

REPUBLIC OF TÜRKİYE

MINISTRY OF AGRICULTURE AND FORESTRY

DIRECTORATE GENERAL FOR EU AND FOREIGN RELATIONS



TÜRKİYE CLIMATE SMART AND COMPETITIVE AGRICULTURAL GROWTH PROJECT

(TUCSAP)

PROJECT OPERATIONAL MANUAL

(POM)

September 2022

CONTENTS

ABBREVIATIONS	v
LIST of TABLES	ix
LIST of FIGURES	ix
GLOSSARY.....	x
1. INTRODUCTION.....	1
2. PROJECT DESCRIPTION.....	3
2.1 Project Development Objective	3
2.2 Project Components	3
2.3 Project Duration and Budget	7
2.4 Project Beneficiaries	8
3. INSTITUTIONAL ARRANGEMENTS.....	9
3.1 Project Coordination Unit (PCU).....	10
3.2 Project Implementation Units (PIUs).....	15
3.3 Project Steering Committee (PSC)	20
3.4 Technical Coordination Committee (TCC).....	21
3.5 M&E Technical Working Group (METWG).....	22
4. IMPLEMENTATION DETAILS by IMPLEMENTING UNITS and COMPONENTS.....	23
4.1 Sub-components under TRGM-PIU.....	23
4.1.1 SC1.1: Narrowing Information Gaps to Enhance Soil Health and Land-use Planning/ Management.....	23
4.1.2 SC3.1 Strengthening Climate Resilience, Productivity, and Resource-use Efficiency in Horticultural Production	34
4.1.3 SC3.2: Promoting the Adoption of CSA Technologies/Practices.....	43
4.1.4 SC3.3: Reducing Animal Production Pressures on Water Pollution and GHG Emissions	55
4.2 Sub-components under GKGM	61
4.2.1 SC2.1: Strengthening the Capacity of Animal Health Institutes	61
4.2.2 SC2.2: Strengthening and improving veterinary medicinal product control for communicable, vector-borne diseases and zoonoses in animals.....	68
4.3 Sub-components under TAGEM	76
4.3.1 SC3.4: Research and Innovations to Support CSA	76
4.4 Sub-components under BTGM.....	84
4.4.1 SC1.2: MoAF Digital Blueprint for Sectoral Information Collection and Management	84
4.5 Component under ABDGM	85
4.5.1 C4. Project Management, Monitoring and Evaluation	85
5. FINANCIAL MANAGEMENT	88
5.1 Project Cost and Financing.....	88
5.2 Funds Flow and Disbursement Arrangements.....	88
5.3 Accounting System and Procedures	89
5.4 Reporting.....	89
5.5 National Budgeting Procedure.....	89
5.6 Internal Controls	90
5.7 Auditing.....	90
6. PROCUREMENT ARRANGEMENTS	91
6.1 Procurement Regulations	91
6.2 Procurement Governance.....	91
6.2.1 General Information	91
6.2.2 Procurement Principles.....	92
6.2.3 Procurement Responsibilities	92
6.2.4 Project Procurement Strategy for Development (PPSD)	97

6.2.6 STEP System	98
6.2.7 Methods for Procurement, Procurement Thresholds and Monitoring by WB.....	98
6.2.8 Publication of Procurement Opportunities	100
6.2.9 Procurement Monitoring by the World Bank	100
6.2.10 Bid Evaluation Committee	101
6.2.11 General Procurement Procedures	102
6.2.12 Development of Technical Requirements	102
6.2.13 Competitive selection	103
6.2.14 Standard Procurement Documents	103
6.2.15 Short-Listing in the case of QCBS Method/Firms' Ranking Report in the case of CQS Method	103
6.2.16 Bidding Procedure.....	104
6.2.17 Evaluation of Bids.....	104
6.2.18 Award of Contract.....	106
6.2.19 Standstill Period and Debriefing by the Procuring Entity	106
6.2.20 Notification on the Results of the Tender.....	107
6.2.21 Contract Management.....	107
6.2.22 Conflict of Interest	107
6.2.23 Procurement related Complaints.....	108
6.2.24 Anti-corruption Guidelines	111
6.2.25 Documentation and Keeping of Records	113
7. MONITORING AND EVALUATION ARRANGEMENTS	114
7.1 Results Framework.....	115
7.2 Reporting.....	117
8. ENVIRONMENTAL AND SOCIAL ASPECTS.....	120
8.1 Project environmental and social risks and impacts.....	120
8.2. Environmental and social standards relevant to the project	121
8.3. Procedure on environmental and social assessment	122
8.4. Institutional Arrangements and Capacity for ESMF Implementation.....	129
8.5. ESMF Supervision, Monitoring, and Reporting Activities	134
8.6. Land Acquisition and Resettlement	137
8.7. Stakeholder Engagement.....	144
8.8. Citizen Engagement Strategy	147
8.9. Grievance Mechanism (GM)	148
8.10. Labor Management Procedures	149
9. ANNEXES	154

Annex 1. Detailed Cost Tables

Annex 2. Terms of References (ToR) of External Individual Specialists

Annex 3. AWPB Draft Template

Annex 4. Progress Report Draft Template

Annex 5. Relevant Provincial/Regional Units/Stakeholders

Annex 6. Pre-feasibility Report Template (Draft)

Annex 7. Exclusion List

Annex 8. Draft Subproject Agreement

Annex 9. Draft Sub-financing Agreement

Annex 10. Financial Management Manual

Annex 11. Template of IFRs

Annex 12. Procurement Plans

Annex 13. Process Flow Tables as per the Procurement Methods

Annex 14. Col Declaration

Annex 15. M&E Plan

Annex 16. The Anticipated Risk Categorization of the sub-components and the National EIA Requirements

ABBREVIATIONS

ABDGM	Directorate General of European Union and Foreign Relations
ABSL3	Animal Biosafety Level 3
ACM	Asbestos Containing Materials
AGSOIZ	Agriculture-Based Specialized Organized Industrial Zones
AHUs	Air Handling Units
AWPB	Annual Work Plan and Budget
BDS	Bid Data Sheet
BEC	Bid Evaluation Committee
BoQs	Bill of Quantities
BSL	Biosafety Level
BTGM	Directorate General of Information Technologies
C-ESMP	Contractor's Environmental and Social Management Plan
C-LM Plan	Contractor's Labor Management Plan
CE	Citizen Engagement
CHS	Community Health and Safety
CIMER	Presidency's Communication Center
CoC	Code of Conduct
CoI	Conflict of Interest
CSA	Climate Smart Agriculture
CQS	Consultant's Qualification-based Selection
CVs	Curriculum Vitae
DEM	Digital Elevation Models
DFIL	Disbursement and Financial Information Letter
DQ	Design Qualification
DSCLE	Soil Conservation and Land Evaluation Department
DSS	Decision Support System
E&S	Environmental and Social
EC	Evaluation Committee
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EoIs	Expressions of Interest
ES	Environmental and Social
ESA	Environmental and Social Assessment
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan

ESSs	Environmental and Social Standards
EU	European Union
FAO	Food and Agriculture Organization
FAT	Factory Acceptance Testing
FM	Financial Management
GAPTAEM	Southeastern Anatolia Project Agricultural Research Institute Directorate
GCP	Good Clinical Practice
GDs	General Directorates
GHG	Greenhouse Gas
GIIP	Good International Industry Practices
GIS	Geographic Information System
GKGM	Directorate General of Food and Control
GLP	Good Laboratory Practice
GM	Grievance Mechanism
GMP	Good Manufacturing Practice
HVAC	Heating, Ventilation, and Air Conditioning
IACS	Integrated Administration and Control System
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
ICR	Implementation Completion and Results Report
IDA	International Development Association
IoT	Internet of Things
IQ	Installation Qualification
IPF	Investment Project Financing
IPM	Integrated Pest Management
IVM	Integrated Vector Management
IT	Information Technology
LMP	Labor Management Procedures
LV projects	Low Voltage Power Distribution Projects
M&E	Monitoring and Evaluation
METWG	Monitoring & Evaluation Technical Working Group
MG	Matching Grant
MIS	Monitoring Information System
MoAF	Ministry of Agriculture and Forestry
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MoTF	Ministry of Treasury and Finance
MSIP	Management Strategies and Implementation Plans
MTR	Mid-Term Review
MV projects	Medium Voltage Power Distribution Projects
NSAF	National Soil Archive Facility

OECD	Organization for Economic Co-operation and Development
OIE	World Organization for Animal Health
OHS	Occupational Health and Safety
OQ	Operational Qualification
OTHBDB	Organized Agriculture and Livestock Zones Department
QCBS	Quality and Cost Based Selection
P&IDs	Piping and Instrumentation Diagrams
PAP	Project-Affected Person
PCU	Project Coordination Unit
PDs	Provincial Directorates
PIUs	Project Implementation Units
PMP	Pest Management Plan
POM	Project Operational Manual
PPE	Personal Protective Equipment
PPSD	Procurement Strategy for Development
PSC	Project Steering Committee
R&D	Research and Development
RAP	Resettlement Action Plan
RD&I	Research, Development and Innovation
RP	Resettlement Plan
RF	Resettlement Framework
RfP	Requests for Proposal
RoT	Republic of Türkiye
SAT	Site Acceptance Testing
SBO	Presidency's Strategy and Budget Office
SGB	Ministry's Strategy Development Board
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SC	Sub-component
SDI	Spatial Data Infrastructure
SEP	Stakeholder Engagement Plan
SHARP	Climate Change Awareness Assessment and Capacity
SPDs	Standard Procurement Documents
SPN/s	Specific Procurement Notice/s
SSD	Support Services Department
Su-TEAM	Irrigation Technologies R&D Innovation Center
TadLab	Agricultural Land Assessment Laboratory System
TAGEM	Directorate General of Agricultural Research and Policies
TEHPortal	Soil Survey and Mapping System
TAKUP	Agricultural Land Use Planning
TAMTEST	Agricultural Equipment and Machinery Test Center Directorate

TKK	Technical Coordination Committee
ToR	Terms of Reference
TRGM	Directorate General of Agricultural Reform
TUCSAP	Turkey Climate Smart and Competitive Agricultural Growth Project
TİMER	Agricultural Communication Center
TÜBİTAK	Scientific and Technological Research Council of Türkiye
TÜRKAK	Turkish Accreditation Agency
UNDB	United Nations Development Business
UPS	Uninterrupted Power Supply
UTAEM	International Agricultural Research and Training Center Directorate
VCIs	Veterinary Control Institutes
VELBİS	Veterinary Laboratory Information System
VETKOM	Veterinary Medical Control Center
WB	World Bank
WBG's EHS	World Bank Group's Environmental Health and Safety
WGM	Workers' Grievance Mechanism
WHO	World Health Organization

LIST of TABLES

Table 1. Distribution of the Budget by Project Components/ Sub-components	7
Table 2. Responsibilities of MoAF General Directorates (GDs)/Departments in project implementation	9
Table 3. PCU Staff (Public Officers)	11
Table 4. Individual Consultants at the PCU (Externally Hired).....	12
Table 5. TRGM PIU	16
Table 6. GKGM PIU.....	18
Table 7. TAGEM PIU	19
Table 8. BTGM PIU	20
Table 9. Activities concerning the determination of land and soil sources.....	27
Table 10. Funding sources for sub-component activities	35
Table 11. Related legislation and access links	39
Table 12. Procurement Commission, Inspection Acceptance Commission.....	62
Table 13. BSL-2, BSL-3 Laboratory Modernization and Set-up Activities	63
Table 14. Activities under SC.2.1.....	64
Table 15. Specialists at the PCU (Externally hired)	85
Table 16. Budget Categories and Allocated Loan amount.....	88
Table 17. Procurement Specialists per Department/Component/Sub-component.....	95
Table 18. Procurement Methods, Procurement Thresholds for Goods, Works and Non-Consulting Services	98
Table 19. Procurement Methods, Procurement Thresholds for Selection of Consultants.....	99
Table 20. Business standards for procurement-related complaints (where the procurement is subject to Prior Review by WB)	110
Table 21. PDO Level Indicators	115
Table 22. Intermediate level indicators	116
Table 23. The Calendar for Preparation of AWPB.....	118
Table 24. List of Reports.....	119
Table 25. Roles and responsibilities in E&S screening and assessment of project activities	130
Table 26. Capacity Building Scope	133
Table 27. Regular reporting activities	135
Table 28. Summary of project components, sub-components, locations, and land acquisition requirements	138
Table 29. Resettlement Process and Responsible Parties	142
Table 30. Responsible Parties in the Monitoring and Evaluation Process.....	143
Table 31. Monitoring indicators.....	144
Table 32. Responsibilities of the key actors in SEP Implementation	145

LIST of FIGURES

Figure 1: Project Management Structure	10
Figure 2. PCU Organization	14
Figure 3. Sub-component 1.1.: Main activities and outputs.....	25
Figure 4. Subproject Implementation Process.....	41
Figure 5. Flowchart for ESA of project activities and criteria for categorization.....	123
Figure 6. ESMF main responsibilities at PCU & PIUs.....	130

GLOSSARY

Borrower refers to the recipient of Investment Project Financing (IPF) and any other entity involved in the implementation of a project financed by IPF

Environmental and Social Assessment (ESA) refers to a process of analysis and planning to ensure the environmental and social impacts and risks of a project are identified, avoided, minimized, reduced or mitigated throughout the project life cycle.

Environmental and Social Commitment Plan (ESCP) refers to a summary document setting out the material measures and actions that are required for the project to achieve compliance with the Environmental and Social Standards over a specified timeframe in a manner satisfactory to the Bank. The ESCP forms part of the Legal Agreement.

Environmental and Social Framework (ESF) comprises: a Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability; the World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and the Environmental and Social Standards, together with their annexes, which set out the mandatory requirements that apply to the Borrower and projects.

Environmental and Social Impact Assessment (ESIA) refers to an instrument to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

Environmental and Social Management Framework (ESMF) refers to an instrument that examines the risks and impacts when a project consists of a program and/or series of Subprojects, and those risks and impacts cannot be determined until the program or Subproject details have been identified. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts.

Environmental and Social Management Plan (ESMP) refers to an instrument that details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures.

Good International Industry Practice (GIIP) is defined as the exercise of professional skill, diligence, prudence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally or regionally. The outcome of such exercise should be that the project employs the most appropriate technologies in project-specific circumstances.

Grievance Mechanism is an accessible and inclusive system, process, or procedure that receives and acts upon complaints and suggestions for improvement in a timely fashion and facilitates resolution of concerns and grievances arising in connection with a project.

