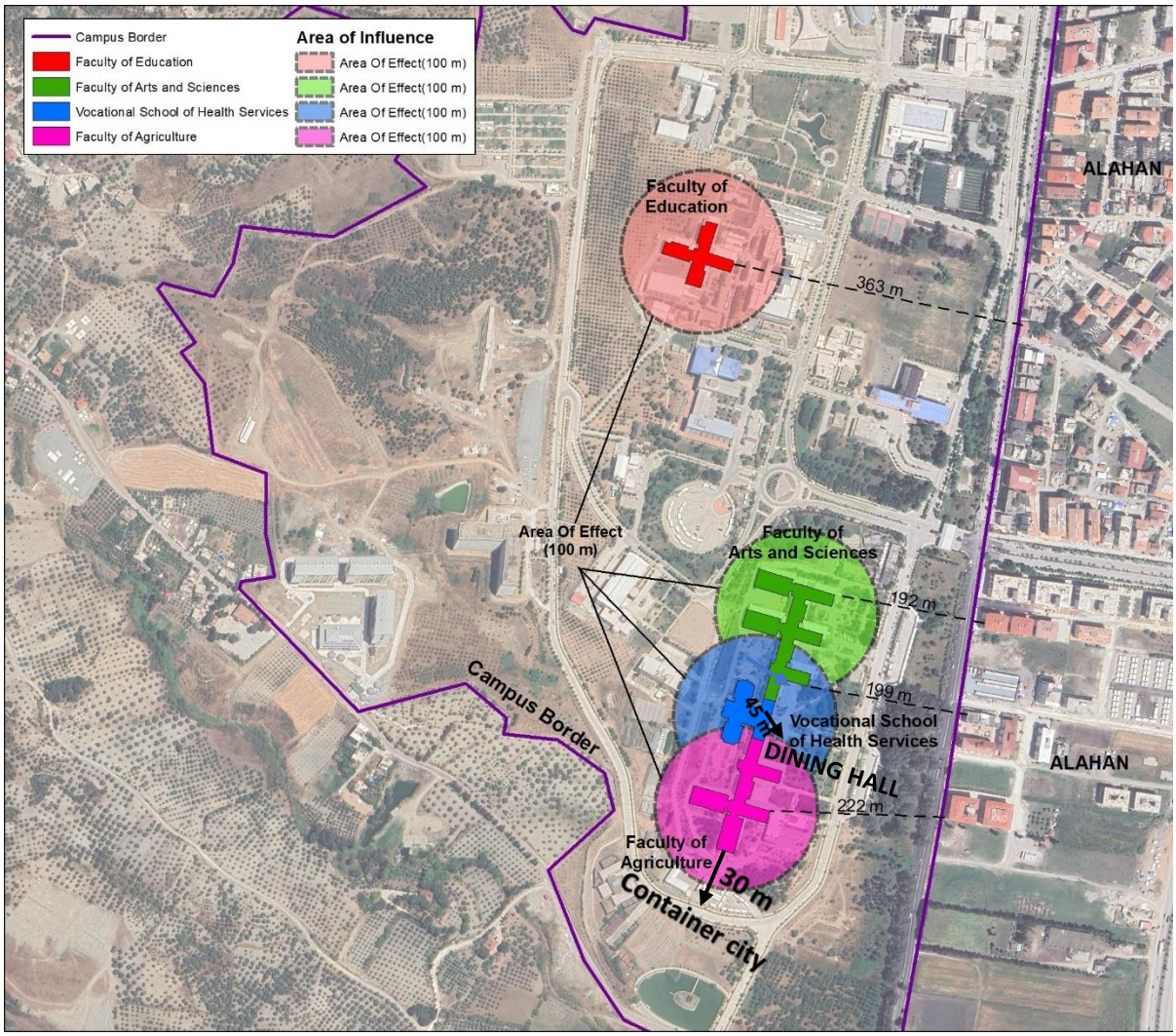


Figure 7. View of the Buildings Included in the Scope of the Project and the Major Impact Area

Within the major impact area, there is the container city, 30 m away from the Faculty of Agriculture, and the university cafeteria, 45 m away from the Vocational School of Health Services Units.

45 people live in this container city and it is used by university personnel. Residents living here will be informed about the stages of construction work to be carried out at the Faculty of Agriculture and where they should apply for possible requests and grievances.

The university's cafeteria is located 45 m away from the Faculty of Agriculture, and since there will be no working hours during meal hours, construction works will also stop. For this reason, those who will use the cafeteria will not be affected by dust and noise caused by construction. Posters containing information about the grievance mechanism will be hung in the cafeteria and its surroundings. The grievance box installed in the cafeteria will be checked twice a week.

2. Compliance with the Legal Framework and the World Bank Environmental and Social Framework (ESF)

2.1 National Legislation

The ESMP is primarily prepared in compliance with the legislation of the Republic of Türkiye. The fundamental framework of Türkiye's environmental legislation is the Environmental Law (Law No. 2872), published in the Official Gazette dated August 11 and 1983 numbered 18132, and last revised in the Official Gazette dated December 29, 2023 and numbered 32414 concerning administrative fines. This law is supported by regulations. Below are law and the regulations primarily utilized or to be utilized for the assessment and prevention of environmental impacts within the scope of this Project.

1. Waste Management Regulation was published in the Official Gazette No. 29314 dated April 2, 2015, and an amendment was made in the Official Gazette No. 30016 dated March 23, 2017.
2. Regulation on the Control of Packaging Wastes was published in the Official Gazette dated 26 June 2021 and numbered 31523.
3. Regulation on the Control of Excavation Soil, Construction and Demolition Wastes was published in the Official Gazette dated 18.03.2004 and numbered 25406, and an amendment was made in the Official Gazette numbered 31623 dated 09 October 2021.
4. Air Quality Assessment and Management Regulation was published in the Official Gazette dated 06 June 2008 and numbered 26898.
5. Regulation on the Prevention of Risks of Exposure to Biological Agents was published in the Official Gazette dated 15 June 2013 and numbered 28678.
6. Zero Waste Regulation was published in the Official Gazette No. 30829 dated 12 July 2019 and an amendment was made in the Official Gazette No. 31623 dated 09 October 2021.
7. Regulation on Control of Soil Pollution and Contaminated Sites by Point Sources was published in the Official Gazette No. 27605 dated 8 June 2010 and was last revised in the Official Gazette No. 28704 dated 11 July 2013.
8. Water Pollution Control Regulation, published in the Official Gazette dated December 31, 2004, with the latest amendment published in the Official Gazette dated May 12, 2023, with the number 32188.
9. Environmental Noise Control Regulation was published in the Official Gazette No. 32029 dated 30 November 2022.
10. The Regulation on Noise Emission in the Environment Created by Equipment Used in Open Areas was published in the Official Gazette No. 26392 dated 30 December 2006 and an amendment was made in the Official Gazette No. 30088 dated 06 June 2017.

Within the scope of the project, activities related to Occupational Health and Safety will be carried out in compliance with the legislation taking into account the primary impacts, including the Labor Law No. 4857 published in the Official Gazette dated June 10, 2003, with issue number 25134, and the Occupational Health and Safety Law No. 6331 Published in the Official Gazette dated June 30, 2012, with issue number 6331, along with related regulations. Below are the regulations that will be primarily utilized.

1. The Regulation on Health and Safety Measures in Working with Asbestos was published in the Official Gazette No. 28539 dated 25 January 2013 and an amendment was made in the Official Gazette No. 28884 dated 16 January 2014.

2. The regulation on Manual Handling was published in the Official Gazette No. 28717 dated 24 July 2013.
3. The Regulation on Occupational Health and Safety in Temporary or Fixed-Term Works was published in the Official Gazette dated 23 August 2013 and numbered 28744.
4. Regulation on Health and Safety Measures in Working with Chemical Substances was published in the Official Gazette No. 28733 dated 12 August 2013.
5. Regulation on the Use of Personal Protective Equipment in Workplaces was published in the Official Gazette dated 02 July 2013 and numbered 28695.
6. Regulation on Health and Safety Signs was published in the Official Gazette No. 28762 dated 11 September 2013.
7. The Regulation on the Vocational Training of Those to be Employed in Hazardous and Very Hazardous Class Jobs was published in the Official Gazette dated 13 July 2013 and numbered 28706, and an amendment was made in the Official Gazette dated 11 May 2017 and numbered 30063.
8. Control of Dust Regulation was published in the Official Gazette dated 5 November 2013 and numbered 28812.
9. Regulation on Occupational Health and Safety in Construction Works was published in the Official Gazette No. 28786 dated 5 October 2013 and an amendment was made in the Official Gazette No. 30642 dated 31 December 2018
10. Regulation on the Protection of Employees from Noise-Related Risks was published in the Official Gazette No. 28721 dated 28 July 2013.
11. The Regulation on the Procedures and Principles of Occupational Health and Safety Training of Employees was published in the Official Gazette No. 28648 dated 15 May 2013 and an amendment was made in the Official Gazette No. 30430 dated 24 May 2018.
12. The Regulation on Health and Safety Conditions in the Use of Work Equipment was published in the Official Gazette No. 28628 dated 25 April 2013 and an amendment was made in the Official Gazette No. 31754 dated 18 February 2022.
13. The Regulation on the Duties, Powers, Responsibilities and Training of Occupational Safety Experts was published in the Official Gazette dated 29 December 2012 and numbered 28512, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533
14. Regulation on Occupational Hygiene Measurement, Test and Analysis Laboratories was published in the Official Gazette dated 24 January 2017 and numbered 29958.
15. Regulation on Occupational Health and Safety Services was published in the Official Gazette No. 28512 dated 29 December 2012 and an amendment was made in the Official Gazette No. 31533 dated 6 July 2021.
16. Occupational Health and Safety Risk Assessment Regulation was published in the Official Gazette No. 28512 dated 29 December 2012.
17. The Regulation on Emergency Situations in Workplaces was published in the Official Gazette No. 28681 dated 18 June 2013 and an amendment was made in the Official Gazette No. 31615 dated 1 October 2021.
18. The Regulation on Suspension of Work in Workplaces was published in the Official Gazette No. 28603 dated 30 March 2013 and an amendment was made in the Official Gazette No. 29621 dated 11 February 2016.
19. The Regulation on the Duties, Powers, Responsibilities and Training of Workplace Physicians and Other Health Personnel was published in the Official Gazette dated 20 July 2013 and

numbered 28713, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533.

20. Regulation on Health and Safety Measures in Working with Screened Vehicles was published in the Official Gazette No. 28620 dated 16 April 2013.
21. Regulation on the Protection of Employees from Vibration-Related Risks was published in the Official Gazette No. 28743 dated 22 August 2013.
22. Regulation on Supporting Occupational Health and Safety Services was published in the Official Gazette No. 28861 dated 24 December 2013.
23. Regulation on Occupational Health and Safety Boards was published in the Official Gazette No. 28532 dated 18 January 2013.
24. Regulation on Health and Safety Measures to be Taken in Workplace Buildings and Extentions was published in the Official Gazette No. 28710 dated 17 July 2013.
25. The Regulation on the Working Conditions of Pregnant or Breastfeeding Women, Breastfeeding Rooms and Child Care Dormitories was published in the Official Gazette No. 28737 dated 16 August 2013, and an amendment was made in the Official Gazette No. 30881 dated 7 September 2019.
26. The Regulation on the Working Conditions of Female Employees in Night Shifts was published in the Official Gazette No. 28717 dated 24 July 2013 and an amendment was made in the Official Gazette No. 30159 dated 19 August 2017.

To determine the basic insurance rights during the employment of all workers, the Social Security and General Health Insurance Law No. 5510 dated June 16, 2006, will be applied.

Additionally, the Environmental Impact Assessment (EIA) Regulation, under Article 10 of the Environmental Law, was first published in the Official Gazette dated February 7, 1993, with issue number 21489, and was last revised and published in the Official Gazette dated July 29, 2022, with issue number 31907. Since the construction activities will take place in publicly-owned existing buildings, the project is not subject to the EIA Regulation.

Significant social and environmental impacts resulting from the project are likely to affect sensitive receptors located near the project area. In this context, the careful management of ESMPs and OHS activities will be sufficient to reduce environmental and social impacts.

2.2 International Agreements

1. European Union Council Directive 89/391/EEC dated 12/6/1989, concerning measures to improve the health and safety of workers at work.
2. International Labour Organization (ILO) Convention No. 155, concerning Occupational Safety and Health and the Working Environment.
3. International Labour Organization (ILO) Convention No. 161 concerning Occupational Health Services.
4. International Labour Organization (ILO) Convention No. 187 concerning the Promotional Framework for Occupational Safety and Health.
5. International Labour Organization (ILO) Convention No. 167 concerning Safety and Health in Construction.

6. United Nations Framework Convention on Climate Change.
7. Paris Agreement on Climate Change.
8. Long-Range Transboundary Air Pollution Convention.

2.3 World Bank Environmental and Social Frame (ESF) and Standards

At all stages of the project, compliance with national legislation and the requirements of the World Bank Environmental and Social Framework (ESF) [1] and relevant Environment, Health and Safety (EHS) Guidelines [2] will be ensured.

Environmental and Social Standards (ESS), summarized in Annex II, are one of the components of the World Bank Environmental and Social Framework and establish requirements for the project owner regarding the identification and assessment of environmental and social risks and impacts associated with projects supported by the World Bank. The applicability of the World Bank Environmental and Social Standards to the SREEPB Project is summarized in Table 2.