Implementing Agency refers to the Ministry of Agriculture and Forestry which will assume overall responsibility for the Project.

Labor management procedures (LMP) set out the way in which project workers will be managed, in accordance with the requirements of national law and ESS 2: Labor and Working Conditions.

Land acquisition refers to all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way. Land acquisition may also include: (a) acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purposes; (b) repossession of public land that is used or occupied by individuals or households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible. "Land" includes anything growing on or permanently affixed to land, such as crops, buildings and other improvements, and appurtenant water bodies.

Legal Agreement entered into between the Bank and the Borrower to provide Bank financing for the Borrower's investment project.

Procurement documents refer to all Procurement Documents issued by the Borrower. It includes: General Procurement Notice (GPN), Specific Procurement Notice/s (SPN/s), Expression of Interest/s (EOI), Request for Expressions of Interest/s (REOI/s), prequalification document/s, initial selection document/s, request for bids (RFB) document/s, request for proposal (RFP) document/s, forms of contract/s and any addenda.

Project refers to Turkey Climate Smart and Competitive Agricultural Growth Project.

Project Coordination Unit (PCU) refers to the staff of Directorate General of European Union and Foreign Relations (ABDGM) responsible for the overall coordination of Project, including monitoring and reporting to World Bank.

Project Implementation Units (PIUs) refers to the staff of five PIUs; Directorate General of Agricultural Reform (TRGM), Directorate General of Plant Production (BÜGEM), Directorate General of Food and Control (DGFC), Directorate General of Information Technologies (DGIT) and Directorate General of Livestock (HAYGEM) responsible for the implementation of the project, including the preparation and implementation of environmental and social plans.

Provincial Organization refers to provincial organization of MoAF which includes (i) Provincial Organization Directly Affiliated with the Centre (research institutes and veterinary control institutes) and (ii) Provincial Organizations Directly Affiliated with the Centre (provincial directorates and district directorates).

Resettlement Plan (RP) refers to the document consistent with the principles and objectives ESS5 and with the RF.

Selected AGSOIZ signing the Subproject Agreement with MoAF for the purpose of financing the investments

Stakeholder refers to individuals or groups who: (a) are affected or likely to be affected by the project (project-affected parties); and (b) may have an interest in the project (other interested parties).

Stakeholder Engagement is a continuous process used by the project to engage relevant stakeholders to generate sense of ownership to the project and for a clear purpose to achieve accepted outcomes. It includes a range of activities and interactions over the life of the project such as stakeholder identification and analysis, information disclosure, stakeholder consultation, negotiations and partnerships, grievance management, stakeholder involvement in project monitoring, reporting to stakeholders and management functions. It includes both state and non-state actors.

Stakeholder Engagement Plan (SEP) is a tool for managing communications with the project stakeholders at the Subproject or activity level. The SEP will describe the timing and methods of engagement with stakeholders throughout the life cycle of the project as agreed between Bank and Borrower, distinguishing between project-affected parties and other interested parties. The SEP will also describe the range and timing of information to be communicated to project-affected parties and other interested parties, as well as the type of information to be sought from them. When a project consists of a program and/or series of Subprojects and the stakeholders/stakeholder engagement program cannot be identified in detail until the program/Subproject details have been identified, the SEP may be prepared initially as a framework instrument.

Sub-Financing Agreement specifying the principal amount of Sub-Financing to be provided by MoAF, to a Selected AGSOIZ, and financing terms and conditions such as interest rate, term of repayment, charges and/or fees to be charged of the AGSOIZ, that shall be reasonable and acceptable to the Bank.

Subproject proposed to be carried out by the Selected AGSOIZ and in which investments under the scope of the TUCSAP Project as determined in the Subproject Agreement.

Subproject Agreement which is signed between the MoAF and the respective AGSOIZ, following the approval by the MoAF, SBO and the Bank's no-objection for a Subproject.

1. INTRODUCTION

Türkiye Climate Smart and Competitive Agriculture Growth Project (TUCSAP) aims at strengthening capacity for sustainable and competitive agricultural growth and promoting the use of climate-smart agriculture in targeted regions in Türkiye. The project will support the agricultural sector in Türkiye to transition toward a more sustainable, competitive and climate smart orientation by enhancing institutional capacity through narrowing information gaps in relation to Turkey's soils and land natural capital, to enhance its sustainable planning and management; improving data collection and information management to support smart policy monitoring; and improving capacity for animal disease surveillance and diagnostic and for control and regulation of veterinary medicines/vaccines. It will also support innovation and the use of Climate Smart Agricultural (CSA) technologies and practices by farmers and agricultural enterprises.

TUCSAP is financed through an International Bank for Reconstruction and Development (IBRD) loan to the Republic of Türkiye (RoT), through the Ministry of Agriculture and Forestry (MoAF) in the amount of EUR 304,800,000 (US\$ 341,27 million equivalent) and included in the Annual Investment Program published in the Official Gazette on January 15, 2022.

TUCSAP was approved by the World Bank's Board of Directors on March 30, 2022, and the Loan Agreement, between the Bank and Republic of Türkiye, was signed on May 16, 2022.

This document constitutes the Project Operational Manual (hereinafter referred to as the "POM") for TUCSAP. It has been prepared by the MoAF as the implementing agency and adopted in form and substance satisfactory to the Bank by date. The POM is developed to define the main principles and procedures for the practical implementation of the project, including the roles, functions, relationships and responsibilities of the various General Directorates involved in the project. The roles, functions, relationships and responsibilities of the different General Directorates involved in the project. It defines the duties of the Project Implementation Units (PIUs) which are responsible for implementing project activities under their respective Components/Sub-components, and the Project Coordinating Unit (PCU) which is responsible for overall project coordination and for overseeing overall implementation and management of the project. The POM also includes arrangements and requirements regarding financial management, procurement, and monitoring & evaluation (M&E) besides the environmental and social requirements of the Project.

Consequently, this document consists of the following main chapters:

- (a) general description of the Project;
- (b) institutional arrangements for carrying out the respective parts of the Project;
- (c) implementation details of the Project Components/Sub-components;
- (d) the financial management arrangements, requirements and detailed procedures;
- (e) procurement arrangements;
- (f) the requirements and procedures for Project monitoring, evaluation, reporting, and communications;
- (g) the environmental and social requirements, environmental and social instruments, and arrangements, including safety considerations, details on the functioning of the grievance mechanism(s);
- (h) guidance on the Project's communication and visibility strategy.

This POM presents the guidelines, principles and procedures for fiduciary (financial and procurement), Environmental and Social Framework (ESF) requirements, implementation and administrative procedures for administrators, staff, and consultants responsible.

These guidelines have been agreed upon between MoAF and the World Bank.

All expenditures of the project funds must comply with these guidelines, other relevant Project documents and provisions of related national legislation, as listed below:

- Loan Agreement between the International Bank for Reconstruction and Development (IBRD) and Republic of Türkiye
- General Conditions for IBRD Financing: Investment Project Financing (December 15, 2021)
- The World Bank Procurement Regulations for IPF Borrowers – November 2020
- WB's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 (Anti-Corruption Guidelines)
- The World Bank's Disbursement Handbook for World Bank Clients and the Project's Disbursement and Financial Information Letter (DFIL)
- National regulations as and when become relevant
- The Project Appraisal Document (PAD)
- TUCSAP Procurement Strategy for Development (PPSD)
- TUCSAP Environmental and Social Documents^{1*}
 - o Environmental and Social Management Framework (ESMF)
 - o Environmental and Social Commitment Plan (ESCP)
 - o Stakeholder Engagement Plan (SEP)
 - o Labor Management Procedures (LMP)
 - o Resettlement Framework (RF).
- The requirements of the World Bank's Anti-Corruption Guidelines.
- TUCSAP Grant Manual (to be prepared)

The POM is a living document and may be revised from time to time, as needed, by MoAF, as the implementing body of the project and with the prior review and agreement of the Bank. Where there are inconsistencies between the POM and other project legal documents (i.e., the Loan Agreement), the legal documents will prevail.

¹ The environmental and social documents prepared for TUCSAP are available at available at <https://www.tarimorman.gov.tr/ABDGM/Menu/160/Tucsap-Proje-Sayfasi>

2. PROJECT DESCRIPTION

2.1 Project Development Objective

TUCSAP's Project Development Objective (PDO) is to strengthen capacity for sustainable and competitive agricultural growth and promote the use of climate-smart agriculture in targeted regions in Türkiye. The project will support the agricultural sector in transitioning toward a more sustainable, competitive and climate-smart growth orientation by enhancing capacity in a range of areas, including information generation and dissemination to contribute to sustainable soil and land-use planning/management; agricultural data collection and analysis; and animal health aspects, and by supporting innovation and the use of smart farming/climate-smart technologies and practices by farmers and agricultural enterprises. The project investments are expected to contribute to increased agricultural productivity/ competitiveness, resilience, and sustainability.

The success of the project will be monitored against achievement of the following key results Project Development Objective (PDO) indicators:

- Land area with integral information to develop sustainable and competitive agricultural land planning/management (Hectare [Ha])
- Increase in the analyses/tests for animal disease diagnosis processed in the upgraded/constructed laboratories (Percentage)
- Farmers adopting CSA technologies (Number).

2.2 Project Components

The Project is organized around four Components, as follows:

Component 1: Institutional Capacity Strengthening for Climate-Smart Agriculture Policy, Planning, and Investments (US\$151.5 million IBRD). Activities under this component will support the strengthening of broad sectoral capacity, with a particular focus on narrowing information gaps in relation to Turkey's soil and land natural capital, to enhance its sustainable planning and management. Component activities will also enhance MoAF's digital blueprint for data collection and information management to contribute to effective policy monitoring and programming and support improved decision-making across the agricultural sector.

- **Sub-component 1.1: Narrowing information gaps to enhance soil health and land-use planning/management** (US\$143.5 million IBRD). This sub-component will support the generation of key information and narrowing capacity gaps in relation to the governance of Turkey's soils/land natural capital, and specifically to contribute to its sustainable planning and management generating climate co-benefits. Sub-component 1.1 will finance mainly specialized technical services, investments in equipment, small civil works and computer infrastructure and training. Sub-component activities will be implemented into the following four sequential output blocks, as follows:
 - a) *Determination of Soils and Land Resources/Assets*. Detailed soil surveys and analysis will be carried out, followed by the preparation of soil classification maps (1:5000 scale) in approximately 14 million hectares. A national soil archive will be established to preserve soil samples following international standards.
 - b) *Digital National Profile Soil Database*. Activities will strengthen this database, hosting soil/land profile information and soil threats thematic maps, to improve its functionality and capability.
 - c) *System and Service Development*. Support will be provided to develop and/or optimize the

soil and land information and decision support system in the TAD Portal.² Specifically, support will be provided to develop the Soil-land Spatial Data Infrastructure and National Soil & Land Information System. The following subsystems will be developed/optimized under the National Soil and Land information system: (i) National Soil monitoring sub-system for selected soil indicators; (ii) Dynamic Modelling/Mapping subsystem including the identification of soil monitoring sites for periodic monitoring of soil threats, nationally; and (iii) a geospatial Soil Organic Carbon Information sub-system. Support will also be provided for the development of data sharing and use policies aligned with international good practice experience. The systems & services to be supported will contribute to develop and guide sectoral climate change mitigation and adaptation strategies.

- d) *Land Use Classifications*. Land classifications will be carried out in 78.3 million hectares to use as the basis for preparing land utilization notes delimitating the Turkish agricultural frontier (agricultural land versus other uses). The sub-component will also support the development and piloting of a decision support system for crop suitability and land planning.

Capacity building activities will be implemented across the above four output activities and will be targeted to generators and users of the soil and land information, including MoAF staff. Awareness campaigns, dissemination and training with specific tools developed by the project will target particularly local provincial governments and provincial Soil Conservation Boards. To facilitate data use by different stakeholders, the sub-component will support upgrading, developing and/or validating user-friendly applications (e.g., via mobile phone) on soil and land information generated by the project.

- **Sub-component 1.2: MoAF digital blueprint for sectoral information collection and management** (US\$8 million IBRD). Activities will enhance MoAF's capacity for data collection and sectoral information management to support smart climate sectoral policy and planning. The sub-component will support the development, testing and implementation of improved data collection methods and modelling approaches for monitoring crop production and yields, provide production forecasts and overall contribute to agriculture planning (also considering climate change aspects) for food price monitoring, food security assessments, and other applications. The sub-component will finance mainly specialized consulting services, investments in equipment and computer infrastructure, and training.

Component 2: Enhancing animal health capacity for effective disease surveillance, diagnostics and control (US\$81.2 million IBRD). The component will support strengthening the capacity of Veterinary Control Institutes (VCIs) and the establishment of the National Veterinary Medicinal Control Center. The component will follow best practice (i.e., World Organization for Animal Health, EU) to support feasibility assessments, laboratory facilities, laboratory equipment, technical training for staff (as per the National Reference Laboratory defined plans for all laboratories), and information systems. Designs to maximize green and resilient (e.g., energy saving, seismic resistance) elements in infrastructure and equipment will be considered in the feasibility assessment.

- **Sub-component 2.1: Strengthening the capacity of animal health institutes** (US\$31.2 million IBRD). The sub-component will strengthen capacity of the GKGM to deal with introduction and spread of animal diseases and zoonoses due to climate and non-climate related factors via

² The TAD Portal is a web-based portal for the protection of agricultural lands and plains hosted at TRGM. The focus of the improvements will be on systems linked to the TAP Portal; however, support can also be extended to other relevant soil/land subsystems within MoAF.

improvements in capacity for animal disease surveillance and diagnostics for infectious and vector-borne diseases. Investments will support biosafety laboratory infrastructure, information systems and capacity building of MoAF's network of VCI located in the provinces of Adana, Elazig, Erzurum, Konya, Samsun, Izmir, and Istanbul. The project will specifically support upgrades to the institutes' infrastructure to increase the biosafety level (BSL) of laboratory units from BSL1 to BSL2 and BSL3, through investments in critical construction works, equipment, and biosecurity trainings, certification, as well as the establishment of a common laboratory information management system for the targeted institutes.