Table 2. Applicability of World Bank Environmental and Social Standards to the Project

Environmental and Social Standards	Applicability
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	YES
ESS2: Labor and Working Conditions	YES
ESS3: Resource Efficiency and Pollution Prevention and Management	YES
ESS4: Community Health and Safety	YES
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	NO[3]
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	NO[4]
ESS7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	NO[5]
ESS8: Cultural Heritage	YES
ESS9: Financial Intermediaries	NO[6]
ESS10: Stakeholder Engagement and Information Disclosure	YES

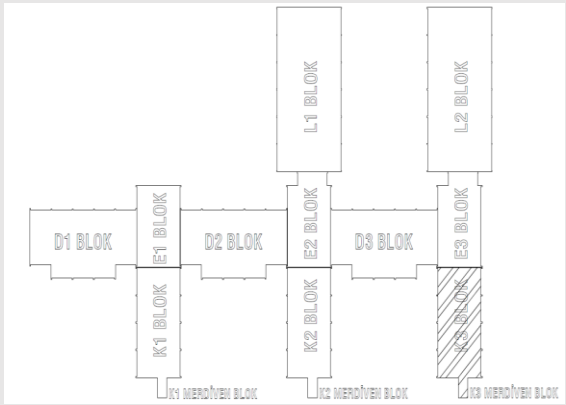
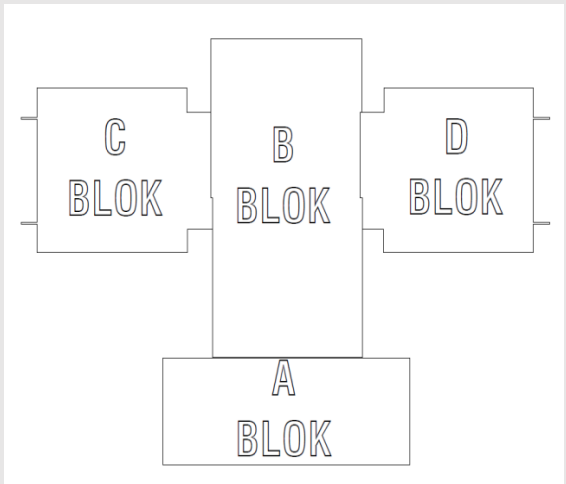
[1] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework
[2] https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines#:~:text=The%20Environmental%2C%20Health%2C%20and%20Safety,and%20in%20IFC's%20Performance%20Standards
[3] None of the activities to be carried out within the scope of this project will cause land acquisition, any restrictions on land use and/or involuntary resettlement, and all works will be carried out within existing buildings.
[4] There will be no interaction with natural resources and/or biodiversity elements due to any activities to be carried out within the scope of the project.
[5] There are no indigenous groups in Türkiye that meet the definition given in ESS7.
[6] Since there is no financial intermediary institution involved in this project, ESS9 will not be applied in this project.

3. Activities to be Conducted Within The Project

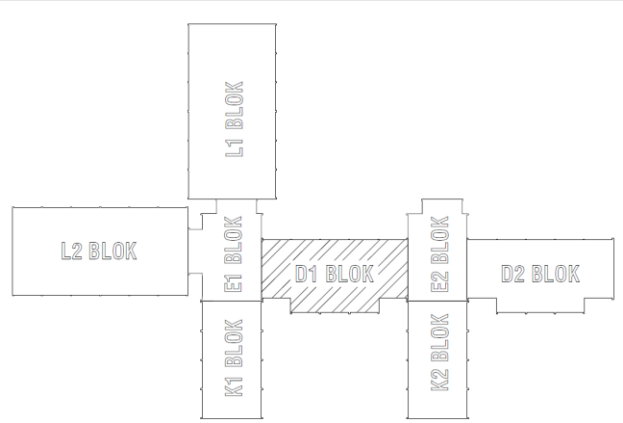
Summary technical information about the structural strengthening and energy efficiency works to be carried out at the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education located at Hatay Mustafa Kemal University Tayfur Sökmen Campus is given in Table 3 below. This ESMP will be accessible to all stakeholders throughout the life of the project, at construction sites and on the project website (https://kamuguclendirme.csb.gov.tr/). In addition, the draft ESMP was published on the official website of Hatay Mustafa Kemal University (https://www.mku.edu.tr) 13 days before the meeting to ensure that stakeholders participate in the meeting with sufficient information about the project before the information meeting. A full-time environmental, a social and a occupational health and safety (OHS) specialist will be employed by the Contractor; a environmental specialist, a social specialist and a OHS specialist have been employed by the Construction Supervision Consultant. The Consultant, the Contractor and the Ministry's Project Implementation Unit (PIU) are responsible for recording and answering the questions and opinions regarding environmental, social and OHS issues received by the stakeholders.

Table 3. Summary Information About the Activities to be Conducted

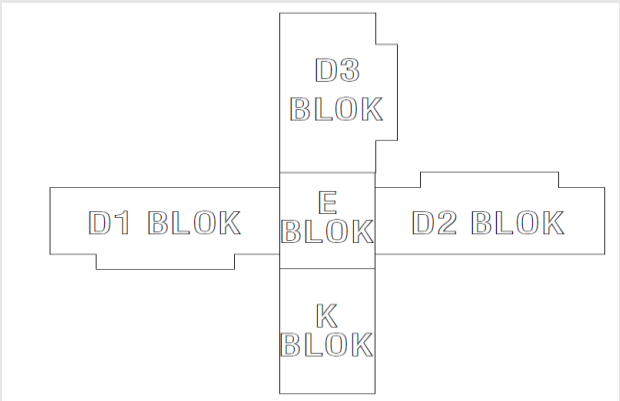
FIELD STUDIES

DEFINITION OF THE GEOGRAPHICAL, PHYSICAL, BIOLOGICAL, GEOLOGICAL, HYDROGRAPHIC, AND SOCIO-ECONOMIC CONTEXT	Faculty of Arts and Sciences   Vocational School of Health Services  

Faculty of Agriculture



Faculty of Education



During the implementation of the project activities (such as scaffolding installation, painting, exterior cladding, installation of solar panels, etc.), it is expected that the soil around the buildings will be affected by the construction activities. Necessary precautions will be taken to prevent hazardous chemicals from contaminating the soil during the work will be carried out in the project area. The measures to be taken to manage the possible environmental and social impacts and risks of the project are presented in detail in Chapter 5. No problems are foreseen in transportation to the project area. All infrastructure facilities required for the works, such as electricity, water, sewerage, natural gas and internet, are available.

LOCATIONS AND DISTANCE WHERE THE CLOSEST SENSITIVE RECEPTORS ARE LOCATED, SUCH AS HOSPITALS, HEALTH UNITS, PUBLIC BUILDINGS, HOMES	The project site is within the borders of Hatay Mustafa Kemal University Tayfur Sökmen Campus. The majority of the strengthening and improvement works will be carried out inside the building. However, mearures to preventig the close settlements around the project area from being negatively affected by construction activities is presented in this ESMP and will be kept under control and managed with impact mitigation measures. The buildings of the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education and other buildings located outside the SPP construction area are not expected to be directly affected by the construction operations. • Within the major impact area (Figure-7) arising from the operations to be carried out within the scope of seismic strengthening and energy efficiency in the Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education, possible problems that may be encountered in waste management such as noise, dust, vibration, and the spread of excavation waste outside the construction site. These problems may negatively affect those working/living in the buildings in question. Detailed information on the subject and precautions to be taken are included in Chapter 5. In addition, Hatay Mustafa Kemal University Tayfur Sökmen Campus Rectorate/faculty and college management (faculties are still out of use due to the earthquakes in February 2023) will be informed at least 7 days before each stage in the construction process. The construction schedule will be kept on site, in a place where stakeholders can see it, and will be constantly updated throughout the project. • Container settlements located within the campus close to the SPP area, settlements adjacent to the south gate, and the common road, library and student dormitories are within the impact area. The measures to be taken within the scope of the project to prevent these sensitive receptors from being affected by possible environmental and social impacts/risks are presented in detail in Chapter 5. • Hatay Mustafa Kemal University Campus is located 18 km from the city center and Hatay Airport.
TRAFFIC ACTION PLAN	Considering the activity area and its immediate surroundings, it is not foreseen that there will be any problems during the transportation of the materials needed for construction activities. Access roads and rules are specified in the Traffic Action Plan. The traffic action plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the Community Safety and Traffic Management Plan will be prepared by the contractor before the construction phase begins. The map and traffic management plans showing the traffic route of the four buildings and the areas where the Solar Panels will be installed are given below.


Road Route
Faculty of Education
Faculty of Arts and Sciences
Vocational School of Health Services
Faculty of Agriculture
Faculty of Education
DUR
All Vehicles
20
Faculty of Arts and Sciences
MKU ENTRANCE
Vocational School of Health Services
Faculty of Agriculture
DUR
SITE ENTRANCE

Map showing traffic route

Traffic Plan for Faculty of Arts and Sciences

Traffic Plan for Vocational School of Health Services

Traffic Plan for Facultyof Agriculture

Traffic Plan for Faculty of Education

	 Traffic Plan for Faculty of Education
SEWER SYSTEM, ELECTRICITY, WATER NETWORK ETC. INFRASTRUCTURES USED BY THE PROJECT	During the construction works, the sewerage, electricity and water networks already existing in the region will be used, with the approval of the Beneficiary Institution. Domestic waste will be disposed of using municipal services, while temporary storage areas will be created for other wastes and disposed of by licensed companies. In case any infrastructure service procurement is required specific to the project (overflow as a result of clogging in sewer lines (purchase of sewage truck service), long-term power outage (mobile generator), long-term water outage (fighting dust with water tankers, etc.), existing infrastructure opportunities will be evaluated and the relevant regulations will be met. will be carried out appropriately.

STAKEHOLDER ENGAGEMENT PROCESS	
STAKEHOLDER ENGAGEMENT PROCESS	Following the approval of the Environmental and Social Management Plan by the Administration, a stakeholder participation meeting was held in order to convey the Plan to the stakeholders, to provide information about the technical, social and environmental details of the project by relevant experts before the implementation of the prepared and approved projects, to answer any questions of the participants about the project and to obtain their opinions. edited. The meeting was held with the participation of the consultant, beneficiary institution management and technical units, building users and consultants. Before the information meeting, this ESMP was published and made available to stakeholders on the website of both the project (https://kamuguclatma.csb.gov.tr/) and Hatay Mustafa Kemal University (https://www.mku.edu.tr/) for 13 days. The ESMP will be accessible to all stakeholders both on the relevant websites and on construction sites throughout the life of the project. Additionally, a printed copy of this ESMP will be available to stakeholders in all buildings included in the project for 13 days. A stakeholder participation meeting was held following the completion of the 13-day suspension period of the ESMP. Detailed information about the retrofit and energy efficiency renovations to be made within the scope of the project were given and the anticipated environmental and social impacts were explained. Details about the stakeholder engagement meeting and grievance mechanism established specifically for the project are presented in Chapter 4 and Annex-6.
ISSUES AND CONCERNS RATED BY BUILDING USERS	Building users were informed about the structural strengthening and energy efficiency renovation process during the meeting. All suggestions and opinions submitted were recorded in stakeholder participation meeting minutes and grievance log.
INSTITUTIONAL CAPACITY DEVELOPMENT	
TRAINING	Within the scope of the project, it is expected that the institutional capacity of the contractor company will improve as a result of the training that the Consultant will provide to the Contractor personnel. These trainings are listed below. • Environmental and Social Impacts • Waste Management • Response to Environmental Emergencies •Energy efficiency • Stakeholder Participation/Information Activities • Grievance Mechanism (GM) • Gender Equality / Gender-Based Violence/Sexual Exploitation/Sexual Assault/Sexual Harassment • Code of Conduct • Preservation of Historical Heritage • OHS Plan Implementation and Monitoring Training • • Log Out and Tag OutTraining Permit to Work System Training

4. Stakeholder Engagement and Grievance Mechanism (GM)

Stakeholder Engagement is an inclusive process to be carried out throughout the project lifecycle and supports the establishment of strong, constructive and responsive business relationships that are important for the successful management of the project's environmental and social impacts and risks. The Stakeholder Engagement Meeting helps manage stakeholder expectations that will affect the management of risks, possible disputes and project delays by ensuring early, frequent and open communication throughout the life of the project. Before the implementation of the prepared and approved projects, a stakeholder participation meeting was held in order to provide information about the technical, social and environmental details of the project by relevant experts, to answer all questions of the participants about the project and to obtain their opinions. The meeting was held after the approval and publication of the draft version of this ESMP with the participation of the consultant company, beneficiary institution management and technical units, building users and PIU.

The ESMP specific to this sub-project will be published on the website of the SREEPB Project (https://kamuguclendirme.csb.gov.tr/) throughout the life of the project so that all stakeholders have information about how the project process will be carried out in the field and to receive objections and suggestions, if any. It was hung on 31.05.2024 at Mustafa Kemal University Tayfur Sökmen Campus within the scope of the project. Following the completion of the suspension process, a stakeholder participation meeting was held again on 13.06.2024 in order to provide information about the technical, social and environmental details of the project by relevant experts, and to answer all questions of the participants about the project and obtain their opinions, before the projects prepared and approved were implemented. The meeting was held with the participation of beneficiary institution management and technical units, consultant company employees and environmental experts of the Project Implementation Unit, social experts, OHS experts, building experts, civil engineers and other relevant personnel and 40 people attended the meeting (11 women and 29 men). 88 people (36 women, 52 men) participated via Zoom. Details about the stakeholder participation meeting are presented in Annex 6.

Grivance Mechanism

The Grievance Mechanism is to provide access to an effective procedure for project-affected or interested parties. Grievances can be an indicator of stakeholder concerns and can escalate if not identified and resolved. Identifying and responding to grievances supports the development of positive relationships between Project staff, local communities and other stakeholders.

The Ministry of Environment, Urbanization and Climate Change has determined many alternative methods for collecting institutional grievances and suggestions.

The Ministry of Environment, Urbanization, and Climate Change PIU has developed a transparent and comprehensive Grievance Mechanism (GM) specific to the SREEPB Project to receive, evaluate, and resolve grievances/opinions/suggestions that may arise during the activities carried out in public buildings within the scope of the SREEPB Project. This mechanism is designed to assist all relevant stakeholders in conveying their grievances/opinions/suggestions about the activities to the relevant individuals and institutions, thereby strengthening stakeholder emgagement in the project. The mechanism also enables all employees involved in the project (PIU, Consultant, Contractor) to submit their grievances/suggestions/opinions to the Ministry and the World Bank either anonymously or with open identification. The responsibilities of the Contractor, the consulting firm, and PIU are detailed in

the Project Stakeholder Engagement Framework (https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/SREEPB-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf). Additionally, all parties involved in the project are obliged to implement the Project's Environmental and Social Management Plan, Stakeholder Engagement Framework, and Labor Management Procedure.

Within the scope of the SREEPB Project, grievances will be addressed at multiple levels;

a) **Contractor Level:** Each contractor appointed to carry out construction works will be responsible for receiving, recording, and, if possible, resolving grievances /concerns/opinions/suggestions expressed by any stakeholder (building management, building users, visitors, local communities or beneficiaries, project staff, etc.) in accordance with the Grievance Mechanism Procedure. The contractor will ensure that all personnel involved in the project are aware that they can use the Grievance Mechanism (GM) and that grievances from staff will not be an obstacle to renewing their employment contract in the future. The steps for transmitting grievances/opinions/suggestions from employees are detailed under the "Grievance Mechanism for Employees" heading in the SREEPB Project Workforce Management Procedures. All employees can use this mechanism openly or anonymously.If the Contractor cannot resolve grievances/concerns/opinions/suggestions related to construction works carried out within the scope of the SREEPB Project, they are obliged to forward these applications to the relevant person/organizations by the Grievance Mechanism Procedure of the project.Contractors will also report the records they keep, including resolved and unresolved grievances/concerns/opinions/suggestions, to the Consultant weekly. The contractor is obliged to resolve grievances within 15 calendar days at the latest.

b) **Consultant Level:** Concerns/opinions/recommendations that cannot be addressed at the contractor level will be handled by the social specialist of the Consultant Firm. The Project Manager, following the Grievance Mechanism Procedure, will prepare a status report, reminding the contractor of their responsibilities and ensuring that necessary corrective actions are taken to resolve the issue.The Consultant will assure all personnel involved in the project that they can use the GM, and that using it will not affect the renewal of their contracts in the future. If the Project Manager cannot resolve grievances /concerns/opinions/recommendations, they are obliged to refer them to the Ministry of Environment, Urbanization, and Climate Change. The Consultant firm is responsible for resolving within a maximum of 15 calendar days. The Consultant will also report both direct grievances/concerns/opinions/recommendations they receive and those conveyed by the contractor to the Ministry of Environment, Urbanization, and Climate Change on a weekly basis.

c) **MoEUCC Provincial Directorates Level:** To the extent possible, the Provincial Directorate of Environment, Urbanization, and Climate Change will be responsible for grievances /concerns/opinions/recommendations received regarding activities carried out within the scope of the SREEPB Project. Provincial directorates will also promptly forward all grievances/concerns / opinions / recommendations received, whether or not they resolve them, to the Administration.

d) **MoEUCC Level (PIU):** Within the scope of the SREEPB Project, MoEUCC is responsible for collecting, recording, and resolving all grievances/concerns/opinions/recommendations expressed by stakeholders through the levels mentioned above. MoEUCC is responsible for resolving the collected grievances/concerns/opinions/recommendations within 15 calendar days and informing the complainant about the results. However, in cases requiring detailed investigation, this period can be extended to 30 calendar days.

For grievances regarding gender-based violence and sexual exploitation and harassment, it is recommended to use the web-based Grievance Mechanism provided in Annex III, which allows for anonymous registrationIn order to ensure confidentiality, authorized personnel will have access to this web-based Grievance Mechanism.

In addition to the Grievance Mechanisms at different levels defined above, throughout the life of the Project, stakeholders will also be able to use the national Grievance Mechanism channels detailed below. The channels for communicating grievances and suggestions to the Administration, especially the national Grievance Mechanism such as the CIMER Communication Center, are given below:

Table 4. GM Communication Channels

Call Center	: ALO 181
Phone	: 0312 586 4858
E-mail	: yigmSREEPB@csb.gov.tr
Grievance	: https://SREEPBoneri.csb.gov.tr/oneri.jsp |
	Suggestion and grievance boxes installed in buildings

Table 5. CİMER Communication Channels

Website	: https://www.cimer.gov.tr
	https://giris.turkiye.gov.tr
Call Center	: ALO 150
Mailing Address	: T.C. Cumhurbaşkanlığı Külliiyesi 06560 Beştepe - Ankara
Phone	: 0312 590 20 00
Fax	: 0312 473 64 94

Tablo 1. YİMER Communication Channels

Website	: https://yimer.gov.tr
Call Center	: ALO 157
Mailing Address	: Çamlıca Mahallesi 122. Sokak No: 4 Yenimahalle/ANKARA
Phone	: 0312 157 11 22
Fax	: 0312 920 06 09

The communication channels for the GM include wall posters in all buildings (posted on walls where suggestion and grievance boxes are located) and the distribution of project brochures to raise awareness. Additionally, all project personnel are responsible for informing stakeholders in their surroundings about the suggestions and grievance mechanisms. They will be provided with information on this matter before the project commences. Further details on this issue are explained in the Stakeholder Engagement Framework (SEF) (https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/SREEPB-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf).

The Construction Contractor is responsible for receiving, recording, and resolving, grievances/concerns/opinions/recommendations during the renovation of public buildings. Every contractor appointed to carry out construction work will establish a system to receive and record, opinions, and suggestions related to construction activities from building management, employees, visitors, and beneficiaries. The contractor will record grievances, opinions, and suggestions using the

Grievance and Suggestion Form and the Grievance Closeout Form provided in Annexes IV and V. Verbal, opinions, and suggestions will be recorded by the responsible personnel of the contractor by filling out the Grievance and Suggestion Form. The contractor is obliged to send the recorded grievances to the Project Manager every week. The Project Manager is responsible for reporting the received, suggestions, and requests to the MoEUCC weekly.

Records related to grievances, opinions, and suggestions will be regularly shared by MoEUCC with the World Bank (WB). Additionally, individuals or communities who believe they have been adversely affected by projects supported by the WB can submit their grievances through the project-level Grievance Mechanism (GM) available or directly to MoEUCC, or through the WB's Grievance Redress Service (GRS) at (https://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service).

Stakeholders affected by the project can also submit their grievances to the WB Inspection Panel. This panel determines whether individuals or communities who file grievances have been or could be harmed as a result of a violation of one or more of the WB's performance criteria. The Panel can directly communicate its concerns about received grievances to the WB, at which point the WB has the opportunity to respond to the grievances. For information on how to submit grievances to the WB Inspection Panel, please visit www.inspectionpanel.org.