- **Sub-component 2.2: Strengthening and improving veterinary medicinal product controls for animal infectious and vector-borne diseases and zoonoses** (US\$50.0 million IBRD). This sub-component will support activities to improve the capacity of Turkey to control and regulate veterinary medicines and vaccines to ensure that effective and high-quality products reach the market. It will do so by supporting the establishment of a centralized Veterinary Medicinal Control Center, bringing together the functions that are now disaggregated in two different veterinary institutes and enable in-country veterinary medicine/vaccine efficacy and safety tests which are currently carried out abroad and are costly. The project will invest in construction works, equipment, and technical services to build: (i) testing, analyses, and administrative facilities; (ii) a national vaccine strain collection lab (BSL2/BSL3); and (iii) experimental laboratory units (BSL2/BSL3). Activities will also support capacity building and training (also covering climate-related topics as appropriate), certification and some operational costs.

Component 3: Investments for Enhanced Productivity, Resource-Efficiency, and Climate Resilience (US\$99.75 million IBRD, US\$33 million Beneficiaries). This component will support the dissemination, validation and adoption of CSA technologies and practices, as well as RD&I efforts. The component will encourage the uptake and effective use of innovative/disruptive CSA technologies/practices by closing knowledge and skill gaps and by providing financial support and technical assistance to producers and enterprises. Activities supported under Component 3 will be implemented through four sub-components.

- **Sub-component 3.1: Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production** (US\$30 million IBRD). Sub-component 3.1 will pilot a geothermal greenhouse business model to build basic infrastructure in Agriculture-Based Specialized Organized Industrial Zones (AGSOIZ) and mobilize private (including small/middle size) investors rapidly, to build greenhouse infrastructure (supra-infrastructure), while maintaining the advantages of a cluster. The model will be piloted in one or potentially two AGSOIZ sites depending on final cost assessments, selected from among the 14 sites where feasibility studies have already been undertaken by the MoAF. Funds will cover consulting services for zone planning and geological surveys; works on basic enabling infrastructure (civil infrastructure and construction works such as: geothermal drilling, geothermal heating power production facility; energy transmission line and network backup power line as well as an electrical substation; potable and utility water reservoirs and pumping stations; telecommunication center; foundation drainage connection line; gas supply, local roads; etc.); studies and feasibility analysis of different investment models and investment needs; and dissemination and outreach activities to target collaboration with the private sector.
- **Sub-component 3.2: Promoting the adoption of CSA technologies/practices** (US\$40 million IBRD, US\$33 million Beneficiaries). This sub-component will focus on expanding the use of emerging innovative/disruptive CSA and energy-efficient technologies on small and medium farms to enhance the productivity and profitability of farm operations, increase input-efficiencies and reduce carbon footprint and other negative environmental impacts. This sub-component will

primarily focus on awareness creation, dissemination and providing co-funding opportunities for digitally enabled technologies and solutions (smart and precision agriculture). Activities will support awareness & dissemination and specific investment to support acquisition of digital CSA technologies³ suitable for small and medium farm enterprises that are commercially available in Turkey. The project will support the cost of acquiring digitally enabled technologies, equipment/machinery and related goods, license fees for remote sensing and cloud-based analytical services, training and specialized consulting services. A matching grant (cost-sharing) mechanism will be established, with separate windows targeting producer organizations, agribusinesses promoting contract farming, and private service providers targeting small and medium farm enterprises.

- **Sub-component 3.3: Reducing animal production pressures on water pollution and GHG emissions** (US\$15 million IBRD). Sub-component activities will support the establishment of stakeholder information network around manure management experience and knowledge; training of professionals on manure management services; a pilot for encouraging third-party manure collection and biofertilizer processing, potentially linked to biogas generation, and policy analysis. It will also support awareness and training on other sources of water pollution linked to fertilizers use in pastures and feed crops. The sub-component will finance construction works and equipment, equipment for transportation and application of biofertilizer in fields, training and demonstrations and specialized consulting services.
- **Sub-component 3.4: Research and innovations to support CSA** (US\$14.75 million IBRD). Activities under this sub-component support research, validation and dissemination efforts around Integrated Pest Management (IPM), especially biological and biotechnical control methods, microbial pesticide, and identification of new resistant lines and cultivars against soil-borne pathogens in order to reduce the effects of pesticides on the environment and human health and to prevent economic losses. Sub-component activities will also cover climate-related dissemination activities around energy-saving technologies produced by TAGEM (e.g., solar milking prototype); and carrying out climate assessments to create awareness around climate impacts in crops, and on the opportunities for reducing the water and carbon footprint of key priority value chains and optimize crop planning (e.g., based on water needs). The sub-component activities will also include purchasing and installing new equipment for the research institutes and small-scale civil works for refurbishing their existing facilities.

Component 4: Project Management, Monitoring, and Evaluation (US\$8.65 million IBRD). Activities under this component will support all project management functions. It will include support for a Project Coordination Unit (PCU) at the General Directorate of EU and Foreign Relations (ABDGM), and Project Implementation Units (PIUs) under TRGM, TAGEM, BTGM and GKGM, for: (i) strengthening capacity for day-to-day project management of technical, fiduciary, Monitoring and Evaluation (M&E), Environmental and Social (E&S) issues; (ii) grievance redress, citizen engagement, and implementation of the communications; and (iii) M&E of project activities, including impact assessments, beneficiary satisfaction surveys, and development of an integrated system for project management and monitoring of project outputs and outcomes.

³ Precision farming and regenerative or conservation agriculture are key entry points for the promotion of CSA highlighted by the World Bank Climate Change Strategy 2021-2025 (Transition sector: Agriculture, Food, Water and Land).

2.3 Project Duration and Budget

Project budget is 304,800,000 Euros, equivalent to 341,270,000 US Dollars. The financing source is a loan from the International Bank for Reconstruction and Development (IBRD) affiliated to the World Bank Group. The implementation period covers the years 2022-2028. The Closing Date is March 31, 2028.

Distribution of the Budget by Project Components/Sub-components is shown in Table 1.

Table 1. Distribution of the Budget by Project Components/ Sub-components

Project Components/ Sub-components	Implementation units-PIUs	IBRD Loan Amount (000 \$)	IBRD Loan Amount (000 Euro)*
Component 1: Institutional Capacity Strengthening for Climate-Smart Agriculture Policy, Planning, and Investments		151.589	135.389
<i>Sub-component 1.1: Narrowing information gaps to enhance soil health and land-use planning/management</i>	TRGM	143.589	128.244
<i>Sub-component 1.2: MoAF digital blueprint for sectoral information collection and management</i>	BTGM	8.000	7.145
Component 2: Enhancing animal health capacity for effective disease surveillance, diagnostics and control		81.279	72.593
Sub-component 2.1: Strengthening the capacity of animal health institutes	GKGM	31.271	27.929
Sub-component 2.2: Strengthening and improving veterinary medicinal product controls for animal infectious and vector-borne diseases and zoonoses	GKGM	50.008	44.664
Component 3: Investments for Enhanced Productivity, Resource-Efficiency, and Climate Resilience		99.750	89.090
Sub-component 3.1: Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production	TRGM	30.000	26.794
Sub-component 3.2: Promoting the adoption of CSA (Climate Smart Agriculture) technologies/practices	TRGM	40.000	35.725
Sub-component 3.3: Reducing animal production pressures on water pollution and GHG emissions	TRGM	15.000	13.397
Sub-component 3.4: Research and innovations to support CSA (Climate Smart Agriculture)	TAGEM	14.750	13.174
Component 4: Project Management, Monitoring, and Evaluation	ABDGM	8.652	7.728
TOTAL BUDGET		341.270	304.800

(*) Based on the currency exchange rate: 341.700 US \$ / 304.800 €= 1.119652 (or USD/EUR 0.89293687).

Detailed Cost Tables per sub-component are given in Annex 1.

2.4 Project Beneficiaries

The beneficiaries of the project are farmers and supply chain actors, service providers, decision makers and overall rural populations nationally and across targeted regions in Türkiye. A total of 81,000 people (out of which about 25,000 are women) will benefit directly from awareness raising, knowledge dissemination/validation around CSA technologies, while about 55,000 largely small and medium scale farmers will benefit from access to technologies/improved resilience infrastructure via co-financed investments. Approximately 3,270 service providers and extension workers will benefit from a wide range of skills development, knowledge and experience sharing activities including through digital platforms. About 5,250 veterinarians, para-veterinarians and laboratory staff will benefit from training about improved diagnostic and surveillance capacity for animal diseases and zoonoses.

Beyond these direct beneficiaries, the project is expected to have broader impacts across Türkiye. While the main direct beneficiary for information generated and capacity created on soils will be the MoAF staff at national and provincial levels, as well as government authorities in local municipalities/provinces (specifically the Soil Preservation Boards operating in all 81 provinces of Türkiye and with responsibilities in agriculture soil protection and conservation), the range of beneficiaries is wider and includes professionals from academia, private sector investors, and farmers, as well as others outside the sector (e.g. urban planning agencies, cadaster, etc.).

The private sector will benefit from improved oversight on veterinary medicines/vaccines products and consumers will benefit from improved confidence on the safety of the animal-related food in the market.

3. INSTITUTIONAL ARRANGEMENTS

The borrower of the IBRD Loan is the Republic of Türkiye, represented through the Ministry of Treasury and Finance (MoTF). The overall responsibility for project implementation, including management and coordination lies with the Ministry of Agriculture and Forestry (MoAF) through the Project Coordinating Unit (PCU) and the Project Implementing Units (PIUs).

PCU is the General Directorate of EU and Foreign Relations (ABDGM).

PIUs are the General Directorate (GD) of Agricultural Reform (TRGM), the General Directorate of Food and Control (GKGM), the General Directorate of Agricultural Research and Policies (TAGEM) and the General Directorate of Information Technologies (BTGM).

Responsible GDs and Departments are shown in detail in Table 2 below.

Table 2. Responsibilities of MoAF General Directorates (GDs)/Departments in project implementation

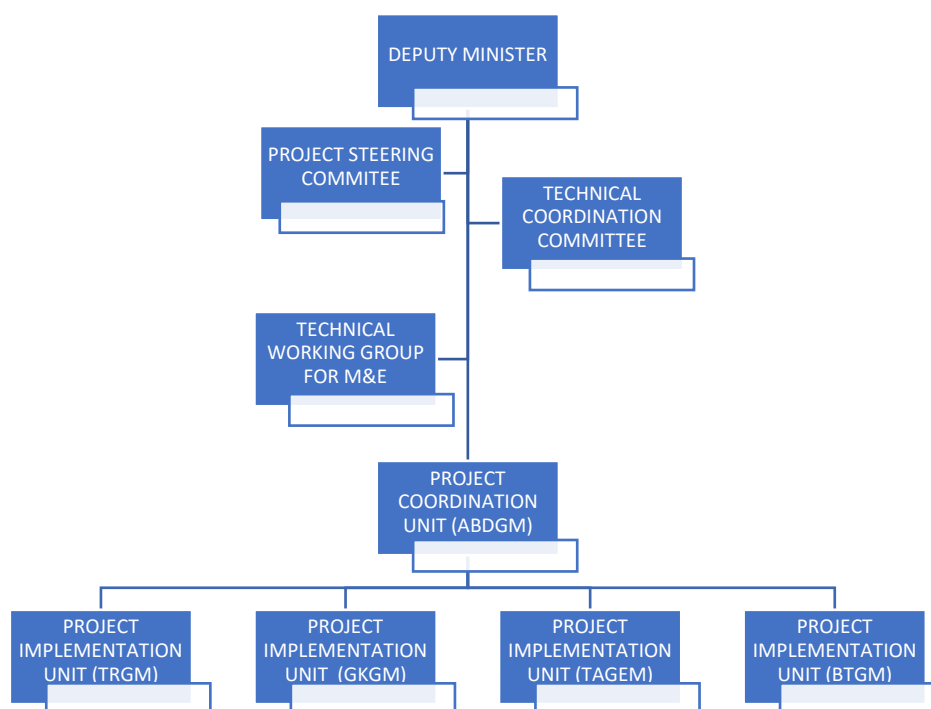
MoAF General Directorates	Department	Key Responsibilities
Leading Deputy Minister-Project Coordinating Unit (PCU)	The PCU is located at ABDGM reporting directly to the project's leading Deputy Minister.	<ul style="list-style-type: none"> • The PCU Coordinator, supported by the Project Coordinator, is to be responsible for day-to-day project management and directly report to the Deputy Minister. • Responsible for overall project coordination and management • Reporting to the WB on implementation progress, including technical, fiduciary, E&S, and M&E aspects. • Preparation of AWPB in close coordination with PIUs.
General Directorate of Agricultural Reform (TRGM)	Soil Conservation and Land Evaluation Department	Leads the implementation of Sub-component 1.1. Narrowing information gaps to enhance soil health and land-use planning/management
	Organized Agriculture and Livestock Zones Department	Leads the implementation of Sub-component 3.1. Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production
	Agricultural Technologies and Mechanization Department	Leads the implementation of Sub-component 3.2. Promoting the adoption of CSA technologies/practices
	Department of Protection of Agricultural Environment and Natural Resources	Leads the implementation of Sub-component 3.3. Reducing animal production pressures on water pollution and GHG emissions.
General Directorate of Information Technologies (BTGM)	Project and Institutional Architectural Development Department	Leads the implementation of Sub-component 1.2. MoAF digital blueprint for sectoral information collection and management in close coordination with TRGM
	Software and Development of Applications Department	
General Directorate of Food and Control (GKGM)	Department of Animal Health and Quarantine	Leads the implementation of Sub-component 2.1. Strengthening the capacity of animal health institutes
	Veterinary Health Products and Public Health Department	Leads the implementation of Sub-component 2.1. Strengthening and improving veterinary medicinal product controls for animal infectious and vector-borne diseases and zoonoses

General Directorate of Agricultural Research and Policies (TAGEM)	Plant Health Research Department	Leads the implementation of Sub-component 3.4. Research and innovations to support climate-smart agriculture in Turkey Pesticide/Fertilizer/Nutrition Management Soil pillar/Climate assessments/water-carbon footprint
	Soil and Water Resources Research Department	

A Project Steering Committee (PSC) (chaired at the Deputy Minister level), a Technical Coordination Committee (TCC) and a Monitoring & Evaluation Technical Working Group (METWG) are also key project implementing structures for the coordination, management and monitoring purposes. Responsibilities and structure of these committees will be explained in Sections 3.3, 3.4 and 3.5.

The following figure shows the Management Structure covering PSC, TCC, METWG, PCU and PIUs:

Figure 1: Project Management Structure



3.1 Project Coordination Unit (PCU)

A Project Coordinating Unit (PCU) is responsible for overall project coordination and for overseeing overall implementation and management of the project, ensuring proper application of all project-related requirements, and preparing all project documents to be submitted to the Bank. The PCU is located at the ABDGM and PCU's functions will be overseen by the leading Deputy Minister (to whom ABDGM report).