5. Environmental and Social Risks & Impacts and Precautions to be Taken

Table 6.**List of Environmental & Social Effects and Measures to be Taken**

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings	***a) OHS*** Possible adverse health and safety effects for workers, local residences and employees due to: - Possible injuries that employees may be exposed to due to reasons such as working at height, working with hazardous materials, and electrical tools; - Failure to comply with national and international occupational health and safety requirements in the workplace;	• Local construction and environmental inspection authorities and communities will be informed about the planned activities. • The public will be informed through stakeholder participation, in the media, and/or in public places through appropriate notifications. • All necessary legal permits for construction and/or improvement studies will be obtained. • Regular site inspections will be conducted by the Project Implementation Unit (PIU) and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations, including the regulations regarding building fire protection, and the requirements of World Bank standards. • Detailed information and analyses regarding occupational health and safety are included in the Occupational Health and Safety Plan prepared for the same campus.	Project Implementation Unit (PIU) Consultant
		• In areas where the underground natural gas pipeline passes, the Natural Gas Provider Company is responsible for the necessary work before the start of Phase II (Construction Phase) of the projects. All processes related to the Natural Gas Pipeline will be carried out by the Service Provider Local Distribution Company, and before the Site Handover, all necessary conditions will be created with all checks and tests completed entirely, and the delivery will be made as specified in the projects. For all processes related to the natural gas pipeline, the Property Owner must apply in accordance with the relevant legislation. Therefore, neither the Consulting Firm nor the Contractor will intervene in any way in the natural gas pipeline. • The Contractor shall immediately inform the MoEUCC in the event of a significant incident. MoEUCC will report all types of significant incidents (such as accidents, leaks, deaths, etc.) to the World Bank within 48 hours and will submit an accident-incident	Consultant PIU Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		investigation report along with a corrective action plan to the World Bank within 30 business days. • Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and the requirements of the World Bank standards. • Health and safety measures and environmental measures regarding the restructuring of the public building will be explained in detail in the site-specific Waste Management Plan and Occupational Health and Safety Management Plan. • Occupational Health and Safety Plan for Hatay Mustafa Kemal University Tayfur Sökmen Campus Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education was prepared by the Consultant. Work will be carried out in the site in accordance with the measures determined in the OHS Plan. • The Contractor will prepare its own OHS plan for the works to be carried out, taking into account the Occupational Health and Safety (OHS) Plan prepared by the Consultant. • Before construction works begin, a Risk Assessment study will be carried out for all works to be carried out. Relevant procedures and plans will be developed by contractors by adding risk assessment, safety procedures, training, monitoring, incident investigation and reporting, health and safety plans including emergency plans, site-specific risk assessments, procedures and instructions. See Annex-8 of the ESMF https://webdosya.csb.gov.tr/dbamuguclatma/menu/SREEPBp175894_csyc_final100521--mayis_20210510070430.pdf-) • Proper signage on construction sites will inform workers of the basic rules and regulations they will follow. • Employees will be given Occupational Health and Safety (OHS) training indicating possible risks related to the work site and the work to be done, and weekly and monthly site occupational safety meetings will be held.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• The Contractor formally acknowledges that all work will be carried out in a safe and disciplined manner designed to minimize impacts on local residents and the environment. • The Contractor appoints a personnel/person in charge/expert who has the relevant certificate and experience responsible for occupational health and safety. • The Contractor will ensure a safe working environment for workers and provide personal protective equipment (PPE) prior to construction activities (such as hard hats at all times and, where necessary, masks and safety glasses, seat belts and safety boots) in accordance with international best practices and Turkish Legislation. • A suitable working environment and rest break for employees during work will be provided by the contractor company. • Employees' dining areas will be established in areas determined by the building technical units under the written permission and approval of the campus management. • Dress changing areas (lockable) for employees will be provided within the building with the written permission and approval of the campus management. The areas in question will be determined by the building technical staff and the use of areas except these areas are strictly prohibited. Employees should not keep their valuable things in these areas in case of theft that may occur. In case of negativities, the contractor company will notify the employees that the campus management bears no responsibility. The issue in question will also be announced with warning signs. • Employees' toilet needs will be met from the building infrastructure under the written permission and approval of the campus management. If the existing infrastructure cannot be used, portable WCs will be arranged by the contractor for the use of workers, and the containers will contain all materials for hygiene. However; • Employees will be able to use the toilets allowed/allocated to them in the building. The contractor company will notify its employees about the toilets allowed/allocated in line with the number of employees. Monitoring and control regarding the restriction in question will be the responsibility of the contractor company.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• The contractor company will warn its employees to use the toilets in question in accordance with the hygiene rules, in case of unhygienic conditions are detected, the responsibility for cleaning will belong to the contractor company. • Any materials that employees will need for hygiene will be provided by the contractor company. • The contractor company will provide work uniforms that display the project name so that employees can be easily distinguished. • Employees are strictly prohibited from arguing with building technical units or campus users for any reason. In case of individual or activity-related problems, the employee will immediately report the situation to his manager (the responsible manager and contact information will be notified to all employees by the contractor company). The contractor company will record such situations and forward them to the consultant. Any decision/action regarding this process will be made with the knowledge and approval of the building management. • In case of night shifs approval will be obtained from the Campus management. All activities will be implemented in line with both the Occupational Health and Safety Law (Official Gazette No. 28339, dated 30 June 2012) and relevant regulations, as well as the World Bank Group (WBG) Environment, Health and Safety (EHS) Guidelines. • In case of any epidemic or pandemic/communicable disease, the guidanceand recommendations provided by the Ministry of Health, Ministry of Labor and Social Security and the World Health Organization will be followed and all relevant measures will be taken in terms of occupational health and safety for both employees and workplaces. • Third parties who are not on duty will be prevented from entering the construction site. • The names of the personnel will be submitted to the Consultant in a list along with the necessary training documents, and employees with appropriate training and personal protective equipment will enter the construction site with their badges. • People under the age of 18 will not be allowed to enter the construction site.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• Smoking areas on the construction site will be determined by the contractor. • Food and beverage, break/rest, toilet and sink needs will be provided in the areas indicated by the technical units within the building where the work will be carried out. This issue will be within the knowledge of the campus managements. Employees who will work in the project will not leave the allocated areas. • Hygiene materials required for the use of workers will be provided by the contractor. The sewage infrastructure in the region will be used for wastewater. • Packaged water (pet bottles, glass bottles, etc.) will be provided to workers as drinking water. • Clean domestic water will be provided through the existing installations of the building. Drinking the water inside the building facilities will be prohibited. The Contractor will provide a healthy and safe working environment for employees, provide personal protective equipment (PPE) in accordance with Turkish Legislation, including international best practices and pandemic-related health and safety measures provided by the Ministry of Health and the Ministry of Labor and Social Security, will monitor and control its use. (Always use a hard hat, respiratory protection, protective glasses, full body seat belt and foot protection, etc. when necessary). • PPE, work clothes and employees' own clothes will be stored in separate places, and closed changing areas will be created within the building for this purpose. • In case of work accidents with loss day, root cause investigation will be conducted and reported. • Employees who will working at heights (facade insulation, roof insulation, etc.), working at height training will also be given theoretically and practically. The statement that people who working at height can work will be clearly stated in the health report prepared by the workplace physician. Before the work, a work plan for working at height will be prepared and a permit to work will be obtained. Working at height will be carried out under the supervision of a qualified person and an occupational safety expert. Fall protection systems and equipment for working at height will be selected in accordance	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		with the relevant legislation, and their control, maintenance and repairs will be carried out by specially trained personnel. • Necessary periodic checks and/or maintenance of all work machines and equipment to be used will be carried out, compliance with standards and CE certificates will be checked, relevant records will be kept, otherwise they will not be allowed to enter to the work area. Job-specific trainings will be provided to the workers who are assigned to use a spesific equipment.Maintenance forms for the work equipment to be used in the field will be provided, regular maintenance and repairs will be carried out, and people responsible for maintenance and repair works will be appointed with writing. • When there are new equipment and innovations in the execution of the work, risk analyzes will be updated and information/training about the changes will be updated in all studies. • After the periodic checks of all lifting vehicles, pressure vessels and boilers will be used at the site are checked (by the consultant), after control the approval to entering to the site will be given after all necessary controls will be done. • All machinery, equipment (including scaffolding) and hand tools using at the site will be checked for compliance with TSE standards and CE certification, and entry approval will be given after all necessary controlles will be done. • Planning of purchasing, transferring and storage of materials will be ensured. • The Contractor will have one employee with a First Aider Certificate for every ten (10) employees who will work in the same building, and if the number of workers is less than 10, the contractor will have at least one (1) first aider. Each teams are working in different buildings will be evaluated separately. • Preparation of the procedure for working with hazardous chemicals and creation of storage areas for materials will be ensured. Chemical substances will be taken to the site after their Turkish material safety data sheets are obtained and checked. • Employees without professional competency certificates will not be employed.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• All employees will start working after completing basic OHS training and induction training. Training will be updated when required by legislation. • Interior and exterior renovation areas of the building will be separated with warning tapes. Warning signs required to restriction of the access to the areas in question will be obtained in sufficient numbers. • Visitors will not be allowed to approach renovation areas. However, when necessary, building technical staff will be able to attend the work areas under the supervision of authorized employees to take the necessary security measures within the framework of their expertise and use the necessary PPE for process monitoring. Training documents will also be prepared for those who will enter the site under the supervision of an authorized employee, and these people will be provided with training before entering to the site. • Construction method and risk assessment will be made for each activity to be carried out on the site. • A permit to work system will be established for hazardous work such as night work, working at height, excavation work, welding work, etc. • Lock out and tag out system will be installed for work on live lines such as maintenance and repair work, work with dangerous voltage. Special training will be given to employees regarding the system in question. • A disciplinary enforcement system regarding OHS non-conformances will be established in the site and all employees will be trained on this subject. • It is essential that construction activities be carried out during the day. However, in case of working at night will be necessity, the entire work area, passageways and hazardous areas will be well illuminated. • In order to control situations that may occur during the construction activities of the project and require urgent intervention (fire, earthquake, chemical spill, etc.), procedures that will also cover public and environmental health and safety will be prepared and shared with all employees.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• If there will be an electricity, water or natural gas cut in the long or short term due to construction activities, necessary security measures will be taken and building users will be informed a reasonable time before the cut. • All documents and records that need to be prepared and provided within the scope of OHS legislation, such as health screenings of employees, employment documents (personnel files), training documents, PPE delivery minutes will be kept in the work area. All these documents will be ready for presentation for the Consultant and Ministry audits. • An organizational chart will be created under the title of OHS, indicating duties, authorities and responsibilities and including contact information. • In case of changes in public building entrances during construction works, suitable structures for disabled users will be created. • Community health and safety will also be covered in the OHS Plan to be prepared, and a person that will be assigned to ensure communication with building users and local people will be defined in the plan. • Records of all activities and events (meetings, inspection, surveillance, training, accident, fire, etc.) carried out during the construction phases will be kept. • In accordance with the SREEPB Project Workforce Management Procedures and covering all Contractors and subcontractors: • The Contractor and all subcontractors, in accordance with the Project's Workforce Management Procedures, declare that they will not use any kind of forced labor, child labor or uninsured workers, and that they will not engage in any discrimination (age, gender, religion, language, race, etc.), use of force among their workers. A written and signed social policy/written commitment will be created stating that there will be no bullying, insults or humiliation. This document will also emphasize that all contractor employees should pay attention to these issues in their relationships and communication with each other. • The contractor will take necessary measures to prevent the spread of contagious diseases (including Sexually Transmitted diseases and infections such as HIV virus) and non-	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		communicable diseases caused by the performance of Construction Works, and will act with the awareness that especially sensitive and vulnerable community groups are at risk at different rates in this context. It will implement measures to prevent the spread and reduce the effects of infectious diseases that may arise from contract-related temporary or permanent labor mobility.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***b) OHS*** Possible adverse health effects to workers, facility users, children and the general public as a result of asbestos fiber and dust emissions during debris transportation and final disposal	• The project site will be illuminated throughout the night. • No waste will be thrown into the surrounding area and this area will be kept clean. Waste must be collected and removed from the construction site. • Broken glasses during the works will be cleaned immediately. Work areas will be separated from the demolition and residential areas of the building using physical barriers. • The entire procedure to be applied regarding asbestos is included in Annex-8 of the Environmental and Social Management Framework document. Work will be carried out in accordance with Annex 8 and the Regulation on Health and Safety Precautions in Working with Asbestos and the relevant legislation requirements.The building's cleaning schedule will be added to remove additional dust and dirt created by demolition work; safety guidelines for the storage, transportation and distribution of hazardous materials will be followed to minimize the possibility of misuse, leaks and accidental human exposure. • Old windows and doors will be stored temporarily in a secure location designed to prevent access by unauthorized persons. • Regular maintenance will be carried out on vehicles to minimize possible serious accidents caused by hardware failure or premature failure. • Both training and incidents (major events such as deaths, lost-time accidents, leaks, fire) will be recorded. • The Contractor immediately informs the MoEUCC in case of a significant event. The MoEUCC will notify the World Bank of any significant incidents (such as accidents, leaks,	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		deaths, etc.) within 2 days (48 hours) and send an incident investigation report with a corrective action plan to the World Bank within 30 business days.	
	c) Security	• The contractor will be responsible for the life and property safety of all personnel and other individuals on duty at the construction site from the moment the application/construction work begins. • If any damage occurs during construction works, the Contractor will compensate all losses incurred by theThe Beneficiary Institution Employer and/or the 3rd party. • The safety rules of the Ministry of Labor and Social Security and the rules of the Ministry of Health will be taken into account during the studies. The relevant rules are to be used as general reference during the execution of the works. • The Contractor will have authorized a personnel on site who will specifically deal with safety and protection against accidents, and this personnel will deal with all workers and workforce of the contractor, as well as the Project Manager, the employer's personnel, equipment, offices and other facilities at the construction site. This person will be a person who has the qualifications required for this job, has the authority to give instructions and can take all necessary precautions to prevent accidents, and will constitute a team established by the Contractor especially for this purpose. The Contractor will take all necessary safety precautions to prevent damage to the materials, equipment and productions that will not be changed and will be used in the places where the production will be carried out. • A security team consisting of the required number of security guards will cooperate with the Legal Security Forces and will carry out its duties by strictly complying with all rules and instructions received from them. The Contractor will employ at least 1 (one) night watchman for the work site. • Scraps of the replaced machinery, equipment and systems will be delivered to the building management without any damage. • The machinery, equipment and system parts in question will be transported by the contractor company to the area requested by the building management (inside the	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		building and/or within the campus). Transportation and delivery operations will be carried out with a delivery report. As of the date when the said report is signed by the parties, the responsibility for the scrap will belong to the building management.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***d) Waste Management*** Possible adverse environmental and health effects may occur due to various waste streams and improper waste management (inappropriate waste management can create direct and indirect pollution in water and soil and affect air quality)	**General Information** • PIU and the consultant will monitor the practices regarding environmental and social impact mitigation measures specified in the Environmental and Social Management Plan through field inspections. • Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and World Bank ESSE requirements. • The Waste Management Plan will be prepared by the contractor as specified within the scope of the Environmental and Social Management Framework. • Waste collection and disposal routes and sites for all waste types expected to arise from renovation, demolition and construction activities will be defined in site-specific Waste Management Plans. • Daily visual site inspections will be conducted by the consultant to monitor the implementation of mitigation measures. • During construction activities, all waste types will be collected separately at the source and transported to selected temporary waste storage areas within the site, in accordance with the project and legislation requirements determined with the knowledge of the beneficiary. (Temporary storage period is limited to 6 months.) • Temporary storage areas will be determined by the contractor company by obtaining permission from Administrator of the Hatay Mustafa Kemal University Tayfur Sökmen Campus Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education and the consultant will be notified of the areas in question.	PUB Advisor Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• If a protocol is signed between the contractor company and the beneficiary institution, the existing waste management system can be used. However, with the protocol made, the contractor will be obliged to cover the costs arising from his own waste. • The Contractor will reuse and recycle appropriate and applicable materials whenever possible. • Documents regarding waste disposal and recycling will be regularly recorded. A Waste Record Information Form will be prepared to keep these records. • Hazardous wastes will be sent to licensed disposal facilities using the waste management application via the Integrated Environmental Information System (I-EIS) in the online programs of the Ministry of Environment, Urbanization and Climate Change. For this purpose, the Contractor will register with I-EIS. • In cases where vehicle tires need to be changed during construction activities; Old tires will be disposed of through tire distribution and sales companies and vehicles licensed for transportation. **Solar panels:** • Unused and/or end-of-life solar panels will be temporarily stored in an area determined by the beneficiary for a maximum of 6 months, in a way that does not pose any safety and environmental risks. The waste of solar panels will be delivered to licensed companies. • PV panels taken to licensed facilities with licensed vehicles after temporary storage will be primarily recycled, and those that are not recycled will be final disposed of in accordance with the relevant legislation. **Construction and Excavation Wastes:** • In case of debited material belonging to the building as a result of the dismantling activities, a document will be obtained from the building management stating that the material has been delivered. • Recycling of construction/demolition wastes and especially their reuse as infrastructure material will be prioritized. Excavation waste will be sent to the waste storage facility of	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		the relevant municipality. An official letter will be received from the relevant municipality stating that the waste will be accepted to the site and will be submitted to the Administration. **Waste Batteries and Accumulators:** • Waste batteries and accumulators will be delivered to licensed facilities through authorized transportation companies. **Hazardous Wastes:** • The wastes will be stored within the project area in sturdy, leak-proof, safe containers that comply with internationally accepted standards, the phrase hazardous waste will be placed on the containers, and the waste code, amount, content, properties, preservation conditions and storage date of the stored substance will be stated on the containers in case of temporary storage of hazardous waste at the project site. Hazardous substances can be stored temporarily for a maximum of 6 months. (Temporary storage areas will be determined by the contractor company in accordance with the legislation, with permission from the University Administration based on the project, and the areas in question will be notified to the consultant.) • Containers where hazardous substances are stored and waste oils will be placed in sealed concrete areas to prevent spillage and leakage to the ground. • Paints with toxic content, solvents or lead-based chemicals will not be used. • Management of hazardous wastes will be carried out in accordance with the Waste Management Regulation. • Hazardous chemicals and wastes that are likely to be generated at the construction site will be sent to licensed disposal facilities using the waste management application via the Integrated Environmental Information System (E-EIS) online program of the Ministry of Environment, Urbanization and Climate Change. • Spillage and leakage absorbent pad kits will be available at work sites. All personnel on duty will be subject to protection and emergency training regarding hazardous chemical leaks and spills.	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• In case of medium and large-scale environmental accidents, accident investigation will be conducted and reported. In this regard, the Waste Management Regulation will be followed. • Used fluorescent lamps removed during renovation/construction works will be disposed of in licensed facilities. Necessary documents regarding the transportation and disposal of the material will be kept at the construction site and will be submitted to the MoEUCC and the World Bank if requested. **Domestic Waste:** • Domestic wastes that will be generated will be separated at the source (plastic, glass, paper, etc.) and recyclable ones will be recycled. Employees will be trained to properly separate waste. • Wastes that cannot be recycled will be collected in closed sanitary garbage bins and sent to regular landfills through the solid waste collection system of Antakya Municipality. **Asbestos:** If asbestos is found at the project site, it will be clearly marked as hazardous material. • In case of asbestos in the project site, it will be properly preserved and sealed to minimize the impact of asbestos. • In cases where asbestos must be removed, a wetting agent will be used to keep asbestos dust at a minimum level before removal. • The entire procedure to be applied regarding asbestos is included in Annex 8 of the Environmental and Social Management Framework document (https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/SREEPB-p175894_csyc_final100521--mayis_20210510070430.pdf).The Contractor will act in accordance with the content in question. • If asbestos material is to be stored temporarily, waste should be kept securely in closed containers and appropriately marked. Security measures will be taken against unauthorized removal from the site.	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• The extracted asbestos will not be reused and will be disposed of in accordance with national regulations and sent to licensed facilities. Necessary documents regarding the transportation and disposal of the material will be kept at the construction site and will be submitted to the MoEUCC and the World Bank if requested. • Paints containing toxic components or solvents or lead-based paints will not be used.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***e) Pollution Prevention*** Demolition and construction activities can cause pollution at construction sites.	• Site-Specific Pollution Prevention Plans to be prepared will be examined and approved by PIU. • Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and World Bank ES requirements.	PUB Advisor Contractor
		• Ambient air pollution related to dust formation is specified in the "Air Quality/Emissions" section of this Table. • Hazardous material will be secured in the designated storage area to prevent spillage and tipping. Up-to-date material safety forms for chemicals will be kept in areas where they are stored. • Semi-used chemical containers will have lids and be tightly closed when not in use. • Residual (abandoned) concrete in concrete mixers will not be allowed to be poured into the construction site, its surroundings or access roads of the construction sites. Concrete mixer drivers will be given training on this. • In the event of any leak of hazardous materials or hazardous waste, leak prevention methods will be implemented to limit the area of exposure. • Leakage sets will be placed at appropriate points on construction sites. • In case of any leakage, workers who will respond to such incidents are determined and training is given on emergency response to leaks. • Training records will be kept at construction sites.	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***f) Noise*** *The presence of workers at the construction site, renovation/construction works and movements of transportation vehicles will increase the noise and vibration levels.*	• Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and World Bank ESF requirements. • Noise during demolition and construction will be limited to limited periods agreed in the permit. • During activities, engine covers of generators, air compressors and other electrical and mechanical devices will be closed and placed as far away from residential areas as possible. • During the works carried out during the construction phase, generators, air compressors and other working mechanical equipment will be placed as far away as possible from student areas and other buildings on campus that are not included in the scope of the project. It is necessary to use plastic wedges for all equipment in question. In this way, excessive noise due to vibration will be prevented. This should be taken into account when choosing the device. • Impact noise that may occur as a result of construction site activity will not exceed 100 dBC in terms of LC Max noise indicator as specified in the Environmental Noise Control Regulation. In terms of occupational health and safety, the World Health Organization (WHO) has determined noise exposure levels of 70 dB in a 24-hour period and 85 dB in 1 hour to prevent hearing impairment. In addition, according to the World Bank Environmental, Health and Safety Guide Table 1.7.1, it should not exceed 55 dB between 07:00-22:00 for residences/educational institutions and public institutions, and 45 dB between 22:00-07:00. It is foreseen (https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf). This situation will be taken into account during field inspections. • Following the start of construction, noise levels will be measured once inside and outside by accredited laboratories during the demolition process and the necessary precautions will be determined as a result of the measurements. If measurements exceed the levels	Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		allowed by legislation and World Bank Guidelines, measurements will be made at regular intervals every week. • As a result of the measurements, if necessary, placing noise barriers, reducing the simultaneous operation of machines, etc. in order to prevent nearby settlements from being affected by noise. Precautions will be taken by the Contractor. • Site evaluations will be carried out in accordance with the World Health Organization Environmental Noise Guidelines for the European Region. • If the noise level increases during the construction phase, it will be ensured that work machines are not operated at the same time. • The schedule of works that create high levels of noise will be planned in coordination with people in nearby buildings. • Necessary communication will be provided with the public in the nearest settlement in order to determine the impact of noise that will occur during construction works and to take the necessary precautions. • Precautions will be taken to minimize the noise level, such as using new model vehicles whenever possible. • Within the scope of the project, unnecessary use of horns and sirens will be prohibited in vehicles transporting machinery, equipment, materials and personnel. This rule covers off-campus as well as on-campus. Contact numbers will be attached to the vehicles so that grievances regarding such issues can be received and resolved. • The second parking lot of the Hospital, where the Solar Panels will be built, is located at a distance of approximately 41 m behind the hospital buildings. It is close to the hospital and noise will be generated during the opening of the holes where the feet of the profiles on which the panels will be placed will be placed. This process will be done in a small area and will take approximately 1 week. Since the solar power plant installation is planned to be done in the summer months, the number of students and staff who will use the university will be relatively low. It is thought that the noise impact will decrease slightly due to issues such as the construction being carried out during daylight hours, being	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		completed in a short time, and being located at the back of the Hospital. During these procedures, in case of grievances from the Hospital and the container settlement, additional measures will be taken, such as using temporary noise barriers and not operating unnecessary work machines. Again, the sensitivities on this subject will be given training and conveyed to the personnel who will work in the SPP installation. The procedures to be performed will be shared with the Hospital Management beforehand and in special cases, the procedures will be paused and proceed.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	**g) *Air Quality /Emission***	• Debris will be kept in a controlled area and water will be sprayed to reduce debris dust. (Water will be supplied from the infrastructure of the campus area. The invoice for the spent water will be covered by the Contractor. In case of long-term water outage or if permission cannot be obtained from the Administration, water tanker may be used.) • Following the start of construction, during the demolition process, dust measurements will be carried out by the Contractor once, both indoors and outdoors, through accredited laboratories. The principles for preventing air quality problems occurring during demolition activities will be determined in the Construction Methods (which will be prepared by the contractors and approved by the PIU). • Improvement and strengthening works will mainly take place within the building. Dust generated in pneumatic excavation during scraping and stripping operations will be suppressed by continuous water spraying. • Solar panels to be built in order to increase energy efficiency will be built on the second parking lot behind the Hospital within the campus. There will be no excavation during the construction of the SPP panels, only the fixing of the profile legs and the installation of the SPP panels will be carried out on the existing parking lot floor. At this stage, dust formation will be reduced by humidifying the area in question. Before the procedures to be performed, the work schedule will be shared with the Hospital Management and in special cases, the operations will be paused and proceed.	Consultant Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• Dust generated in pneumatic excavation during excavation will be suppressed by continuous water spraying and/or by installing dust barriers enclosures at the construction site if necessary. • In case of debris waste, a rubble disposal chimney will be used after the first floor. • The surrounding environment (sidewalks, roads) will be cleared of debris to minimize dust. • Construction materials/waste will not be burned in open areas at the construction site. • Construction vehicles will not be idled for excessive periods of time at construction sites. • In cases where materials need to be transported, trucks will be covered outside the campus. The speed of these types of vehicles on campus is limited to 20 km. • All vehicles to be used will have exhaust emission permits and all vehicles will be regularly maintained or their maintenance will be inspected.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***h) Water Quality*** Uncontrolled disposal of wastewater/waste generated at the construction site	• Storage or disposal of waste generated at the construction site will be minimized. • Since the campus is far away from water sources such as seas and lakes, it is not expected to have a negative impact on surface waters. • Construction vehicles and machinery will be washed only in areas where surface runoff will not pollute natural surface water bodies. • Precautions will be taken during operations with chemicals, use pans, thick nylon tarpaulins, etc. to prevent possible spills.	Consultant Contractor
	i) Soil Quality Hazardous substances and wastes mixing with the soil	• The waste management mentioned in the previous sections must be carried out in a disciplined manner. • All hazardous chemicals (including contaminated waste) will be kept in temporary storage areas that meet sealing conditions. • Before using chemicals, MSDSs must be checked by OHS Specialists and Workplace Physicians and users must be informed. Leak pads will be available on the field against point source pollution (paint spilled on the field, oil leaking from vehicles, etc.), and all employees will be subject to leak & spill training. These trainings will be reinforced with	