The PCU will be fully functional no later than sixty (60) days after the project Effectiveness Date. Necessary arrangements have been made by ABDGM to ensure the PCU is operating and undertaking coordination of project activities prior to project effectiveness and during the recruitment processes of key positions at the PCU. In this framework, public officers/staff were assigned. These officers have ensured official communication between the relevant implementing General Directorates (GDs) and the PCU. Public officers will continue supporting project coordinating functions during the whole implementation of the project, to complement the team of external consultants. PCU Coordinator and

other experts will work for the smooth and proper management of the specific sub-components as they were assigned for. (See Table 3)

Table 3. PCU Staff (Public Officers)

Related Expert at the PCU	Main Responsibility
Arzu YÜRÜKÇÜ (PCU Coordinator)	The PCU Coordinator provides support and oversight to the Project Coordinator (to be recruited externally) and ensures close collaboration and coordination across MoAF staff assigned to the PCU and the external PCU consultants. In addition, the PCU coordinator provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 3.2: Promoting the adoption of CSA (Climate Smart Agriculture) technologies/practices
Tamer KÖSE	Provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 1.1: Narrowing information gaps to enhance soil health and land-use planning/management; and Sub-component 1.2: MoAF digital blueprint for sectoral information collection and management
Özlem HIÇCAN	Provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 2.1: Strengthening the capacity of animal health institutes; and Sub-component 2.2: Strengthening and improving veterinary medicinal product controls for animal infectious and vector-borne diseases and zoonoses
Adil Yüksel PERKİN	Provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 3.1: Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production
Şebnem TÜZÜN KEZER	Provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 3.3: Reducing animal production pressures on water pollution and GHG emissions
Derya DAĞDELEN BURAL	Provides oversight and supports the coordination of activities between PCU and PIU for Sub-component 3.4: Research and innovations to support CSA (Climate Smart Agriculture)
All Experts mentioned above	Support administrative and management functions regarding the implementation of Component 4: Project Management, Monitoring, and Evaluation

The fully functional PCU will also host a dedicated multidisciplinary team of externally hired specialists (individual consultants) to support project management, technical, financial management, procurement, environmental and social risk management, monitoring & evaluation, communication and translation functions with qualifications satisfactory to the Bank. Therefore, along with the 6 public officers assigned at the PCU, 19 consultants will be recruited within the 60 days after project effectiveness. Procurement of individual consultants has already started. The SPN for Request for expressions of interest was published on 22 July 2022. The evaluation process is ongoing.

The responsibilities of individual consultants are as follows:

- **Project Coordinator**, responsible for overall project management, and collaborates with and reports to the PCU Coordinator.
- **Procurement Specialists**, responsible for provision of support in handling procurement implementation during the course of procurement process, preparing/updating the procurement plan in the Bank's STEP system, ensuring the contract packaging is effective for project implementation, preparing/revising of all sorts of bidding documents, providing technical assistance in the preparation of Terms of Reference/s/Technical Specifications, all sorts of Bid Evaluation Reports, preparing the "Minutes of Negotiations" following contract

negotiations, supporting the PIUs/the PCU in contract management made for the delivery of works/services/goods and assisting in the preparation of a control report in coordination with the Financial Management Unit at the PIU towards initiating the payment process.

- **Financial Management Specialists**, responsible for establishing an FM system aligning the FM arrangements of the project with the applicable legislation. The FM arrangements include planning and budgeting, fund flows and Designated Account management, accounting, internal controls, reporting and auditing.
- **Environmental Specialists**, responsible for ensuring the project and all Subprojects are implemented in accordance with the requirements of Turkish Legislation and the World Bank’s Environmental and Social Framework (ESF), the Environmental and Social Commitment Plan (ESCP), the Project Loan agreement, as well as in accordance with all ESF documents prepared for the Project and to be prepared for the Subprojects/grants.
- **Social Specialists**, responsible for ensuring that project investments are implemented in accordance with the requirements of Turkish Legislation and the World Bank’s Environmental and Social Framework (ESF), as well as accordance with all ESF documents prepared for the Project and to be prepared for the Subprojects and tracking social performance against indicators specified in the Project’s environmental and social framework documents and for the monitoring and evaluation social activities within the scope of the project.
- **Communication and Stakeholder Engagement Specialist**, responsible for managing and overseeing the implementation of all aspects of the Project’s Stakeholder Engagement Plan (SEP) and Grievance Mechanism (GM), and responsible for preparation and implementation of a communication strategy, including preparation and dissemination of information materials, planning and implementation of information campaigns, outreach activities, management and reporting on the project GM, etc. and ensuring the project and all Subprojects/grants are implemented in accordance with the requirements of Turkish Legislation and the World Bank’s Environmental and Social Framework (ESF), as well as in accordance with all ESF documents prepared for the Subprojects.
- **Monitoring and Evaluation (M&E) Specialists**, responsible for the establishment and management of a monitoring, progress, evaluation and reporting system, in close coordination with the PIUs, and for leading the Monitoring and Evaluation Technical Working Group.
- **Translators/Interpreters**, responsible for providing direct translation services and consecutive and/or simultaneous interpretation services.

Lead specialists will hold the responsibility in the overall procurement, financial and environmental & social aspects of the project. They will be supported by the specialists who were assigned to different Project Implementing Units (PIUs), as presented in Table 4 below.

Table 4. Individual Consultants at the PCU (Externally Hired)

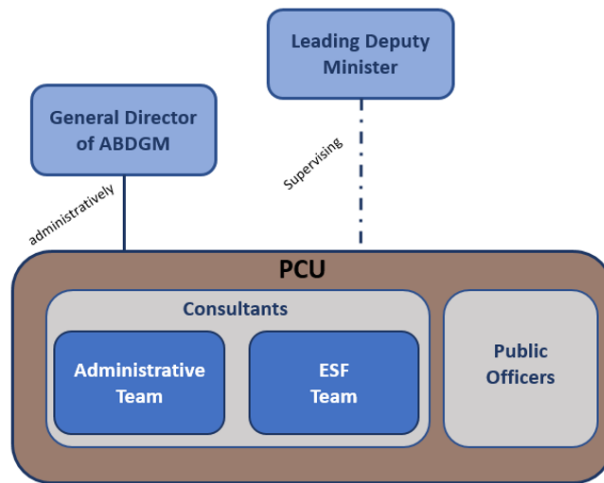
Administrative Issues	Place of Duty	DGs/PIU to be affiliated with
Project Coordinator	PCU	Transversal to all DGs/PIUs
Lead Financial Management Specialist	PCU	Transversal to all DGs/PIUs
Financial Management Specialist	PCU	Transversal to all DGs/PIUs
Lead Procurement Specialist*	PCU	Transversal to all DGs/PIUs and specific support provided to BTGM, TAGEM, ABDGM for sub-component activities.
Procurement Specialist	PIU	TRGM

Procurement Specialist	PIU	TRGM
Procurement Specialist	PIU	GKGM
Lead M&E Specialist	PCU	Transversal to all DGs/PIUs
M&E Specialist	PCU	Transversal to all DGs/PIUs
M&E Specialist	PCU	Transversal to all DGs/PIUs
Communication Specialist**	PCU	Transversal to all DGs/PIUs
Translators (2)	PCU	Transversal to all DGs/PIUs
*The Lead Procurement Specialist will also be responsible for the overall supervision of the project activities to be implemented by different Directorate Generals.		
**Communication Specialist will be responsible for SEP coordination in addition to his/her communication-specific duties.		
E&S Issues	Place of Duty	DGs/PIU to be affiliated with
Lead Social Specialist*	PCU	Transversal to all DGs/PIUs and specific support provided to BTGM, TAGEM, ABDGM
Social Specialist**	PIU	TRGM
Social Specialist	PIU	GKGM
Lead Environmental Specialist*	PCU	BTGM, TAGEM, ABDGM
Environmental Specialist	PIU	TRGM
Environmental Specialist***	PIU	GKGM
*The Lead Environmental and Lead Social specialists will also be responsible for the overall supervision of the project activities to be implemented by different Directorate Generals.		
**One of the social specialists will facilitate and support the maintenance and the management of the Grievance Mechanism (GM).		
*** One of the environmental specialists will be the focal point for Occupational Health and Safety (OHS) management and supervision.		

Specific arrangements for environmental and social (E&S) aspects will be discussed in detail in Chapter 8 of this POM. When necessary, given project demands of other relevant implementing factors, the PCU may adjust the assignment of the ES team during implementation to cover demands of individual sub-components/specific activities.

Terms of References (ToR) demonstrating duties and requirements of the external individual specialists; environmental, social, communication and stakeholder engagement, procurement, financial management, monitoring and evaluation specialists and translators/interpreters are attached to this POM (Annex 2).

Figure 2. PCU Organization



Duties and responsibilities of the PCU are the following:

- Lead the coordination and management of the overall project including implementation and necessary correspondence with World Bank and the relevant institutions such as the Presidency's Strategy and Budget Office (SBO), the Ministry of Treasury and Finance.
- Coordinate the preparation (and needed future adjustments) of the Project Operational Manual (POM), with inputs provided by the Project Implementation Units (PIU).
- Consolidate the inputs provided by the PIUs responsible for the implementation of grant-based sub-components and submit the Grant Manual for Bank's non-objection.
- Ensure the timely delivery of annual work plans and budgets (AWPB) and procurement plans for the project and monitoring the implementation (AWPB Draft Template can be found in Annex 3). The PCU prepares these documents by consolidating the information and inputs provided by the Project Implementing Units (PIUs).
- Liaise with the PIUs and the Ministry's Strategy Development Board (SGB) to ensure that sufficient budgetary allocations for the project are provided in the annual national budgets.
- Manage the project's Designated Account (DA) in the Central Bank that will be opened for project disbursements and payments.
- Carry out the financial management of the project including cash management, review of expenditure requests by PIUs, project accounting, documentation, and financial reporting.
- Prepare a financial management manual which will be an integral part of the POM.
- Assist the Treasury Controllers during the annual audits of the project in the preparation of the required documents for their external review and coordinate the related correspondence.
- Prepare the annual work plan and budgets (AWPB) of the project, and consolidate results/progress of annual plans, with the inputs and information provided by the PIUs and participating institutions.
- Supervise project implementation and reporting and leading the preparation of progress reports for the World Bank (bi-annual technical and financial reports), and of the project completion results reports. The reports are prepared by the PCU, based on information provided by the PIUs (Progress Report Draft Template can be found in Annex 4.)
- Provide support to the Project Implementing Units in project implementation for adherence/compliance with the World Bank's Environmental & Social Requirements and fiduciary responsibilities.
- Coordinate the setting and further operationalization of the Project Steering Committee.

- Organize periodical meetings of the Technical Coordinating Committee, annual meetings and workshops related to the project.
- Present the progress of the project to the Project Steering Committee and work with all PIUs to ensure that all problems are resolved to ensure project schedule.
- Carry out project communication and promotion activities. (This can also be a responsibility of the GDs/PIUs or by the GD/department responsible with communication and promotion activities).
- Ensure all the monitoring and evaluation activities of the project are carried out as planned, including the establishment of the project Monitoring Information System; the establishment of the project M&E group; monitoring of M&E responsibilities under of PIUs to make sure they are implemented as planned; and collect data on M&E activities from the PIUs to report progress.

3.2 Project Implementation Units (PIUs)

Project Implementation Units (PIUs) will be established at the implementing General Directorates which are responsible for the implementation of the specific sub-components: TRGM, GKGM, BTGM and TAGEM will be responsible of implementing project activities under their respective components/sub-components and ensure effective engagement and coordination with MoAF's central and provincial units (including provincial directorates and research and veterinary institutes) and relevant stakeholders at the provincial level (Relevant provincial directorates, veterinary control institutes, and other stakeholders -such as AGSOIZs, cooperatives, unions etc.- are shown in the Annex 5 for each sub-component. Details of the relation and coordination with these stakeholders are explained under Chapter 4 Implementation Details by Implementing Units and Components).

In the General Directorates responsible of component/sub-component implementation, if more than one department is responsible for the implementation of project sub-components, focal points will be appointed in each department. These focal points will report directly to the Deputy General Director, and will coordinate implementation closely with the PIU coordinator, appointed from the internal staff by the respective Deputy General Director. The personnel designated as the focal point will also be responsible for following up the activities related to the sub-component and accepted as the PIU staff. PIUs will be strengthened with technical experts, as needed, either through internal MoAF staff appointed or through external hiring.

The specific tasks and responsibilities of **the PIUs** are summarized below:

- Lead the implementation of the sub-component(s) activities under their responsibility in coordination with the PCU
- Prepare the annual work program/plans, budgets and procurement for the sub-component(s), consolidate and report on the results and progress in the implementation of the annual plans and send them timely to the PCU
- Prepare biannual progress reports on sub-component(s)' activities highlighting both technical and financial progress
- With the support of the specialists at the PCU, implement a M&E system to report on the results framework and report the impacts of the sub-component's activities
- With the support of the specialists at the PCU and PIU, ensure that sub-component activities adhere/complaint with the World Bank's Environmental & Social Requirements and fiduciary responsibilities
- Participate in the Technical Committees of the Project and Project Steering Committee
- Prepare procurement plans and submit them to the PCU

- Undertake procurement processes in adherence to procedures established in the Project documents
- Initiate payments for completed activities in coordination with the PCU and as per the procedures described in the Financial Management Manual
- Prepare inputs to the PCU for the preparation of the Project Operational Manual and for further adjustments that might be needed
- In coordination with the Communication Specialist at the PCU, carry out project communication and promotion activities related to its sub-component(s), as needed
- Lead the preparation of the grant manual, in the section related to the sub-component(s) under its responsibility (for Sub-component 3.2)
- Monitor the implementation of grant-financed project activities, and ensure those activities are carried out per the Grant Manual by all parties (for Sub-component 3.2)

General Directorates will bear the responsibility for the procurement implementation of their investments, which will include drafting the ToRs, technical specifications, bidding documents, and requests for proposals/bids and also conducting the selection of consultants and procurement activities; signing, paying, and managing contracts; monitoring; and reporting and all other procurement-related activities.