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		exercises. At least one leakage and spillage kit will be available for each structure and each mobile work machine.	
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	**j) *Required Resources***	• Contractors will obtain the necessary permissions from university administrations to use water from the network to be used in construction activities. The cost of the water used will be covered by the Contractor. In case of problems in obtaining permission, water will be brought to the construction sites by tankers. • Concrete will be supplied from locally licensed ready-mixed concrete facilities. • Permission will be obtained from the beneficiaries for the electricity to be used in construction activities. If permission cannot be obtained, electricity will be provided through generators to be provided by the Contractor. Records regarding electricity, fuel (for generators) and water consumption to be used for construction activities will be kept at the construction sites, and their costs will be covered by the Contractor. • Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and the requirements of the World Bank standards.	Contractor PIU Consultant

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
Renovation and reinforcement works to improve earthquake resistance and energy efficiency in public buildings	***k) Public Health and Safety/Traffic Safety***	• Regular site inspections will be carried out every two months by the PIU and daily by the Consultant to ensure and monitor that all construction activities to be implemented are carried out in accordance with national laws and regulations, the requirements of the World Bank standards and the Occupational Health and Safety Plan prepared for the activity. • PIU will review and approve the site-specific Community Safety and Traffic Management Plan prepared in accordance with the Occupational Health and Safety Plan. • The Contractor and the Consultant will develop the Traffic Action Plan created by the Contractor, taking into account the needs of the disabled people. • In accordance with national regulations and the World Bank ESFS, the contractor will ensure that the construction site is appropriately secured and construction-related traffic is regulated. • The construction site will be clearly visible and the public will be warned of all possible dangers with signboards, warning signs, barriers and traffic directions. • Traffic management system and personnel training will be provided, especially for access to the construction site and heavy traffic near the construction site. Safe crossings and passages will be provided for pedestrians at places that intersect with construction traffic. • Working hours will be adjusted to local traffic patterns, for example major transport operations will be avoided during peak hours or when animals are being transported. • Active traffic management will be carried out by trained and visible personnel at the construction site, if necessary, for the safe and comfortable passage of the public.	Consultant Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• Construction areas will be surrounded by health and safety signs to prevent possible accidents. • If there will be an electricity, water or natural gas outage in the long or short term due to construction activities, the building technical units will be notified in advance and approval will be requested. • Construction areas will be separated with warning tapes and their safety will be ensured. • All vehicles that will operate during construction will be ensured to comply with the determined speed limit. • The surroundings of the project site will be arranged with traffic signs and warning signs. The Traffic Action Plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the security-related measures to be taken into account will be specified in more detail in the Community Safety and Traffic Management Plan that the Contractor will prepare before starting work. • Visibility of the project site will be ensured. • Pedestrian paths and vehicle passageways within the site will be separated from each other. These roads will be included in the traffic plan. • Local people, building visitors and users will be informed about possible dangers and risks through warning signs and, if necessary, informational meetings. • In case of any epidemic, the company will be informed about the work to be done, including the measures taken, using appropriate media and/or printed materials and signs in areas accessible to the public users and other stakeholders (including work sites). • Pedestrian paths and vehicle passageways within the site will be separated from each other. These roads will be included in the traffic plan. • Activities that will affect regional traffic will be planned taking into account peak traffic hours as much as possible. All drivers who will take part in the project will be informed about road safety, speed limits, traffic rules to be followed during the project and conditions to be taken into consideration.	Consultant Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• The weights of all vehicles to be used within the scope of the project will not exceed the limits given in the relevant legislation. If hazardous chemicals or waste are stored on the site, the transfer of these wastes will be carried out by licensed carriers in a way that does not pose a threat to public health. • Special loads will use routes prepared in agreement with the competent authorities. The specified routes will be programmed to prevent traffic congestion on the roads and will be published in advance to prevent possible disturbance. • The entire organization regarding traffic will be discussed and planned with the authorized institutions.	
Operational phase impacts and risks	***b) Waste Management*** Waste management, various waste streams and possible negative environmental and health effects due to improper waste management (inappropriate waste management can create direct and indirect pollution in the soil and the environment and affect air quality)	• Waste types will be collected and stored separately and will be recycled/disposed of through licensed companies and in line with national legislation requirements.	Relevant beneficiary institution
Operational phase impacts and risks	***b) OHS risks*** Maintenance and repair activities for the proper functioning of the	• Relevant OHS risks will be reduced through the provisions specified in national legislation. • Regular preventive measures and maintenance measures will be taken for the proper functioning of the building (regular checks and maintenance of any leaks on the roof, windows, doors)	Relevant beneficiary institution

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
	building may cause OSH risks for workers.	• Keeping records of the Master Design Project and related project documents for easy maintenance and renovation of any part of the building	
Throughout the project lifecycle	***Stakeholder Feedback (Suggestion, Grievance, Opinion)***	• The responsible employee of the Construction Contractor will collect, record and forward the grievances/opinions/suggestions arising from the construction activities at the field scale to the administration through the forms given in Annex III and Annex IV. Grievances will be closed via the Grievance Closing Form in Annex V. • The Contractor's field manager will be given training on the functioning of the Consultant firm's Social Expert Grievance and Resolution Mechanism. • Corrective actions will be taken within 15 calendar days for the grievances/opinions/suggestions collected within the scope of the project, and if the solution period is more than 15 days (the solution period will take a maximum of 30 calendar days), this issue must be agreed between the contractor/PIU and the complainant. At the end of the process, the applicant will be notified that the request has been closed. • Grievances about gender-based violence, sexual exploitation and harassment will be processed in accordance with the principle of confidentiality, taking into account the possibility of retaliation. • If a crime of sexual abuse is encountered, legal action will be taken immediately (transferring the situation to law enforcement forces, referral to the relevant public institution), with the consent and knowledge of the survivor of this crime. If such a situation is encountered, the PIU Social Specialist will be informed on the same day. • The Contractor will take action in accordance with the SREEPB Project GM Procedure in all works related to GM. • All personnel working within the SREEPB Project (PIU, Consultancy Firm, Contractors) will be able to report their grievances/opinions/suggestions to the Administration and/or the World Bank by following the process in the Employee DM included in the Workforce Management Procedures prepared for the SREEPB Project.	PIU Consultant Contractor

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
		• The contractor company will announce the contact information specified in this report to collect suggestions and grievances through information signs allocated outside and inside the building (at least one for each floor). The principles regarding receiving feedback are explained under the title in "4. Stakeholder Engagement and Grievance Mechanism".	