In this framework, the structure of the PIUs are as follows:

TRGM-PIU. The PIU operates under the Administrative Affairs and Coordination Department of TRGM to support the implementation of four (4) different sub-components. The PIU will consist of public personnel assigned by Soil Conservation and Land Evaluation Department, Organized Agriculture and Livestock Zones Department, Agricultural Technologies and Mechanization Department, Department of Protection of Agricultural Environment and Natural Resources and Administrative Affairs and Coordination Department. The PIU will be supported by 1 environmental specialist, 1 social specialist and 2 procurement specialists who are externally hired by the PCU and will work at the PIU.

Structure of TRGM-PIU, including focal points, roles of the staff and relevant Departments is shown in Table 5

(Needed adjustments to the assignments presented below, during the project implementation are communicated to the World Bank.)

Table 5. TRGM PIU

Responsible Deputy General Director	Muhsin Yazıcı
PIU Coordinator	Mehmet Aydınbelge - Coordinator
Focal Points	SC.1.1.Mustafa Usul - Coordinator
	SC.3.1.Aylin İnan - Coordinator
	SC.3.2.Serkan Işık – Coordinator, Agricultural Engineer
	SC.3.3.İpek Özenç – Agricultural Engineer
Procurement/Fiduciary	<ul style="list-style-type: none"> • 2 Procurement Specialists (will be externally hired by PCU) • Anıl Daknı- Agricultural Engineer (from SC.1.1) • Can İbrahim Yılmaz- Agricultural Engineer (from SC.1.1) • Yusuf Gürbüz – Coordinator (from SC.3.3)

	<ul style="list-style-type: none"> İpek Özenç – Agricultural Engineer (from SC.3.3)
Monitoring & Evaluation, Reporting	<ul style="list-style-type: none"> Pınar Hışır – Environmental Engineer (from SC.3.3) Orhan Sezgin – Agricultural Engineer (from SC.3.3) Dr. Firdes Kılıç – Agricultural Engineer (PhD)
Environmental & Social Issues	<ul style="list-style-type: none"> 1 Environmental Specialist, 1 Social Specialist (will be externally hired by PCU) Dilek Kınık Bingöl – Environmental Engineer (from SC.3.3) Öykü Yıldırım – Agricultural Engineer (from SC.3.3) Nilüfer Gülşen Koca – Biologist (from SC.3.3) Tuncay Burhan – Programmer (from SC.3.3)
Other administrative issues	May be appointed at a later stage
Technical issues	1.1 Soil Conservation and Land Evaluation Department <ul style="list-style-type: none"> İlknur Elagöz- Agricultural Engineer, (Msc) Semra Yıldırım- Agricultural Engineer Funda Çimen Türel - Engineer Aslı Akci – City Planner Control Engineers (~ 12 persons)
	3.1. Organized Agriculture and Livestock Zones Department <ul style="list-style-type: none"> Ferda Dünder - Agricultural Engineer Hasan Uzal – Electrical Electronics Engineer Aykut Aybar – Computer Engineer
	3.2. Agricultural Technologies and Mechanization Department <ul style="list-style-type: none"> Ali Çağlar Çelikcan – Agricultural Engineer Necdet Kurul – Agricultural Engineer Dr. Derya Sürek – Agricultural Engineer, (PhD) Muhammed Vahdet Önder – Agricultural Engineer Dr. Firdes Kılıç – Agricultural Engineer, (PhD) Mücahid Arslan – Agricultural Engineer Işık Erdoğan – Agricultural Technician
	3.3. Department of Protection of Agricultural Environment and Natural Resources <ul style="list-style-type: none"> Necati Cem Aktuz – Agricultural Engineer Seçil Ocağ – Agricultural Engineer Pelin Polat – Agricultural Engineer

GKGM -PIU. The PIU will consist of public personnel assigned by Department of Veterinary Health Products and Public Health, Department of Animal Health and Quarantine and Department of Administrative Affairs and Coordination. The PIU will be supported by 1 environmental specialist, 1 social specialist and 1 procurement specialist who are externally hired by the PCU and will work at the PIU.

The Structure of GKGM-PIU, including focal points, roles of the staff and relevant Departments is shown in Table 6:

Table 6. GKGM PIU

Responsible Deputy General Director	Sedat Ildız
PIU Coordinator	Yılmaz Çiftçi (Agriculture and Forestry Specialist)
Focal Points	SC.2.1 Alper Karapınar (Veterinarian) SC.2.2 Hüsniye Dirican (Veterinarian)
Procurement/Fiduciary	<ul style="list-style-type: none"> • 1 Procurement Specialist (will be externally hired by PCU) • Alper Karapınar (Veterinarian) • M. Siddık Ortımur (Computer Operator) • Mustafa Oğuz (Agricultural Engineer) • Musa Alkan (Veterinarian)
Monitoring & Evaluation, Reporting	<ul style="list-style-type: none"> • Gencay Ergin (Agriculture and Forestry Specialist) • Anıl Demeli (Veterinarian)
Environmental & Social Issues	<ul style="list-style-type: none"> • 1 Environmental Specialist, 1 Social Specialist (will be externally hired by PCU) • Kemal Yılmaz (Head of Section, Veterinarian) • Anıl Demeli (Veterinarian) • Musa Alkan (Veterinarian) • Mazlum Yoluk (Biologist)
Other administrative issues	May be appointed at a later stage
Technical issues	SC.2.1 Department of Animal Health and Quarantine <ul style="list-style-type: none"> • Bayram Sertkaya (Head of Department) • Yılmaz Çiftçi (Agriculture and Forestry Specialist) • Kemal Yılmaz (Head of Section, Veterinarian) • Alper Karapınar (Veterinarian) • Anıl Demeli (Veterinarian)
	SC.2.2 Department of Veterinary Health Products and Public Health <ul style="list-style-type: none"> • Mustafa Bebek (Head of Department) • Gencay Ergin (Agriculture and Forestry Specialist) • Hüsniye Dirican (Veterinarian) • Musa Alkan (Veterinarian) • Mazlum Yoluk (Biologist)
	SC. 2.1 & 2.2 Department of Administrative Affairs and Coordination <ul style="list-style-type: none"> • Mustafa Oğuz (Agricultural Engineer) • M. Siddık Ortımur (Computer Operator)

TAGEM -PIU. The PIU will consist of public personnel assigned by the Plant Health Research Department; Soil and Water Resources Research Department and the Administrative Affairs and Coordination Department. Lead Environment, Social and Procurement Specialists at the PCU will support the PIU regarding SC.3.4 activities.

Structure of TAGEM-PIU, including focal points, roles of the staff and relevant Departments is shown in Table 7:

Table 7. TAGEM PIU

Responsible Director	Deputy	General	Dr. Bülent Sönmez
PIU Coordinator			Merve Altan, Coordinator
Focal Points			Plant Health Research Department Nilgün Arıkan, Agricultural Engineer
			Soil and Water Resources Research Department Mahmut Sami Çiftçi, Agricultural Engineer
Procurement/Fiduciary			<ul style="list-style-type: none"> • Umut Emre Öztürk (Department of Administrative Affairs and Coordination) • 2 procurement officers will be appointed at a later stage
Monitoring&Evaluation, Reporting			1.Ayşe Uysal Morca/ Coordinator 2.Fatma Dolunay Erdoğan/ Coordinator 3.Ender Kahraman/ Coordinator 4.Nilgün Arıkan/ Coordinator 5.Dr. İnci Tekeli / Coordinator 6.Dr. Kadriye Kalınbacak/ Coordinator 7.Şule Küçükcoşkun/ Coordinator Additional staff will be appointed at a later stage
Environmental & Social Issues			Support from PCU
Other administrative issues			Tuğçe Uslu, Biologist
Technical Issues			Plant Health Research Department <ul style="list-style-type: none"> • Nilgün Arıkan/Coordinator • Ender Kahraman/ Coordinator • Ayşe Uysal Morca/ Coordinator • Fatma Dolunay Erdoğan/ Coordinator
			Soil and Water Resources Research Department <ul style="list-style-type: none"> • Canan Erakman/Engineer • Havva Taşkın/ Engineer • Turgay Dadaş/ Engineer • Mahmut Sami Çiftci/ Engineer • Siyami İlhan Kökden/ Engineer

BTGM -PIU

The PIU will consist of public personnel assigned by the Software and Development of Applications Department, Head of Project and Institutional Architectural Development Department and Administrative Issues and Coordination Department. Lead Environment, Social and Procurement Specialists at the PCU will support the PIU regarding SC.1.2 activities.

The structure of BTGM-PIU, including focal points, roles of the staff and relevant Departments is shown in Table 8. However, the number and distribution of staff may change depending on the results of feasibility studies.

Table 8. BTGM PIU

Responsible Director	Deputy General	Yasin Hakkı Kocaman
PIU Coordinator		Serdar Tevfik Gürbüz – Acting Head of Section
Focal Points		Dilek Özdemir – Head of Software and Development of Applications Department
		Mehmet Erkan Uçaner – Head of Project and Institutional Architectural Development Department
Procurement/Fiduciary		A person will be appointed from the Administrative Issues and Coordination Department
Monitoring&Evaluation, Reporting		A person will be appointed at a later stage
Environmental & Social Issues		A person will be appointed from the Administrative Issues and Coordination Department
Other administrative issues		May be appointed at a later stage
Technical Issues		Software and Development of Applications Department <ul style="list-style-type: none"> • Murat Gündoğan - Engineer • Ferhat Yılmaz Ateş – Informatics Specialist • Hülya Gezer İnce - Engineer
		Project and Institutional Architectural Development Department <ul style="list-style-type: none"> • Serdar Tevfik Gürbüz – Acting Head of Section • Sevde Kahraman Özmen – Informatics Specialist • Nezahat Karahan Nalbant - Engineer

3.3 Project Steering Committee (PSC)

A Project Steering Committee is established to ensure effective coordination at a higher level and provide strategic advice. The PSC will consist of high-level representatives of relevant GDs as well as representatives of the related institutions. The PSC will be chaired by the line Deputy Minister of the MoAF (to whom ABDGM report), with the PCU acting as the Secretariat.

The PSC will consist of the following members:

- MoAF, Deputy Minister
- ABDGM General Director
- TRGM Deputy General Director
- GKGM Deputy General Director
- TAGEM Deputy General Director
- BTGM Deputy General Director
- SGB, Head of Budget Department
- Support Services Department (DHDB), Head of Department
- PCU Coordinator (Secretariat)

Senior officials of the Ministry of Treasury and Finance and Presidency's Strategy and Budget Office will be invited to join specific sessions, based on project needs.

The PSC will meet on a quarterly basis or with higher frequency if required.

The main duties and responsibilities of PSC are to (a) provide general direction and coordination of the activities in line with the objectives and targets of the Project, and provide guidance for the rapid and solid solutions of specific problems that may arise during the implementation (b) monitor implementation progress, outcomes and overall success of the Project, (c) provide guidance to PCU and PIUs as needed for ensuring the delivery of project outputs and achievement of project outcomes, particularly with regard to financial decisions, (d) review Annual Work Plan and Budget, (e) ensure effective institutional coordination.

Documentation and logistical support for the PSC will be managed by PCU.

3.4 Technical Coordination Committee (TCC)

The objective of the Technical Coordinating Committee (TCC) is to ensure close project coordination on a regular basis. TCC will be established and led by the PCU Coordinator, with participation of focal points assigned for each sub-component and relevant staff hired to support coordinating activities at the PIUs level.

Committee members will meet periodically to review project progress based on monitoring and evaluation (M&E) results and will revise technical and administrative issues related to implementation.

Ad hoc Technical Committees may be established for specific topics where strong alignment among MoAF's departments is required, including participation of departments that have not direct responsibility in the implementation of the project but that are direct beneficiaries of some of the activities or information generated by the project. These ad hoc technical committees can be established for a specific period of time, as required, and will operate under a flexible framework.

The main duties and responsibilities of the TCC are to (a) Ensure project coordination on a regular basis, (b) Review project progress periodically based on M&E results, (d) revise technical and administrative issues related to implementation, (e) create and dissolve ad-hoc subcommittees/groups as needed for undertaking specific tasks in a predetermined time frame, (f) provide general direction and coordination to the activities of these subcommittees and to monitor their progress.

Documentation and logistical support for the TCC (and ad hoc Technical Committees as needed) shall be managed by PCU.

The TCC will consist of the following members:

- PCU Coordinator
- TRGM Focal Points
- GKGM Focal Points
- TAGEM Focal Points
- BTGM Focal Points
- PCU members and targeted/selected PIU Specialists (as per the topics to be covered by the TCC)

3.5 M&E Technical Working Group (METWG)

A M&E technical working group will be established to further refine the overall M&E strategy for the project and monitoring its implementation, including alignment of measurement approaches and strategies for data capture, reporting and evaluation. The M&E working group will be coordinated by the Lead M&E Specialist and consists of the focal points specifically assigned for monitoring and evaluation aspects by Project Implementation Units (PIUs), as follows:

The TWG will consist of the following members:

- Lead M&E Specialist
- TRGM Focal Points
- GKGM Focal Points
- TAGEM Focal Points
- BTGM Focal Points
- M&E Specialists

(Other specialists such as social specialists may participate in the meetings when required.)

The main duties and responsibilities of the TWG are to

- a. Provide guidance on determining measurement approaches and strategies for the three types of M&E activities:
 - (i) Together with the PIUs, monitor project outcomes (PDO results and intermediate indicators);
 - (ii) stakeholder-based monitoring approaches to understand adoption of technologies and perceptions of the benefits and tradeoffs of such technologies and associated service provision; and
 - (iii) impact-based assessment approaches to understand the benefits of the technologies promoted by the project, particularly the most novel ones.
- b. Review and comment on the format of data collection, reporting and evaluation in order to be used in the Integrated Monitoring Information System (MIS), which will consolidate information needed for the assessment of implementation performance, but also to monitor achievement of indicator targets.
- c. Evaluate the achievement of project outcomes and impacts. In relation to project impacts, the focus will be particularly on the extent to which the project is creating conditions for a further scaling-up of technologies and approaches promoted by the project and ensure inclusion (small scale farmers, women, youth).
- d. Encourage and monitor the measurement of gender indicators in the M&E system.
- e. Contribute to the preparation of M&E reports as well as annual work plans and monitor the implementation of these plans.

Documentation and logistical support for the METWG will be managed by PCU.