6. Environmental and Social Monitoring Plan

Table 7**. Environmental and Social Monitoring Plan**

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Site Preparation Activities					
Community Health and Safety Management and Implemented Protective Measures	Around the project site	Visual Inspections Site Inspection Availibility of active Community Safety and Traffic Management Plan	At the beginning of the renovation/reinforcement works (first day) Every working day throughout the project activities	To minimize health and safety risks and mechanical injuries to local communities	• Contractor • Consultant
Occupational Health and Safety (OHS) protection measures for construction site workers	Project site and buildings near the project site	Visual Inspections Site Inspection Availibility of OHS plan	Every working day throughout the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, notifications, directives, and other regulations.	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
To avoid and minimize health and safety risks for individuals affected by the project	In the building and at the project site	Visual Inspections	At the beginning of the renovation/strengthening work and continuously every working day	Preventing Post Activation Potential (PAP) injury due to inhalation of construction dust.	• Contractor • Consultant
Construction Works					
Occupational Health and Safety (OHS) Protection Measures for Site Workers (Working at Heights, Working with Hazardous Materials, Working with Rotating Equipment, Working with Electrical Devices, etc.)	Project site Buildings near the project site	Verification of Relevant OHS Certifications and Documents for Trained Workers Visual Inspections for the Use of Personel Protective Equipment Implementation of the OHS Plan and Site-Specific Health and Safety Instructions Site Inspections Record Verification	Before starting demolition work Every working day throughout the project activities	Minimizing risks to workers' occupational health and safety Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations Compliance with international standards	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Employment and working conditions	Project site	Final OHS Plan Review Site Inspection Grievance Mechanism (Feedback)	Every working day during the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations	• Contractor • Consultant
Health and Safety records	Project site	Health and Safety construction site documentation control	Weekly	Ensuring that necessary Occupational Health and Safety records are kept at construction sites	• Contractor • Consultant
Air Quality	Project sites, across access roads Project site Buildings near the project site	Site Inspection Measurements to be carried out in case of grievance	Every working day throughout the project activities	Minimizing dust generation to avoid negative impact on local communities and the environment Air Quality Assessment and Management Regulation	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Noise	Project site Buildings near the project site	Visual control of the implementation of established noise abatement measures, including declarations of methods followed Monitoring at the nearest building receiver points with a noise-measuring device (Alahan neighborhood) Site inspections Measurements to be carried out in case of grievance	Every working day during construction activities	Minimizing noise to avoid negative impact on local communities and the environment Compliance with Environmental Noise Control Regulation	• Contractor • Consultant
Waste Management	Project site	Waste Records Site Inspection Visual Inspections	Every working day during construction activities	Prevent pollution to protect construction workers, beneficiaries' employees, local communities and the environment	• Contractor • Consultant
Domestic Wastes	Project site	Waste Records Site Inspection	Throughout the project lifecycle/Daily	• Regulation on Control of Packaging Wastes Waste Management Regulation	• Contractor
Hazardous Wastes	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	Separating hazardous waste (adhesive, paint, insulation material, packaging waste) from non-hazardous waste and biodegradable waste	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Proper temporary storage, packaging and labeling of the extracted waste	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	To minimize injuries, To prevent environmental pollution, Ensuring that inventory is kept properly. •Waste Management Regulation	• Contractor • Consultant
Excavation and Construction Waste	Project site	Visual inspection Transport records Site inspection	After the removal of all parts of the buildings containing hazardous materials Throughout the project lifecycle/daily	Ensuring that construction debris is disposed of in accordance with applicable national regulations and the Project's Demolition plan • Regulation on the Control of Excavation Soil, Construction and Demolition Waste Waste Management Regulation	• Contractor • Consultant
Soil Pollution	Project sites, external storage areas and access roads	Training records check (spill, leak training) Chemical absorbent kit control (Field, mobile work machines) Site Inspection	Throughout the project lifecycle/daily	Protection of soil and groundwater quality. • Regulation on Soil Pollution Control and Contaminated Sites by Point Sources, • Regulation on Water Pollution Control • Regulation on the Protection of Groundwater Against Pollution and Deterioration	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Vehicle and Pedestrian Safety	Project sites and access roads	Visual inspection Using appropriate signs and signals Site inspection Community Health and Safety Traffic Management Plan	Daily	Protecting construction workers, their beneficiaries' employees, and local communities from injuries and deaths related to traffic accidents.	• Contractor • Consultant

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Grievance Mechanism	Project site Buildings near the project site	Grievance and Suggestion Forms Grievance Closing forms Total number of grievances (pending/resolved and gender issues) Number of grievances received Number of grievances resolved Grievance Register Log Availability of announcement posters regarding the Grievance Mechanism (GM) Physical condition of suggestion and grievance boxes Suggestion, status of grievance box locking mechanisms	Weekly (throughout the project lifecycle)	• Environmental Social Management Plan (ESMP) • Grievance Mechanism (GM) • Stakeholder Engagement Framework (SEF) Ensuring that stakeholders who are directly or indirectly affected by the project can bring forward their grievances/opinions/suggestions regarding project activities, contribute to the project and benefit from the project at the highest level.	• Contractor • Consultant • PIU

What *parameters will be monitored?*	**Where** *parameters will be monitored?*	**How** *parameters will be monitored?*	**When** *parameters will be monitored (measurement frequency)?*	**Why** *parameters will be monitored?*	**Responsibility**
Stakeholder Engagement	Hatay Mustafa Kemal University Tayfur Sökmen Campus	Number of Stakeholder Engagement Meeting participants (by gender) Promotional materials related to the project (announcement posters, webcasts, etc. control)	Daily	Fulfilling the requirements of the Stakeholder Engagement Framework.	• PIU • Consultant • Contractor
Renovation/Reinforcement Works Operation Process					
Waste streams	Renovated/Retrofitted buildings	Waste management requirements on site Complying with the University Zero Waste system	Regularly (throughout the project lifecycle)	Ensuring proper collection and disposal of waste in accordance with national legal requirements Waste Management Regulation Packaging Waste Control Regulation Zero Waste Regulation	Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education
Health and Safety	Renovated/Retrofitted buildings	Regular inspections and maintenance of the roof, windows, doors, leaks, etc.	Regularly (throughout the project lifecycle)	Ensuring the health and safety of building users	Faculty of Arts and Sciences, Vocational School of Health Services, Faculty of Agriculture and Faculty of Education

7. Duties and Responsibilities

Table 8**. Task Distribution List**

RESPONSIBLE PARTY	RESPONSIBILITY
MoEUCC /PIU	• Implementation and monitoring of the project, and utilization of funds. • Employment of at least one full-time Environmental, Social, and Occupational Health and Safety (OHS) expert. • Conducting necessary correspondence with official authorities and ensuring follow-ups. • Supervising and ensuring compliance of Environment and Social Management Plans (ESMPs) with both national regulations and WB policies specific to the project. • Presenting the prepared ESMPs to the WB after relevant checks. • Establishment of a Grievance Mechanism. • Organizing and conducting project informational meetings. • Guiding consultants and contractors. • Summarizing environmental and social issues related to project implementation in regular progress reports submitted to the WB. • Coordinating and liaising with WB's inspection missions regarding the evaluation of project implementation in terms of environmental and social mitigation policies. • Supervising the contractor's ESMP implementation and documenting necessary performance, suggestions, and future activities as part of the general project audit. • Ensuring the contractor corrects the application if ESMP is not followed and informing the WB about the issue. • Assisting the consultant if needed to obtain necessary permits throughout the project. • Reporting any significant events (such as accidents, leaks, deaths, etc.) to the World Bank within 48 hours and submitting an incident investigation report with a corrective action plan within 30 working days.
CONSULTANT	• Conducting a preliminary site assessment before the project starts, • If at least one Environmental, one Social and one OHS expert is employed full-time • Preparation of the project-specific ESMP and OHS Plan, • Monitoring, evaluating and submitting to the Administration the activities defined as the responsibility of the contractor in the ESMP and OHS Plan, • Ensuring the operation of the Grievance Mechanism established by the Ministry, • Providing feedback to MoEUCC by preparing reports about the project and ESMP processes, • Review and approval of Construction Methods prepared by the contractor, • Applying for energy efficiency for photovoltaic panel (PV) installation, • Providing training for the contractor (Environmental Impacts, Waste Management, OHS Plan Implementation and Monitoring Training, Response to Environmental Emergencies, Energy Efficiency, Stakeholder Engagement and Information Activities, Code of Conduct, Grievance Mechanism, Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment, Lockout-Tagout Training (LOTO), Work Permit System Training, Conservation of Cultural Assets)
CONTRACTOR	• Employing at least one full-time Environmental and one full-time OHS expert.

RESPONSIBLE PARTY	RESPONSIBILITY
	• Appointing an experienced Environmental and OHS Officer for the comprehensive management and monitoring of the site-specific ESMP and OHS Plan. • Implementing laws, regulations, and rules related to ESMP and OHS Plan attached to the tender documents as defined by the Consultant. • Implementing relevant laws and regulations mentioned in the tender documents appropriately. • Preparation of the Community Safety and Traffic Management Plan, • Updating ESMP and OHS Plan content in coordination with the Consultant during the implementation of ESMPs and OHS Plan in the field as necessary. • Preparation of the OHS Plan for the activities to be carried out, taking into account the OHS Plan prepared by the Consultant, Monitoring the field activities defined in the ESMPs prepared specifically for the project at regular intervals (daily, monthly, etc.), • Operating the Grievance Mechanism in compliance with GM Procedure established by the Ministry. • Examination of the ESMP prepared by the Consultant, commitment to implement it or preparation of the Contractor ESMP by the contractor and relevant sub-management plans of the ESMP (e.g. Waste Management Plan, Pollution Prevention Plan, Community Safety and Traffic Management Plan, Occupational Health and Safety plan, etc.) and preparation of work-specific construction/application methods, • Preparing the Chance Find Procedure if deemed necessary. • Preparing ESMP progress reports for MoEUCC's review. • Applying to the authorized energy distribution company and local gas distribution company depending on the works to be carried out. • Establishing the Employee Grievance Mechanism detailed in the Labor Management Procedure before any construction work starts and ensuring its transparent operation. • Maintaining the operation of the Grievance Resolution Mechanism established by the Ministry in accordance with the GM activities,

8. REPORTING

The details regarding the reporting requirements of the project are presented within the Environmental and Social Management Framework disclosed on the website of the SREEPB Project (https://kamuguclendirme.csb.gov.tr). A summary of this information is provided in Table 9.

Table 9.Reporting Process Requirement List

RESPONSIBLE PARTY	REPORTING PROCESS REQUIREMENT
MoEUCC /PIU	• Preparation of the 6-month Project Progress Report and submission to the World Bank (WB). • Reporting any significant events such as accidents, leaks, deaths, etc., to the World Bank within 48 hours and submitting an incident investigation report along with a corrective action plan within 30 working days. • Monthly updates to the WB about the functioning of the Grievance Mechanism
CONSULTANT	• Preparation of end-of-implementation ESMP reports for the Administration's review. • Preparation of monthly of ESMP progress reports and submission to the Administration. • Preparation of weekly of GM reports and submission to the Administration • Immediate reporting of any important events such as accidents, leaks, deaths, sexual harassment/abuse to the PIU.
CONTRACTOR	• Monthly preparation of ESMP progress reports and submission for approval by the Consultant. • Weekly preparation of GM reports and submission to the Project Manager of the Consultant. • Immediate reporting of any significant events such as accidents, leaks, deaths, sexual harassment/abuse to the Consultant. • Incident/Accident and Root Cause Analysis Reports will be prepared. • Report content details are presented within the Environmental and Social Management Framework.

Annex I Buildings within the Scope of the Project

Faculty of Arts And Sciences

Vocational School of Health Services

Faculty of Agriculture

Faculty of Education

Annex II Summaries of World Bank (WB) Environmental and Social Standards

Summary explanations of the World Bank Environmental and Social Standards (ESS) are included in Table 1.