4. IMPLEMENTATION DETAILS by IMPLEMENTING UNITS and COMPONENTS

4.1 Sub-components under TRGM-PIU

Sub-Component 1.1, 3.1, 3.2 and 3.3 will be carried out by the relevant Departments of TRGM. In this framework, Sub-Component 1.1 will be carried out by the Soil Conservation and Land Evaluation Department (DSCLE), Sub-Component 3.1 will be carried out by the Organized Agriculture and Livestock Zones Department (OTHBDB), Sub-Component 3.2 will be carried out by Agricultural Technologies and Mechanization Department, and Sub-Component 3.3 will be carried out by the Department of Protection of Agricultural Environment and Natural Resources

4.1.1 SC1.1: Narrowing Information Gaps to Enhance Soil Health and Land-use Planning/Management

This sub-component will support the generation of key information and narrowing capacity gaps in relation to the governance of Türkiye's soils/land natural capital, and specifically to contribute to its sustainable planning and management generating climate co-benefits.

DSCLE under The General Directorate of Agricultural Reform (TRGM), in close coordination with provincial directorates, will lead the implementation of this sub-component. Soil and land use are major contributors to GHG emissions mainly through land use changes and nutrient management. Yet, they also play an important role in climate change mitigation by acting as a carbon sink, through adoption of CSA and the protection and rehabilitation of marginal and degraded lands and forests. Healthy soils are also essential for ensuring resilient production.

The sub-component activities are aligned to the RoT's Regulation No. 30265 aimed to protect and conserve land and soil resources dated 9 December 2017 and subsequently amended in 2018 and 2019, under Law No. 5403 on Soil Preservation and Land Utilization, which entered into force in 2005. Regulation No. 30265 sets procedures and principles for (i) improvement and classification of agricultural lands, (ii) determination of land and soil resources specified in Law No. 5403 on Soil Preservation and Land Utilization, (iii) land-use planning in compliance with the sustainable development principle, (iv) determination of erosion-sensitive areas, (v) implementation of soil conservation and land management plans and projects, and (vi) establishment and duties of the Soil Preservation Board. Through this regulation, the government, under the leadership of the MoAF aims to find a balance between competition of different land uses while improving national agricultural production.

According to the Article 108 of the Directive on the Duties, Authorities and Responsibilities of the Central Organization Units of the MoAF (2022-2), in scope of the sub-component 1.1 DSCLE is responsible of (a) establishing Ministry standards for the classification and evaluation of soils and lands, (b) improving and updating the soil database and to provide the basic bases required by agricultural land use plans, (c) carrying out and have the land and soil survey, classification and mapping procedures done throughout the country, (d) controlling and approving the soil classification and maps made throughout the country, developing, managing and operating the National Soil and Land Database in coordination with the BTGM, (e) preparing or having land use plans, and (f) carrying out the authorization and inspection works and procedures of the soil, plant and irrigation water analysis laboratories authorized by the MoAF.

Technical specialists of TRGM, and Environmental Specialists, Social Specialists and Procurement Specialists hired by the Project will ensure that the specifications and tender documents prepared under this sub-component are technically sound and comply with World Bank rules and related environmental, social and other documents.

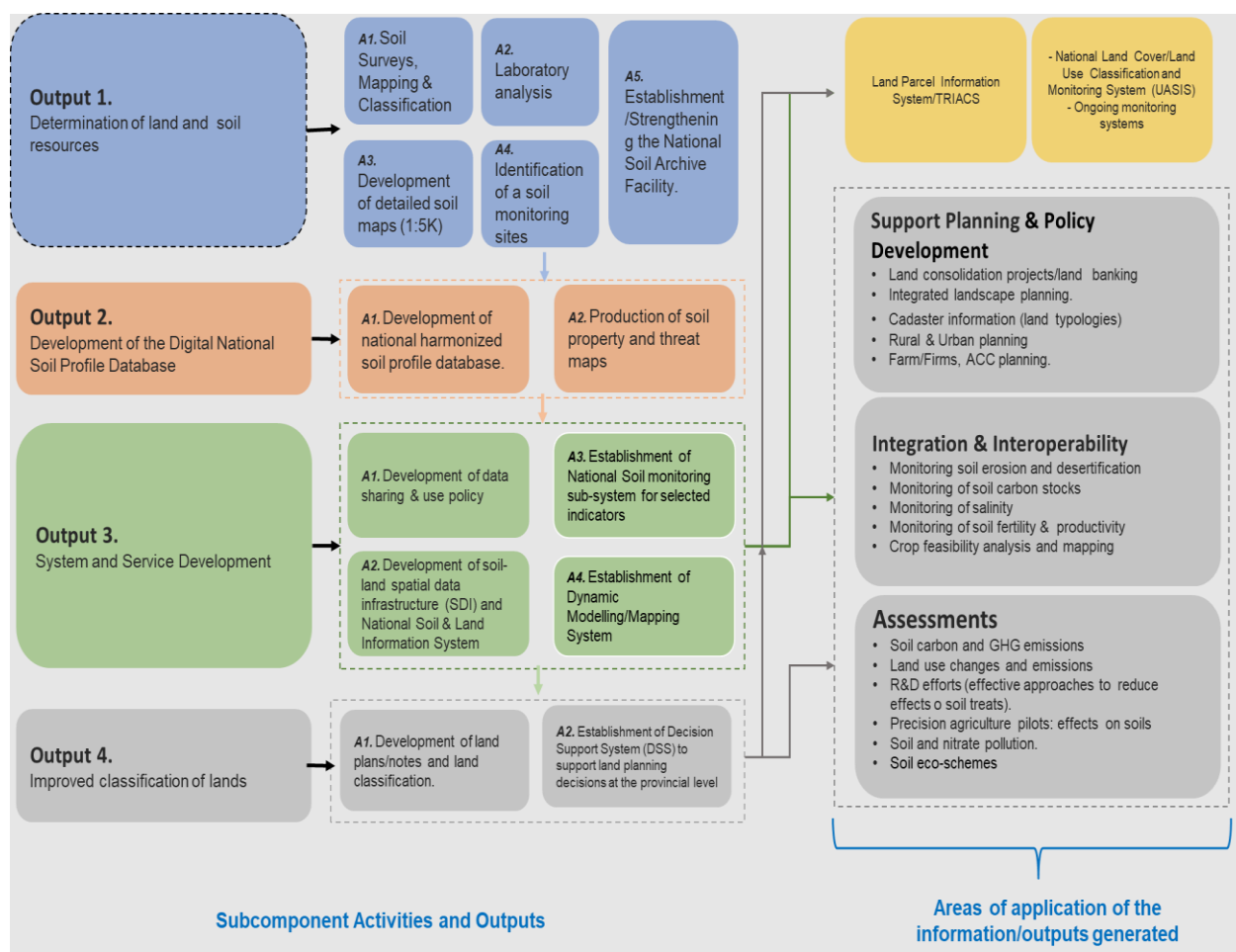
For the operationalization of this sub-component, and according to the Technical Specification and administrative contracts, which will be prepared based on the Technical Instruction of the Soil and Land Classification Standards and Soil Conservation⁴ and Land Use Law Implementation Instruction⁵; all Services performed under the signed Contract will be approved/validated by an 'acceptance commission'; this commission will be formed by MoAF's related institutions, and the accepted Services will be approved by the General Director of TRGM. For the completion of activities/contracts, progress reports, final outputs, payment and its annexes, all these documents will be supported by acceptance minutes and documents will be delivered to the DSCLC in both digital and wet-signature printed format, with coordinates and sketches (with maps). All relevant details will be included in the annex of the contract/s to be signed with the Contractor/s.

The sub-component activities will support national and local capacity for soil and land-use planning and management, more specifically: (i) the determination of land and soil resources, which includes soil surveys and classification; laboratory analysis; production of digital detailed soil maps; identification of monitoring sites and the establishment/strengthening of the national soil archive facility; (ii) the strengthening of the Digital National Profile Soil Database , which includes development of national harmonized soil profile database and production of soil property and threat maps; (iii) the establishment of a system and service development for soils and land , which includes development for data sharing and use policy, development of soil land spatial data infrastructure (SDI) and National Soil and Land Information System and establishment of dynamic Modelling/Mapping system and (iv) the classification of lands across the country, according to global and national standards which includes development of land plans/notes and land classification and establishment of Decision Support System (DSS) to support and planning decisions at the provincial level. Figure 3, below, details the main activities and outputs of the sub-component, which will be implemented in a sequential manner, as they are interrelated training activities will be transversal, in support of the different outputs generated and to inform the applicability of the information generated. Details of the output blocks are presented below.

⁴ https://www.tarimorman.gov.tr/Belgeler/Mevzuat/Talimatlar/ToprakAraziSiniflamasiStandartlariTeknikTalimativeIlgiliMevzuat_yeni.pdf

⁵ [to be published.](#)

Figure 3. Sub-component 1.1.: Main activities and outputs



Output 1- Determination of soil and land resources

The sub-component will support TRGM’s ongoing mapping efforts by extending the area of detailed soil surveys and soil classifications maps (1:5000 scale) to an additional 14 million hectares (to date MoAF has already conducted soil surveys in 8 million ha). This output will provide essential data and information to the other outputs in this sub-component. It will be achieved through the implementation of five main activities which will systematically examine, describe, classify, and map soils in 14 million ha area.

Aerial photographs, satellite images, topographic and geology maps, legacy soil maps and Digital Elevation Models (DEM) will be used to determine the soil profile locations, as well as the relationships between patterns of soil and patterns of images on photographs and images. These relationships will be used to predict the location of soil boundaries and the type of soils associated with them. The detailed soil maps will be produced, using soil profile and site descriptions, auger controls, and laboratory analysis. The sub-component will subsequently establish the national soil archive in alignment with international standards. The archive’s core activities will be to store, archive and maintain soil specimens and their associated field records. The National Soil Archive facility will be constructed in an existing MoAF campus/premise. Activities will also support the identification of soil monitoring sites as an input to a dynamic system for periodic monitoring of soil threats (soil erosion, organic soil, desertification, salinity, etc.) to be established under output 3.

- Soil Surveys and Classification; Laboratory Analyses; Production of digital detailed soil maps. These activities comprise the stages of front office study, soil survey, laboratory work and the development and approval of maps and consists of successive steps. Each phase is the preparatory work for the next step, carried out using the knowledge and materials obtained from the previous steps. Detailed soil surveys, mapping, laboratory analyses and numerical detailed soil maps will be produced with the data obtained by classification of agricultural lands at the level of soil series and phases, in order to prepare a base for both the preparation of land use plans and the National Soil Database (Outputs 3 and 4).

This activity will be carried out by a contractor firm/s while the technical aspects of the consultancies and monitoring of the contracting works to be done by the control engineers working in MoAF. The relevant Procurement Specialist/s will provide support to the DSCLE in the preparation of the Technical Specification/s of these tenders. Procurement will take place according to the rules of the World Bank.

The tenders will be carried out in eight (8) groups covering 81 provinces of Türkiye. Geographically and socially similar provinces are included in the same group, so both logistics will be saved, and more integrity will be provided in the interpretation of that region in terms of evaluation. Since the zoning pressure on agricultural areas is more intense in the western regions, agriculture is more intensive in the western regions and the majority of the country's population resides in these provinces, it is in the first place in order of priority.

The monitoring of the quality of the work by the selected firm/company, will be done by "monitoring/controlling teams" as specified above, according to the Technical Instruction of the Soil and Land Classification Standards⁶, and the technical and administrative specifications. The relevant forms and report samples to be used during the controls of the implementations are also included in technical and administrative specifications in line with the Technical Instruction of Soil and Land Classification Standards. Provincial Directorates will participate in the monitoring/control of contract implementation supporting the DSCLE personnel.

Soil survey and land classification studies will be based on the following legislation: In the Presidential Decree No. 1, it is carried out in accordance with the provision "To perform the duties assigned by the Law on Soil Conservation and Land Use No. 5403 dated 3/7/2005" in subparagraph (I) of Article 417.

Regulatory studies for the protection and conservation of land and soil resources are carried out with the 1st, 3rd, 7th, 10th and 11th articles of the Soil Conservation and Land Use Law No. 5403. DSCLE under TRGM is responsible for detailed soil survey and mapping studies. Regulation on the Protection, Use and Planning of Agricultural Lands is the main sub-legislation for implementation of the law.

The following stages presented in Table 9 should be followed during the determination of land and soil sources. All activities in the Stages will be approved by TRGM.

⁶ [Op.cit:5](#)

Table 9. Activities concerning the determination of land and soil sources.

Stages	Activities	Responsible Party
Front office stage	Supply of cartographic materials such as stereo aerial photographs or satellite images, appropriate scale topographic maps, rectified orthophotos, etc.	TRGM
	An official letter will be written to the relevant provincial/district agricultural directorates to inform the locals	TRGM
	Necessary information in the form of brochures, posters, SMS, etc. will be provided and stakeholders will be informed about the project scope and ongoing activities through the muhtars	Contracting company
	Minutes prepared regarding the notification made will be sent to the TRGM	Contracting company
	Finalization of the project boundary	Contracting company
	Approval of the project boundary	TRGM
	By determining the physiographic groups and making use of the Geology and Large Soil Group maps, the draft series boundaries are established	Contracting company
	Determination of Probe and Profile points	Contracting company
	Developing Draft Soil Map and Draft Physiography Map through the soil survey exercise	Contracting company
	Soil Survey Auger Project Control and Approval	TRGM
Soil survey stage	Before the contracting firm starts the studies in the area to be surveyed, the necessary permissions and information letters are prepared by TRGM. Permission letters should be sent to the relevant Governorship by TRGM. Relevant letters will be sent to law enforcement agency (police and military force), municipality, district governorship, Muhtars etc. by the Governorship.	TRGM
	Opening profiles	Contracting company
	Augering	Contracting company
	Taking soil samples from profile and probe points	Contracting company
	Taking and preparing soil samples for the National Soil Archive	Contracting company
	Sending the samples to the laboratory	Contracting company
	Entering the data into TAD Portal	Contracting company
Laboratory Studies Stage	Preparation of samples for analysis	Contracting company
	Analysis of soil samples taken from probes	Contracting company
	Making analyses on soil samples taken from profiles	Contracting company
	Reporting of analysis results	Contracting company
	Control and approval of analysis reports	TRGM
Soil Maps Stage	Developing and controlling probe and profile database	Contracting company
	Preparation of reports	Contracting company
	Control of reports	TRGM
	Preparation of soil maps	Contracting company
Approval Stage	Land Controls	TRGM
	Preparation of soil survey and mapping report	Contracting company
	Approval of soil survey and mapping report	TRGM

Laboratory studies on soil samples will be carried out by laboratories that have been authorized according to the provisions of the circular numbered 2013/1⁷ (Circular of Establishment, Authority and Inspection of Soil, Plant and Irrigation Water Analysis Laboratories for Agricultural Purposes) and also accredited according to the TS EN ISO 17025 standard (General Requirements for the Competence of Experiment and Calibration Laboratories⁸).