Annex-2/Table 1: World Bank Environmental Social Standards Summary

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	ESS1 aims to achieve environmental and social outcomes consistent with Environmental and Social Standards (ESS) by defining the responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with a project supported by the World Bank through Investment Project Financing at every stage. Environmental and social assessments will be conducted based on current information/data to define and describe the project and all related aspects and identify the nature of risks, impacts, and characteristics of mitigation measures. The assessment will prioritize disadvantaged and/or vulnerable social groups, evaluate potential environmental and social risks and impacts of the project, examine project alternatives, and identify ways to improve project design and implementation to mitigate adverse environmental and social effects. The environmental and social assessment will also explore opportunities to enhance the positive impacts of the project. According to ESS1, stakeholder participation is an integral part of the assessment, following ESS10. Under ESS1, the Borrower will systematically identify, evaluate, and manage environmental and social risks and impacts throughout the project's lifecycle.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS2	Labor and Working Conditions	The objectives of ESS2 are as follows: (i) promote safety and health in the workplace; (ii) encourage fair treatment of project workers, prevent discrimination, and promote equal opportunities; (iii) protect workers, including vulnerable workers such as women, disabled individuals, children (according to ESS2 working age), migrant laborers, contracted workers, community workers, and primary supply workers, in an appropriate manner; (iv) prevent all forms of forced labor and child labor; (v) support the principles of organizing and collective bargaining freedom for project workers in a manner consistent with national law; and (vi) provide accessible means for project workers to raise workplace concerns. The applicability and scope of ESS2 depend on the type of employment relationship between the Borrower and project workers, as well as the environmental and social assessment described in ESS1. ESS2 requirements cover the development and implementation of a written Labor Management Procedure (LMP) that will be applicable to the project. These procedures will determine how project workers are managed in compliance with national law and the requirements of this ESS. They will also define (i) working conditions and employment, including non-discrimination and equal opportunity provisions, which will be monitored by project contractors following the procedures for labor management and behavior rules; (ii) protection of workers, including the prohibition of child labor and forced labor; (iii) the establishment and operation of a grievance mechanism for workers, including regulations for potential risks of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and (iv) occupational health and safety. Furthermore, it will encompass (v) contracted workers, (vi) community workers, and (vii) primary supply workers.
ESS3	Resource Efficiency and Pollution Prevention and Management	ESS3 recognizes that economic activities and urbanization largely pollute the air, water, and soil and consume limited resources at local, regional, and global levels, threatening people, ecosystem services, and the environment. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the well-being of current and future generations. Additionally, technologies and practices to achieve more efficient and effective resource use, pollution prevention, and avoidance of greenhouse gas emissions have become more accessible and available. This ESS establishes the requirements for addressing resource efficiency and pollution prevention and management throughout the project life cycle, consistent with Good International Industry Practices. Risks and impacts related to relevant ESS3 requirements, including raw materials, water use, air pollution, hazardous substances, and hazardous waste, are assessed, and proposed mitigation measures are included in the ESMF and ESMP.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS4	Community Health and Safety	ESS4 acknowledges that project activities, equipment, and infrastructure can increase communities exposure to risks and impacts. Additionally, communities already exposed to the effects of climate change may be further exposed to impacts due to project activities. ESS4 addresses health, safety, and security risks and their impacts on communities affected by the project, with special attention to individuals who could be harmed due to their specific circumstances.
ESS5	Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement **(This ESS is not applicable to the SREEPB Project)**	ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse effects on communities and individuals. Project-related land acquisition or restrictions on land use can lead to physical displacement (relocation, loss of housing or shelter), economic displacement (loss of livelihoods or access to assets resulting in loss of income sources), or both. The term "involuntary resettlement" refers to these effects when affected individuals or communities do not have the right to refuse land acquisition or restrictions on land use.
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources **(This ESS is not applicable to the SREEPB Project)**	The environmental and social assessment specified in ESS1 will consider direct, indirect, and cumulative effects on habitats and the biological diversity they support. This assessment will consider threats to biological diversity such as habitat loss, degradation and fragmentation, invasive alien species, overuse, hydrological changes, nutrient loading, pollution, and incidental capture, as well as the anticipated impacts of climate change. It will determine the importance of biodiversity or habitats based on their global, regional, or national vulnerabilities and irreplaceability. It will also consider different values placed on biodiversity and habitats by stakeholders affected by the project and other relevant stakeholders.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities **(This ESS is not applicable to the SREEPB Project)**	This ESS acknowledges that Historically Underserved Indigenous Peoples/Sub-Saharan African Traditional Indigenous Communities have distinct identities and perspectives from mainstream groups in national societies and are often disadvantaged by traditional development models.
ESS8	Cultural Heritage	The Borrower will avoid impacts on cultural heritage. In situations where avoidance of impacts is not possible, the Borrower will identify and implement measures to address the impacts on cultural heritage in accordance with the hierarchy of mitigation. When appropriate, the Borrower will develop a Cultural Heritage Management Plan.

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS9	Financial Intermediaries **(This ESS does not apply for the SREEPB Project)**	Financial intermediaries will establish and maintain an ESMS to identify, assess, manage, and continuously monitor the environmental and social risks and impacts of sub-projects.
ESS10	Stakeholder Participation and Information Disclosure	This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as a fundamental element of good international practice. Effective stakeholder engagement can enhance the environmental and social sustainability of projects, strengthen project acceptance, and significantly contribute to successful project design and implementation. The Client will engage with stakeholders throughout the project life cycle, starting this engagement at the earliest possible stage of the project development process and at a meaningful time for stakeholder input into project design. The nature, scope, and frequency of stakeholder engagement will be proportionate to both the nature and scale of the project and the potential risks and impacts. Stakeholder engagement is a comprehensive process conducted throughout the project life cycle. When properly designed and implemented, it supports the development of strong, constructive, and responsive relationships crucial for the successful management of the environmental and social risks of a project. Stakeholder engagement, initiated at an early stage of the project development process, is the most effective and integral part of the process of assessing, managing, and monitoring the environmental and social risks and impacts of the project.

Annex III Suggestion & Grievance Form (Online)

The internet form visual, which can be accessed at https://SREEPBoneri.csb.gov.tr/oneri.jsp, is below.

Annex IV Suggestion & Grievance Form (Printed)

The Compliant / Suggestion Form in the Grievance Boxes is given.

TÜRKİYE CUMHURİYETİ
ÇEVRE, ŞEHİRCİLİK VE
İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

THE WORLD BANK

GRIEVANCE FORM

Reference No	
Full name	
Please choose channel you want to be contacted (mail, phone, email)	
Province/District/Location	
Date	

Grievance Categories	
1. Abandonment (public)	
2. Assets/properties affected by the project	
3. Infrastructure	
4. Reduction or total loss of income	
5. Environmental problems (e.g. pollution)	
6. Employment	
7. Traffic, transportation and other risks	
8. Other (Please specify)	
Description of the grievance/ What happened? When did it happen? Where did it happen? What was the result of the problem?	
What do you think needs to be done to solve the problem?	
Although it is not mandatory to give name and address, some problems may occur due to lack of information during the feedback process regarding the grievance.	

Signature: Date:

NKY

Annex V Grievance Closeout Form

Grievance Closing Form is submitted at the below.

Grievance Closure No:		
Description of immediate action required:		
Long-term action description (if required):		
Is compensation required?	[ ] YES	[] NO
Corrective Action and Decision Control		
Stage of corrective action		Term and Responsible Institution
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

COMPENSATION AND FINAL RATINGS

This part will be filled out and signed by the complainant after receiving the compensation fees and resolving the grievance.

Notes:

Date:

Grievance Owner:

Annex VI The Records of Stakeholder Engagement Meeting

The meeting flow and highlighted topics are listed below:

Meeting minutes

Venue: Mustafa Kemal University Tayfur Sokmen Campus

Date: 13.06.2024

Start – End Time: 15.15 – 16.20

Start time	End time	Flow
15.11	16.45	The meeting has been recorded.
15.12	15.15	Information was given about the SREEPB Project and its goals. Appendix VII: Slide number: 1-4 -The incorrect expression in the presentation was changed to Vocational School of Health Services. -It was stated that the second phase will consist of four faculties. -The project area was shown on the map.
15.15	15.25	Information was given about the reinforcement works. Appendix VII: Slide number: 5-12 -It was stated that the ground is solid and strengthening activities will be carried out within the scope of the project. -It was stated that the 300 cores were in accordance with the earthquake regulations and had almost no impact on the building.
15.25	15.30	Information was given about energy efficiency. Appendix VII: Slide number: 13-22 -The main purpose of the study was stated as preventing road losses. -Not spending more than necessary and focusing on efficiency were mentioned. -The importance of automation was mentioned.
15.30	15.45	Information on OHS issues was provided. Annex VII: Slide no:23-30 -It was stated that all measures to be taken will be in accordance with national legislation.
15.45	15.55	Information about environmental issues was given. Appendix VII: Slide number: 31-37 -It was mentioned that there will be studies in accordance with national legislation. -Traffic action plan was emphasized. -Personal protective equipment was mentioned. -Information was given about the health and safety organization.
15.55	16.00	Information about social issues was given. Appendix VII: Slide number: 38-40 -The grievance mechanism of the project was emphasized and the locations of the boxes were mentioned.
16.00	16.20	The comment and question and answer section has started.

Questions and answers

The questions and the answers given during the meeting are listed in the table below:

Name Surname	Question	Answer
Participant 1	Experts talk about the stress accumulated in the Dead Sea fault and the Adana-Cyprus fault. Additionally, unbroken faults are mentioned in Hatay. Will our buildings become resistant to the earthquakes expected in this direction?	NKY reinforcement team (Zoom name) / Hakan Guvengiz : The structures passed the test successfully in a very large earthquake. It survived almost unscathed. Let's not ignore the effect of solid ground here. In addition, strengthening work is being carried out on these. The risk will be minimized.
Participant 2/ Faculty of Agriculture	There were rumors that water was leaking and liquefaction was occurring on the floor of the Arts and Sciences building. Are these wrong?	NKY strengthening team (Zoom name) / Hakan Guvengiz : Liquefaction is not expected in the rock ground. Due to the porous structure of the rock, water moves more easily than other soils. This is the detected water.
Participant 3/ Faculty of Agriculture	Hello. When is this project planned to be started and finished? Thanks.	Project implementation unit, Tülin Yıldırım: It is anticipated that there will be a mobilization period of one month and an implementation period of 4-5 months.
Participant 4	It was stated that nearly 300 core samples were taken. How much damage does it cause to the building?	Oğuzhan Tekin (NKY): It is almost non-existent. It was taken in the number stipulated by the earthquake regulations.
Participant 5	Dear professors, the history and chemistry corridor is included in the Health Services. This needs to be fixed.	Arzu Oğuztekin (Arma): Necessary corrections will be made in the document.
Participant 6	Is it possible to give an estimated time period for the application to be completed and the buildings to be ready for use after the contractor enters?	Project implementation unit, Tülin Yıldırım: It is anticipated that there will be a mobilization period of one month and an implementation period of 4-5 months.
Participant 7/ Faculty of Agriculture	When will the project start and finish?	Project implementation unit, Dicle Maybek: The tender process will proceed in accordance with the World Bank and national legislation. It is not possible for us to give an exact date. However, we anticipate that the construction tender will be concluded in the summer months.

Name Surname	Question	Answer
Participant 8	Let's do the lab and then move on to other parts.	Duran Duran (NKY): The issue of laboratory transportation and timing will be clarified between the university and the rectorate after the tender.
Participant 9	First, you can enter the Faculty of Agriculture. Destruction can start from the top.	Project implementation unit, Emre İlbey: This issue will be clarified between the university and the rectorate after the tender.
Participant 10/ Faculty of Arts and Sciences,	How will laboratories and professors' office furnitures be transported?	Project implementation unit, Emre İlbey: This issue will be clarified between the university and the rectorate after the tender.
Participant 11/ Faculty of Agriculture	Will there be environmental regulation? There is natural spring water around the faculty.	Oğuzhan Tekin (NKY): Drilling was done. The drainage issue is being discussed with the Ministry.
Participant 12	Will the drainage problem of agriculture be addressed?	Oğuzhan Tekin (NKY): The drainage issue is being discussed with the Ministry.
Participant 13	The installations in the laboratory are different from other buildings. Will the installations be reinforced with acid-resistant materials?	Oğuzhan Tekin (NKY): We wanted it to be exactly the same pipe.
Participant 14	What about the fixed devices in the Faculty of Agriculture course block? For distance learning, they will need to remain constant.	Project implementation unit, Emre İlbey: This issue will be clarified between the university and the rectorate after the tender.
Participant 15	Can you tell us about the solar power system?	Duran Duran (NKY): Instead of building separate areas for solar energy, we built a wholesale area. This area will be implemented with the 1st stage. It will be in the form of a parking lot. It will be in a way that covers the vehicles.
Participant 16	How will the chemicals in the laboratory be transported?	Oguzhan Tekin (NKY) and Project implementation unit, Emre İlbey : This issue will be clarified between the university and the rectorate after the tender.

Participant List (Online)

88 people (36 women, 52 men) attended the meeting via Zoom. Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.

Participant List (In Person)

The meeting was held at the rectorate building of Hatay Mustafa Kemal University and 40 people attended the meeting. 11 of the participants were women and 29 were men. Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.

Photos of the meeting

Presentation

KADEV

HATAY MUSTAFA KEMAL UNIVERSITY
TAYFUR SÖKMEN CAMPUS
FACULTY OF ARTS AND SCIENCES
VOCATIONAL SCHOOL OF HEALTH SCIENCES
FACULTY OF AGRICULTURE
FACULTY OF EDUCATION

Prepared by: NKY

1

WORLD BANK GROUP

SREEPB

SEISMIC RESILIENCE AND ENERGY EFFICIENCY IN PUBLIC BUILDINGS PROJECT

The financing of the project is provided by the World Bank and carried out by the Ministry of Environment, Urbanization and Climate Change under the guarantee of the Ministry of Treasury & Finance.

https://kamuguclendirme.csb.gov.tr

2

WORLD BANK GROUP

Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project focuses on seismic strengthening and energy efficiency in public buildings such as higher education buildings, dormitories, social service institutions, hospitals and government offices that are at high seismic risk and have low energy efficiency.

This presentation will give information about the structural strengthening and energy efficiency improvement works of the FACULTY OF ARTS AND SCIENCES, VOCATIONAL SCHOOL OF HEALTH SCIENCES, FACULTY OF AGRICULTURE, FACULTY OF EDUCATION are located at Tayfur Sökmen Campus of Hatay Mustafa Kemal University.