During the soil survey study phase, measures (manual digging, etc.) will be taken to prevent any damage to the crops, land or infrastructure, and in case of any damage, compensation will be made according to the Resettlement Framework⁹ document. While during project implementation, landowners will be informed by the Contracting company, prior to soil survey study through consultation meetings, posters posted in places (muhtar offices, mosques, schools, coffee houses, places where women can also access information, etc.) accessible to all local people (including vulnerable/disadvantaged individuals (elderly, disabled individuals, illiterate, etc.) (or other appropriate means of communication and participation) and will be encouraged to convey their concerns and exposures to TUCSAP Grievance Mechanisms which will be established by PCU after effectiveness of the Project, basically DSCLE of TRGM will be responsible for addressing those complaints. In order to prevent occupational health and safety risks (in accordance with the ESMF prepared for the Project), TRGM-PIU working closely with the Social Specialist at the PCU and assigned to the PIU will ensure that, tender documents will contain relevant provisions regarding these issues and will also be responsible of ensure that are properly implemented by the Contractor/s. Terms of Reference for the Tender process should be first shared with the Bank team. There is a possibility of encountering historical remains during soil surveys. In case of encounter such historical remains, the requirements of Article 4.8 Cultural Heritage of the ESMF document will be implemented, which aims that protection of cultural heritage from the adverse impacts of project activities and support its preservation, addressing cultural heritage as an integral aspect of sustainable development. Detailed soil survey mapping, laboratory analyses and production of numerical detailed soil maps will be implemented in line with the ESMF¹⁰, Stakeholder Engagement Plan¹¹ (SEP), Resettlement Framework (RF)¹² and Labor Management Procedures (LMP)¹³ requirements as stated in the documents being prepared. All ESF documents will be binding documents for the contractors and consultants carrying out the tasks.

Establishment of the National Soil Archive Facility: It is envisaged to establish a National Soil Archive in order to store, archive and preserve the soil samples and related field records collected under this sub-component. This archive will be established in a place to be allocated by the Support Services Department under MoAF and will comply with international standards. The National Soil Archive will play an important role and will be a resource for future soil research, analysis and monitoring. A consulting company will be recruited to conduct surveys and prepare feasibility studies as well as preparation of detailed designs and bidding documents including technical specifications/Bill of Quantities (BoQs) and preparation of Detailed Designs.

⁷ <https://kms.kaysis.gov.tr/Home/Goster/25081>

⁸ <https://intweb.tse.org.tr/Standard/Standard/Standard.aspx?081118051115108051104119110104055047105102120088111043113104073086052076115043053050104108053102>

⁹ <https://www.tarimorman.gov.tr/ABDGM/Belgeler/TUCSAP%20Proje%20Sayfas%C4%B1/%C4%B0ngilizce/RF-24-Jan-2022.pdf>

¹⁰ <https://www.tarimorman.gov.tr/ABDGM/Belgeler/TUCSAP%20Proje%20Sayfas%C4%B1/%C4%B0ngilizce/ESMF.pdf>

¹¹ https://www.tarimorman.gov.tr/ABDGM/Belgeler/TUCSAP%20Proje%20Sayfas%C4%B1/%C4%B0ngilizce/SEP_24-Jan-2022.pdf

¹² Op.cit:10

¹³ https://www.tarimorman.gov.tr/ABDGM/Belgeler/TUCSAP%20Proje%20Sayfas%C4%B1/%C4%B0ngilizce/LMP_24Jan-2022.pdf

The national soil archive is planned to be built on the land belonging to the MoAF and no land acquisition will be required. As with any other investments under the project this will be subject to E&S screening/evaluation, before construction starts and measures considered as defined in the project's Resettlement Framework.

General OHS risks for construction works and proposed mitigation measures will be considered, as specified in Section 5.2.1 of the ESMF¹⁴ document. During the scoping work to be carried out during the implementation phase of the project, the ESMP Checklist/ESMP will be prepared for projects in the low-to-moderate/moderate risk category.

Construction for the National Soil Archive Facility will be implemented in accordance with the requirements of the ESMP or ESMP Checklist, SEP, RF, LMP, and Waste Management Plan, as incorporated in tender documents and specified in the technical proposals presented by the firms.

The execution of this activity will be done by consulting/contractor companies through tender procedures by the DSCLE. In the tender and control stages, cooperation will be made with the Support Services Department of MoAF (SSD):

Firstly, a consulting company will prepare the construction and detailed design project/s.

- SSD will help DSCLE with the preparation of Terms of Reference, including social and environmental requirements, for the selection of this company (tendering procedure).
- SSD will also help DSCLE during the approval process of the construction and detailed design project/s.

Secondly, a contractor company will construct the National Soil Archive Facility (NSAF).

- SSD will help DSCLE with the preparation of technical specifications, including social and environmental requirements, for the selection of this company (tendering procedure).
- SSD will also help DSCLE during construction process including control and supervision services.

Output 4. Improved classification of lands

Preparing Plans/Notes and Land Classification: The aim of this activity is to (a) maintain the protection of agricultural lands in rural areas, and (b) provide a land use planning based on the rational use of lands by considering the quality of the soil, the ability of the land and other land characteristics to secure sustainable agricultural production and ensure rural development.

With these plans, it is aimed to form the basis for national and regional planning, to provide data for other physical planning, and to provide a balance between agriculture and other land use forms. The ultimate goal in these plans is to protect agricultural lands and use them in accordance with their potential, thus creating alternative areas for the usage demands of other sectors.

By preparing these land use plans within the scope of the Soil Conservation and Land Use Law No. 5403, it is expected to achieve the following targets; (a) identification of unproductive lands unsuitable for agriculture, (b) determining the space and raw materials for industry, settlements and areas needed for other sectors by bringing the necessary infrastructure arrangements, (c) thus, creating alternatives suitable for non-agricultural uses, (d) supporting food security and rural development.

¹⁴ [Op.cit:11](#)

Land use planning works consisted of stages such as data acquisition, office works, field works and output/approval studies. These activities will be carried out by the consulting company/ies, which will be awarded contract/s by the DSCLE, in line with the Soil Conservation and Land Use Law Implementation Instruction¹⁵. Provincial Directorates of the Ministry will collaborate during the implementation of the work, particularly around control/supervision of the activities implemented by the Consultant/s. Necessary cooperation among teams will be assured in preparation of the relevant Terms of Reference defined by DSCLE of TRGM and provided to the relevant Procurement Specialist for the preparation of tender documents. Details of the activities to be performed are described below:

Data acquisition: At the first step, detailed soil survey data and data produced by other Departments within MoAF and other institutions (e.g., on pasture, forest, zoning plan, irrigation area, protected area, etc.) will be obtained during the land use plan studies. Data acquisition and office works will be carried out by the Consulting company in coordination with the TRGM personnel.

Office Works: By evaluating the data provided, the lands within the planning boundaries; to be divided into 3 main groups as agricultural areas, non-agricultural areas and out-of-scope areas.

- Agricultural lands will be classified in accordance with the provisions of Law No. 5403 by using the agricultural areas, detailed soil survey data and annual average precipitation data.
- Non-agricultural areas will consist of alternative areas designated for non-agricultural activities. While determining alternative areas in the planning area, first of all, areas that will preserve their agricultural character will be determined; Along with the class of the land, its agricultural potential and its position in integrity will also be taken into account.
- Areas out of scope will be separated as areas outside the scope of Law No. 5403 according to the data obtained from other institutions.

General and practical plan provisions will be determined in the plan explanation report for agricultural areas, non-agricultural areas and areas outside the scope. Plan, legend and plan explanation report will be produced in the 1/5.000 scale land use planning study.

Field control works: This consists of checking the suitability of the plan with the land and controlling the compliance of the plan notes with the implementation. On the other hand, it consists of the stages of carrying out the training/information activities to be given to the Provincial Directorates if needed. Field (control) works will be carried out with Provincial Directorates in coordination with the TRGM personnel.

Output/Approval: This stage consists of the following actions. At the first step 1/5.000 scale plan, plan explanation report and plan note containing general and implementation provisions will be prepared as a result of the 1/5.000 scaled land use plan studies. Then, the controlled plan and plan notes will be approved by the Minister of MoAF. And within the last step, approved plans are going to be shared with all investing public institutions, all institutions and organizations authorized to make zoning planning, universities and citizens in order to provide data as a basis for research projects, through the National Database.

Land use planning and preparation of plan notes will be implemented in line with SEP¹⁶. In this scope, stakeholders will be informed about outputs of land use planning. Obtained stakeholders' feedbacks will be taken into consideration.

¹⁵ [to be published.](#)

¹⁶ [Op.cit: 12](#)

Following the completion of the soil surveys (in Output 1), land use planning studies of the relevant groups will start. These plan notes will be stored in the national soil database/system (TAD Portal) and will be shared with other institutions and citizens in line with the data sharing policy to be created under Output 2.

Outputs 2 (Digital National Soil Profile Database) and Output 3 (Service and System Development)

Output 2 and 3 activities are closely integrated. To support their implementation, MoAF will work around strengthening the data issue and sharing policy. In order to clarify how internal and external integration will be completed to the systems currently available within the MoAF (such as TAD Portal - Agricultural Land Assessment System, TEHPortal - Soil Survey and Mapping System and TadLab - Agricultural Land Assessment Laboratory System), the data and information produced at the end of the project are collected within the MoAF and there is a need to develop and manage a 'data policy' in order to define and manage its accessibility to outside stakeholders, to ensure coordination, and to establish targets and strategies

The following works will be carried out under this activity. First of all, existing regulations will be reviewed. Then, the soil and land information system will be created by using the soil data and land information created by the project and adapting it to the existing database. Approval of the 'national soil data policy' developed to manage internal and inter-agency consultation meetings and data sharing.

Developing/reinforcing data policy will be provided in accordance with the provisions of the Presidential Decree on Geographic Information Systems, which regulates sharing protocols, data sharing and dissemination protocols between government agencies and third parties. (Number of Presidential Decree: 49 Date of Official Gazette Published - Number: 7/11/2019 - 30941)¹⁷

The responsibility for the execution of this decree rests with the Ministry of Environment, Urbanization and Climate Change. Data policy will be developed by working in coordination with the BTGM, which is the unit of MoAF related to digitalization systems, and the responsible ministry.

In line with these provisions, TRGM is responsible for the promotion, sharing and dissemination of soil data. International good practices will also be reviewed to help strengthen national policies regarding the accessibility of soil data.

The project will support the strengthening of national harmonized soil profile database. This database/system will be interoperable with other relevant information systems and platforms to help strengthen national land/soil policies, institutional structure and mechanisms.

The National Soil Information System will be linked to data systems managed by other organizations (General Directorate of State Hydraulic Works, General Directorate of Land Registry and Cadastre, Ministry of Environment, Urbanization and Climate Change, E-Government etc.).

As a result,

- Soil information system can be used for data access, sharing and use of public institutions and organizations.
- Access to land-related data will be facilitated by individual or public/private sector organizations seeking investment.

¹⁷ <https://www.resmigazete.gov.tr/eskiler/2019/11/20191107-9.pdf>

- By directing the investments of the relevant stakeholders more effectively, the costs in terms of investment and time will be reduced.
- Standardization, harmonization and integration of data sharing will be ensured.
- The quality of the data produced by MoAF about Soil and Land will be increased and followed up.

In this activity, the relevant activities will be held by the contractor company for organizing and reporting internal and inter-institutional consultation meetings, and cooperation will be realized with the BTGM and IACS Department of TRGM during the policy making phase.

The National Soil Profile Database (TAD Portal) will be developed and strengthened with the data to be obtained from the detailed soil survey studies to be conducted and the currently available data.

Obtained as a result of serial-based soil classification; (i) all morphological, physiographic and climatic features of the soil series, (ii) profile soil analysis results, (iii) profile photographs, (iv) the coordinates by which the profile is defined in the field, (v) each series, especially other similar parent material and other similar physiography. The differences from the series will be recorded in the database.

Coordinated data where the profile is defined in the field, will form the basis for the determination of soil monitoring sites (under output 3 below) and the establishment of national soil monitoring subsystems for the selected indicators (output 3).

For output 3 system and service development activities. The project will develop/optimize the Soil-land Spatial Data Infrastructure and National Soil & Land Information System.

Under this activity, it is envisaged that the following topics will be addressed; (i) National Soil monitoring sub-system for selected soil indicators; (ii) Dynamic Modelling/Mapping subsystem including the identification of soil monitoring sites for periodic monitoring of soil threats, thematic maps, nationally; and (iii) establishment of Decision Support System (DSS); (iv) Pilot Applications.

A functional land and soil information system will be developed for the purpose of storing and sharing for reducing information gaps in the nationwide soil and land information system; developing soil profile database, detailed soil maps and thematic maps to support land and soil monitoring in accordance with the national data sharing and use policy.

The National Soil and Land Information System will preferably be built using open-source spatial data content management systems and will be integrated with existing web services (TADportal, TEHPortal, TADlab etc.) and will enable it to gather data obtained from different sources across the country.

The National Land and Soil Information System will be connected to data systems managed by other organizations (General Directorate of Land Registry and Cadastre, Ministry of Environment, Urbanization and Climate Change, e-government etc.). It will also guide cross-sectoral studies and investments to be made and provide data for planning processes.

Software works for all sub-activities of this activity will be done by tender in cooperation with the BTGM and the IACS department of TRGM. (During implementation, if need be the technical specifications may be prepared by a Consulting company to be awarded a contract through tender procedure which requires a PP revision subject to the approval of the WB for the same). The control and supervision of all works within the scope of this activity will be carried out by the BTGM and IACS department of TRGM.

Identification of soil monitoring sites and establishment of national soil monitoring sub-system for selected indicators: The following studies are planned under this activity; (i) a methodology will be developed to identify soil monitoring sites to support the establishment of the National Soil Monitoring System, (ii) soil monitoring points will be determined in the existing area in order to update the data periodically for the indicators selected as a result of the current analysis, (iii) The system in accordance with the methodology will be established, (iv) selected soil indicators (heavy metal pollution, salinization, organic carbon etc.) will be monitored at the national level, (v) in addition, the selected monitoring indicators will be determined during project implementation, taking into account national needs and priorities. The outputs of the "National Soil Profile Database" activity will be used as a base.