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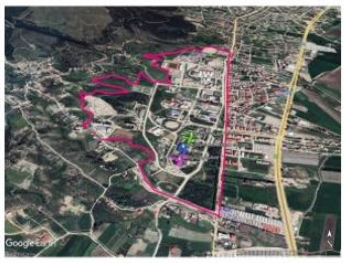

Construction Phase

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As a result of the survey studies, renovations focused on structural strengthening and energy efficiency were determined and designed. These renovation studies are listed under the main headings below:

Structural Strengthening

- Existing carrier system reinforcement, additional carrier system manufacturing,
- Floor, ceiling, wall and door renovations due to structural strengthening activities

Energy Efficiency

- Facade and roof thermal insulation
- Circulation system motor/pump changes
- Non-insulated installation elements, thermal insulation installation for heat exchangers
- VRV transformation
- Lighting element replacements (one-to-one replacements will be made, electrical installation intervention (line, column line replacement, etc.) is out of the question)
- Self-consumption focused solar power plant facility
- Energy monitoring (to be integrated into the existing electrical system)
- Mechanical automation and energy measurement monitoring system

5

Structural Strengthening

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A total of 4 buildings on the campus will be strengthened according to TBDY-2018 principles and their earthquake performance will be brought to the targeted level.

Structural reinforcement is planned to be carried out mainly by placing additional reinforcement curtains in appropriate places, so as not to disrupt the existing architectural functions of the buildings.

Column sheathing can also be done when necessary.

It is planned to replace the existing damaged brick walls in the buildings with lighter gypsum panel walls.

Earthquake safety of undamaged brick walls will be ensured by using steel reinforcement elements.

Since the existing and new ground surveys showed that the ground properties were sufficient, no ground improvement or foundation strengthening was deemed necessary.

6

Structural Strengthening

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Carrier System Reinforcement

The walls in the axes where reinforcement curtains and column jackets will be installed will be marked and demolished using sledgehammers and crushers, starting from the top floor. Before wall demolition, doors, windows, sanitary ware, countertops, electrical and mechanical installation equipment that are at risk of damage will be removed and will be temporarily stored in areas designated by the Beneficiary institution.

Structural Strengthening

WORLD BANK GROUP

Carrier System Reinforcement

After the dismantling process, in order to connect the reinforcement elements to the foundations, the sub-basement concrete must be broken and the foundation fill must be excavated in order to open the perimeter of the curtain and column sheath. These demolition and excavation operations will be carried out manually (with the help of a breaker and sledgehammer) and/or with small machines that can enter the structure (bobcat, etc.).

Structural Strengthening

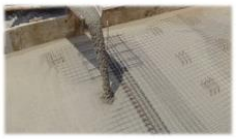
Carrier System Reinforcement

After the demolition and excavation operations are completed, anchor rods are nailed to the existing columns, beams and foundations. Anchor holes are made by drilling holes in the existing elements with drills in accordance with the measurements in the detail projects, cleaning the hole with an air compressor, squeezing the epoxy adhesive into the hole and inserting the previously prepared anchor bar into the hole.

Structural Strengthening

Carrier System Reinforcement

Along with the anchor manufacturing, the laying of reinforcement will begin. After the reinforcement sample checks, the Plywood molds are closed and "self-compacting concrete" (concrete with fine aggregate, super plasticizer additive) is poured into the mold through the hole opened from the upper floor slab or through the funnels manufactured from the mold, also called bird's mouth.



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Structural Strengthening

Finishing Works

After the completion of the rough construction, repair works begin. The interior and exterior surfaces of reinforcement curtains must be coated with plaster, paint, insulation, etc. Reinforcement works are completed by applications, leveling concrete and coating material arrangements on deteriorated floors, electrical and mechanical installation installations and, if necessary, door and window manufacturing.

Energy Efficiency Studies

Heating and cooling systems

In all buildings within the scope of the project, a detached heating center will be established instead of a central heating center, and wall type condensing high efficiency boilers will be installed and the installation and insulation will be renewed.Split air conditioners will be replaced with VRF systems.

Energy Efficiency Studies

Lighting Elements LED Conversion

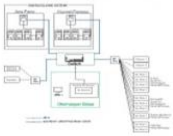
In all buildings within the scope of the project, lighting equipment will be replaced with **LED lighting fixtures** with similar illumination intensity and color temperature, and motion sensors will be applied to spaces such as corridors and WCs.

3

Energy Efficiency Studies

Automation System

By establishing and ensuring the effectiveness of the energy monitoring system (heating system, circulation motors & pumps, solar power plant) and mechanical automation system, covering all structures, in accordance with EN ISO 50001 Energy Management System conditions, It has been calculated that ~0.15% electricity in total energy consumption, and~0.15% natural gas savings can be achieved



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Energy Efficiency Studies

Facade Insulation

Calculations made as a result of exterior facade controls showed that TS 825 minimum requirements were not met, even in insulated sections.

In this cope;

- In the Faculty of Education Building; 4.066,09 m2
- In the Faculty of Agriculture Building; 6.370,17 m2
- In the Vocational School of Health Sciences Building; 2.522,42 m2
- In the Faculty of Arts and Sciences Building; 4.783,44 m2

wall will be insulated with 6 cm rock wool insulation material.

Energy Efficiency Studies

Roof Insulation

As a result of the on-site inspection, calculations made on the roofs reveal that the existing thermal insulation does not meet the requirements of TS 825. In this context;

- 15 cm of unused attic space in the Faculty of Education Building
- 10 cm of unused attic space in the Faculty of Agriculture Building
- 16 cm of unused attic in the Vocational School of Health Sciences Building
- 16 cm unused attic in the Faculty of Arts and Sciences Building

3 cm thick glass wool roofing mat facility with one side covered with aluminum foil (0.035 ≤ Thermal conductivity ≤ 0.040W/(m.K)) (Application area 15.755 m2).

Energy Efficiency Studies

Window and Door Replacement

The existing windows, joinery and TS 825 minimum requirements were not met. Window and door replacements will be made. In this context;

- Replacement of 645 double-glazed window hinge deteriorations and wick leaks in the Faculty of Education Building and coating of the outer glass with film.
- Replacement of 834 single-glazed existing windows (4+11+4) with a total area of 1,890.48 m2 in the Faculty of Agriculture Building with new ones with double glass and plastic joinery with a U value of 1.75.
- Replacement of 360 single-glazed existing windows (4+11+4) with a total area of 805.24 m2 in the Vocational School of Health Sciences Building with new ones with double glass and plastic joinery with a U value of 1.75.
- Replacement of 904 single-glazed existing windows (4+11+4) with a total area of 2,351 m2 in the Faculty of Arts and Sciences Building with new double-glazed and plastic joinery windows with a U value of 1.75.

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Energy Efficiency Studies

As a result of the calculations, by implementing the precautionary scenarios determined specifically for the four faculties, 63.58% savings in total energy consumption can be achieved and approximately 1,786.31 tons/year of greenhouse gas emissions can be prevented. By operating these renovations and renewed systems in accordance with EN ISO 50001 Energy Management System conditions, annual savings of 3,214,218.79 kWh of electricity and 1,088,469.50 kWh of natural gas can be achieved. The material size of the savings in question is approximately 19,361,990.01 ₺/year.

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Occupational Health and Safety

Occupational health and safety plans have been prepared for the construction process. Contractor company;

- In line with the OCCUPATIONAL HEALTH AND SAFETY PLAN prepared by the Consultant, it is mandatory to prepare their own OCCUPATIONAL HEALTH AND SAFETY PLAN and Risk Analysis, covering all the work for which he is responsible, and submit it to the approval of the Consultant.
- However, the work will begin after the plan and analyzes are deemed appropriate.

The issues that our stakeholders should pay attention to regarding these studies are as follows:

- It is essential that periodic inspection reports of all work machines such as mobile cranes and compressors are provided and kept ready in the machines. These machines can be used only by authorized operators. Operators must have their authorization documents ready and be able to declare them in line with the requests of authorized OHS experts during site controls and inspections.

Occupational Health and Safety

- **PAT tests** must be performed to show that all electrical devices/equipment used in the site are electrically safe.
- All of the equipment in question must have labels indicating conformity on the device.
- Employees with the appropriate **Professional Competence Certificate** will be allowed to enter the field.
- All employees must have appropriate **personal protective equipment** and use it effectively within the scope of their duties.
- It is mandatory for all employees to have received "**Basic OHS Training**" and "**Risk Analysis Training**".
- It is mandatory for personnel who will work at heights to have received "**Working at Height Training**".
- It is mandatory for all employees to have received the " **LOTO – Log Out Tag Out Training**".
- It is mandatory for employees to receive other relevant training specified in the "**OCCUPATIONAL HEALTH AND SAFETY PLAN**" before start to work.
- It is essential that work scaffolds meet **TS EN 12811-1** standard conditions.
- It is mandatory for all personnel to work on the scaffolds in question to be trained to work at height and to use parachute type safety belts and fall arrest equipment.
- Action must be taken in accordance with the "**TRAFFIC ACTION PLAN**" specified in the **OCCUPATIONAL HEALTH AND SAFETY PLAN** on campus.
- Emergency action plans should be developed specifically for this work area and drills should be carried out covering all employees.

Occupational Health and Safety

All employees are obliged to use the personal protective equipment specified in the OCCUPATIONAL HEALTH AND SAFETY PLAN in a disciplined manner.

Those who do not carry/use the equipment in question appropriately will not be allowed to work.

Example of some personal protective equipment;

- Helmet - TS EN 397+A1
- Earplug - TS EN 352-2
- Protective Glasses - TS EN ISO 16321-3
- General Purpose Work Gloves - TS EN ISO 21420
- Work Shoes - TS EN ISO 20347
- Half Face Mask - TS EN 140
- Parachute Type Seat Belt - TS EN 361 (Only personnel working at height)

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Occupational Health and Safety

- The areas where employees will gather in case of emergency are determined by taking into account the earthquake risk and are shown in the site plans.

Traffic Plan for Faculty of Arts and Sciences Building

Traffic Plan for Vocational School of Health Sciences

22

Occupational Health and Safety

- The areas where employees will gather in case of emergency are determined by taking into account the earthquake risk and are shown in the site plans.

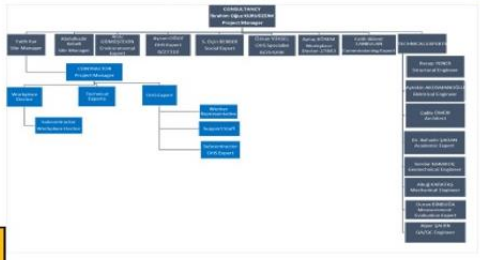
Traffic Plan for Faculty of Agriculture

Traffic Plan for Faculty of Education

Traffic Management Plan

- Limits regarding vehicle use on campus are specified in the OCCUPATIONAL HEALTH AND SAFETY PLAN.

Health & Safety Organization



5

Environmental Impacts

- During the construction works, the sewerage, electricity and water networks already existing in the region will be used.
- Domestic waste will be disposed of using municipal services, while temporary storage areas will be created for other wastes and disposed of by licensed companies. In case any infrastructure service is required for the project (overflow due to blockage in sewer lines (purchase of sewage truck service), long-term power outage (mobile generator), long-term water outage (fighting dust with water tankers, etc.), existing infrastructure facilities (generator, etc.).) will be evaluated and carried out in accordance with the relevant regulations.

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Environmental Impacts

It is expected that the institutional capacity of the contractor company will improve as a result of the training that the Consultant will provide to the Contractor company personnel within the scope of the project. These trainings are listed below.

- **Environmental and Social Impacts**
- **Waste Management**
- **Response to Environmental Emergencies**
- **Energy efficiencyGrievance Mechanism (GM)**

Environmental Impacts

Waste Management

Construction, Excavation Wastes:

- In the event that defrauded material belonging to the building is created as a result of the dismantling activities, **a document will be obtained** from the building management stating that the material has been delivered.
- Recovery of construction/demolition waste and especially its reuse as infrastructure material will be prioritized. Excavation waste will be sent to the waste storage facility of the relevant municipality. An official letter will be received from the Municipality stating that the waste will be accepted to the site and will be submitted to the Administration.

Environmental Impacts

Waste Management

Domestic Wastes;

- Domestic wastes that will be generated will be separated at their source (plastic, glass, paper, etc.) and recyclable ones will be recycled.
- Employees will be trained to properly separate wastes. Wastes that cannot be recycled will be collected in closed sanitary garbage bins and sent to regular landfills through the solid waste collection system of the Authorized Municipality.

Packaging Wastes;

- **Uncontaminated recyclable waste** (plastic, glass, paper, etc.) will be recycled.
- Employees will be trained to properly separate waste. All waste contaminated with hazardous substances will be evaluated as hazardous waste.

31

Monitoring and Management of Social Impacts

- Community Health and Safety
- Trainings
- Human Resources
- Stakeholder Participation
- Grievance Mechanism (GM)

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For grievances about gender-based violence and sexual exploitation and harassment, it is recommended to use the web-based grievance system provided below, which also allows anonymous grievances, for confidentiality reasons. In order to ensure confidentiality, an authorized personnel will have access to this web-based complaint system.

Suggestion and Grievance Mechanism

Project's web site	https://kamuguclendirme.csb.gov.tr/
Grievance and suggestion form	https://kadevoneri.csb.gov.tr/oneri.jsp
Tel	0312 586 48 58
Support line	Alo 181

Website	: https://www.cimer.gov.tr https://giris.turkiye.gov.tr
Call Center	: Alo 150
Mailing Address	: T.C. Cumhurbaşkanlığı Külliyesi 06560 Beştepe - Ankara
Phone	: 0312 590 20 00
Fax	: 0312 473 64 94

KADEV

Thank you for your understanding!