Establishment of a dynamic modelling/mapping system: A dynamic modelling/mapping software (including mobile applications) system will be established in order to ensure the effective use of the data to be obtained by both the ministry units and the stakeholders. With the establishment of the Dynamic Modeling/Mapping System; (i) natural soil features (fertility maps, slope etc.), (ii) soil classification maps at different scales, (iii) soil threats (soil salinity, soil compaction, soil impermeability, soil organic matter reduction, etc.) maps will be produced.

Establishment of Decision Support System (DSS) The land use plans to be prepared include the agricultural areas to be protected and alternative areas suitable for non-agricultural uses. Alternative areas refer to areas that can be evaluated for non-agricultural uses.

Alternative areas identified will be shared with investor institutions and organizations in the plans to be prepared. By using the Decision Support System, stakeholders/beneficiaries will be easily directed to alternative areas and the existing agricultural lands will be protected.

Provincial and District municipalities, Metropolitan Municipalities, General Directorate of Highways and Regional Directorates, İlbank, Ministry of Environment, Urbanization and Climate Change, Ministry of Culture and Tourism, Ministry of Energy and Natural Resources, Organized Industry Regional Directorates will benefit from the Decision Support System.

Pilot Applications: Agricultural product suitability analysis will be carried out in the region to be selected, and with the method to be developed, a study will be realized to determine suitable agricultural products for the region with the data in the database. The outputs obtained at the end of this activity are foreseen to be used in the Agricultural Land Use Planning (TAKUP) studies planned to be carried out in the future.

Logistical & Organizational Services for workshops, seminars etc.: Within the scope of the Project, workshops and seminars will be organized. The organization, accommodation and transportation services of all events that will take place within the scope of workshops and seminars will be provided through organization and logistics company/ies. Consultation meetings will be organized with all stakeholders within the institution and between the institutions. In addition, brochures regarding the activities to be carried out will be printed and distributed.

Staff Training: It is envisaged that the practical trainings are to be provided. Personnel of the provincial and district directorates of agriculture will also be trained on soil surveys and land use plans.

Training on modelling, mapping, harmonization etc. to be also provided to the central and provincial staff of the MoAF. With these trainings, it is aimed to support the Project and increase productivity through the innovation and adoption of technology by the personnel. There are also awareness campaigns and dissemination activities.

Soil survey and mapping training, GIS training, land use planning training, training on the use of subsystems and, if needed, personnel language training will be provided within the scope of this activity.

Study visits related to land use planning and related issues will also be organized to see the best practices in the other countries.

Logistical & Organizational Services and Staff Training activities will be performed via multiple contracts. Technical specifications will be prepared in collaboration of the relevant Procurement Specialist/s and the DSCLE.

4.1.2 SC3.1 Strengthening Climate Resilience, Productivity, and Resource-use Efficiency in Horticultural Production

The main purpose of this Sub-component is to help ensure stable food supply and prevent price fluctuations by increasing the yield and quality in horticultural production. This sub-component will support ongoing public and private sector efforts to enhance protected agriculture in Turkey, via piloting of innovative clustering greenhouse approaches around direct uses of geothermal energy, to enhance the efficiency of protected agriculture and its role on climate resilience, while achieving efficiencies on energy /input use and improving soil health, generating important mitigation co-benefits. Greenhouse production can also support crop diversification for increased production of higher value and nutrient-rich vegetable products, contributing to improved nutrition outcomes.

Currently, largest public-private investments to expand this infrastructure are proposed, under the legal framework of the Specialized Industrial Zones Based on Agriculture (AGSOIZ). Sub-component 3.1 provides support to pilot a geothermal greenhouse business model based on a renewable energy resource to build basic infrastructure and mobilize private investors rapidly (for the construction of supra-infrastructure/greenhouses), while maintaining the advantages of a cluster.

The specific objectives of this sub-component can be listed as follows.

- Establish a successful model for clustered geothermal source greenhouse AGSOIZ,
- Establish modern greenhouses with advanced technology, geothermal heating and full automation, making possible all year around production, benefiting from geothermal energy by reducing the heating cost, which is one of the important cost items of greenhouses,
- Provide socio-economic contribution to the local people, creating employment, especially women's employment,
- In addition to the production of fresh vegetables and fruits, the establishment of industrial facilities will be encouraged for the processing,
- Meet the fresh vegetable and fruit needs of the province and region where the selected(es) AGSOIZ is located, providing added value to the country's economy with the export of surplus production
- Provide an investment environment with an infrastructure for domestic and foreign investors.

The implementation responsibility of this sub-component rests with the OTHBDB - TRGM. The direct beneficiary of the project is the Agricultural Specialized Organized Industrial Zones Legal Entity(es) to be selected.

Legal base: AGSOIZs are established in accordance with the OIZ Law No. 4562 and are private legal entities. The legal entity consists of the members of the enterprising committee, which is composed of the representatives of the institutions and organizations (Governorship, Municipalities, chambers

of commerce, industry chambers, cooperatives, unions, etc.) that participated in the establishment of AGSOIZ, and the Board of Directors, the Supervisory Board and the Regional Directorate of TDIOB, which are selected from the members of the enterprising committee. There are enough technical (control engineers) and administrative personnel in the AGSOIZ Regional Directorate and will be responsible for the administration and administration of AGSOIZ.

The activities under this sub-component are grouped under 3 main headings. These are studies; dissemination and outreach activities and infrastructure investments.

Within the scope of studies, the sub-component will fund consulting services for zone planning and geological surveys; studies and feasibility analyses of different investment models and investment needs; environmental and social impact assessments, and other studies needed to support the technical definition of the investments to be supported by the project. At a more national level, the project will finance the studies needed for the preparation of the national geothermal strategy for agricultural production, including the further identification of potential suitable areas for geothermal greenhouse cultivation.

Sub-component funds will fund the construction of “basic” infrastructure. Civil infrastructure and construction works such as: geothermal heating power production facility; energy transmission line and network backup power line as well as an electrical substation; potable and utility water reservoirs and pumping stations; telecommunication center; foundation drainage connection line; gas supply, local roads; etc.). The activities/facilities associated with these investments such as construction of new greenhouses, sorting, packaging and processing of fruits and vegetables will be financed by the private sector with its own resources.

Dissemination and outreach activities will be implemented to target partnerships with the private sector to motivate subsequent investments in greenhouse infrastructure and training for geothermal greenhouse cultivation will also be provided. Funding sources for sub-component activities are shown in Table 10.

Table 10. Funding sources for sub-component activities

Activities	Funding Source
Technical studies	TUCSAP
Construction works for AGSOIZ “basic” Infrastructure investments Geothermal drillings, geothermal pipeline and heating plant, Energy transmission line and network, An electrical substation as well as a backup power line, Potable and utility water tanks and pumping stations, Sewer and rainwater line, Telecommunication centre, Basic drainage connection network, Natural gas supply, Local roads, etc.	TUCSAP
Broad awareness activities	TUCSAP
Non-Consulting Services	TUCSAP
Construction of new greenhouses	Private sector
Construction of facilities for sorting, packaging and processing fruits and vegetables	Private sector
Wastewater treatment plant,	AGSOIZ to be selected
Facility to collect rainwater,	AGSOIZ to be selected

Biogas production plan and renewable energy production (GPP, SPP and WPP)	AGSOIZ to be selected
Organic fertilizer production plant	AGSOIZ to be selected

Source: ESMF

Steps in the implementation of the component:

(a) Selection of AGSOIZ to be supported.

Sub-component activities will be focalized activities in one or two AGSOIZ sites, depending on costs assessments, selected from among the 14 sites where pre-feasibility or preparatory studies have already been undertaken by MoAF. In order to heat the greenhouses to be established in the areas where the project will be implemented, it is necessary to have a geothermal source with sufficient flow and temperature. For this reason, it will be ensured that site selection studies are carried out in the areas to be determined, geological and geotechnical ground survey studies are carried out, the selection of the appropriate AGSOIZ site will be finalized, and the environmental and social impact assessment (ESIA) of the site will be made. Criteria for the selection of the AGSOIZ to initiate project activities include:

- Pre-technical and environmental pre-feasibility (preliminary studies by MoAF have determined the potential technical viability of the investment for geothermal exploration).
- Characteristics of the location side in terms of:
 - o Availability of a geothermal resource at a flow rate and temperature sufficient for the entire site
 - o The site preferably belongs to the public and there is no private property subject to expropriation
 - o Connectivity to distribution centres
 - o The site is in coherence with provincial/district land use planning directives/regulations (it is not competing with other pressing land uses)
 - o Pre-feasibility assessments suggest there will not be high environmental and social negative impacts
 - o There are no projects and savings belonging to any public institution in the site,
 - o No on-site production facility,
 - o Being in a direction and distance that will not prevent the growth of the province/district where the site is located
 - o Experience in clustering and greenhouses in the region
- The Site is registered in the name of the legal entity of AGSOIZ.
- Availability of sufficient workforce (mainly female and youth workforce) in the region and of generating important social impacts.
- The high logistics facilities of the project area for export.
- The interest of domestic and foreign investors regarding the investment to be made.
- Demonstrated interest and co-financing opportunities provided by local governments, private sector interest (Chamber of Commerce, Commodity Exchange, individual investors, among others.
- Having a strong entrepreneurial structure to carry out the project.
- Solid and operational AGSOIZs governance structures.

The assessment of the above criteria for the related AGSOIZ(s) to be evaluated will be done by experts within TRGM (complemented with external experts if deemed necessary) Selection procedures will be carried out by TRGM, based on pre-feasibility documents as other sources of information available. A brief/guidance for the evaluation of the AGSOIZ will be prepared by TRGM and submitted to the Bank for no-objection prior to initiation the process. As a result of the evaluation, the most appropriate

(one or two) AGSOIZ that meet all of the above-mentioned selection criteria will be submitted to Deputy Minister for approval. After the approval process, selection results will be announced by MoAF to related parties. Detailed evaluation process and results will be sent to the Bank for no-objection.

(b) Preparation of Subproject Investment and Assessment of Eligibility:

The selected AGSOIZ(s) will be invited to prepare a Subproject Investment Plan (Subproject) (or so called here "pre-feasibility report). The Subproject Investment Plan (pre-feasibility report), is a document describing the the purpose and scope of the proposed investment, expected benefits/impacts, investment costs by participating parties, etc. The Proposed Subproject Investment/pre-feasibility report will include the totality of the project investments (see Table 10), including detailed sources of financing from TUCSAP, AGSOI and by the private sector. It will also detail the investment strategies to put in place for the building of associated infrastructure to be built by the AGSOIZ and by the private sector. The Subproject Investment Plan (pre-feasibility report) template is presented in Annex 6 of this POM.

The preparation of this Subproject/pre-feasibility report follows the "Investment Program Preparation Guide" prepared by the Strategy and Budget Office, and it is required for any Subproject to be included in the Investment Program.

The TUCSAP will finance the total Subproject investment costs (taking into consideration investment budget ceiling for infrastructure investment under SC3.1 and the typology of investments supported by TUCSAP SC3.1, as presented in Table 10). The project will not finance the following type of activities/Subprojects (Exclusion List, see also Annex 7) listed as follows:

- High environmental and social risk Subprojects
- Establishment of new AGSOIZ (AGSOIZ that did not complete site selection and expropriation processes)
- Subprojects which did not complete the national EIA process
- Subprojects that will have adverse impacts on known and protected cultural heritage
- Subprojects that will have adverse impacts on critical and natural habitats and/or have significant impacts in terms of biodiversity
- Subprojects that will trigger World Bank's Safeguard Policy OP/BP 7.50 – Projects on International Waterways
- Subprojects that will trigger World Bank's Safeguard Policy OP/BP 7.60 – Projects in Disputed Areas
- Activities involving child and forced labor
- Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardous chemicals include gasoline, kerosene, and other petroleum products

If the Subproject Investment Plan (pre-feasibility report) contains any missing information, TRGM requests the AGSOIZ(s) to complement the missing information. When the selected AGSOIZ(s) completes the missing information, the application will be completed, and the Subproject proposal will be regarded as ready for eligibility analysis, based on the exclusion criteria above. If the Subproject complies with the eligibility criteria a detailed evaluation will follow, as described below.

Pre-feasibility report: As per the "Investment Program Preparation Guide" prepared by the Strategy and Budget Office, the pre-feasibility report (an Annex to the Guide) is required for any Subproject to be included in the Investment Program. All relevant public institutions and organizations shall prepare

a pre-feasibility report that they request to be included in the investment program and submit this report to the SBO. In this project, the selected AGSOIZs shall prepare pre-feasibility report in accordance with their projects and submit them to PIU. If the pre-feasibility report is not found satisfactory by the PIU, the AGSOIZ will be asked to revise it.

the PIU (TRGM) will review the Subproject application submitted by the AGSOIZ(s), the review will consider the “minimum” eligibility criteria described above, as well as technical and budget considerations among other criteria-), If the Subproject proposal is considered incomplete. When the AGSOIZ(s) complete the missing information, the Subproject proposal will be completed and will be regarded as ready for full evaluation by TRGM-PIU.

If additional information is required during the evaluation of the application, the AGSOIZs will submit this information upon request of TRGM -PIU.

If the Subproject proposal is deemed ineligible for failure to meet the basic eligibility criteria after the evaluation, the PIU will reject the application and inform the AGSOIZ accordingly. After that, the PIU will inform the World Bank if the Subproject application is accepted as eligible and will to continue the subsequent steps or if rejected.

If the AGSOIZ’s Subproject proposal is deemed eligible, the PIU will start the detail evaluation of the AGSOIZ and start the environmental and social screening simultaneously.

(c) Detailed review of Subproject Proposal (pre-feasibility) and preparation and evaluation of feasibility report.

All relevant public institutions and organizations shall prepare a pre-feasibility report that they request to be included in the investment program and submit this report to the SBO. As indicated above, in this project, the selected AGSOIZs shall prepare a Subproject Investment (pre-feasibility report) in accordance with guidance provided in Annex 6, and submits it to TRGM-PIU. If the pre-feasibility report is not found satisfactory by the PIU, the AGSOIZ will be asked to revise it. If the revision of the pre-feasibility report is not done in a satisfactory manner, the report will not be proposed to the SBO as a Sub-Project Investment. Guidance for the review/evaluation of the pre-feasibility report will be prepared by TRGM-PIU and submitted to the Bank for no-objection. The PIU will review/evaluate the pre-feasibility report and, if the report has any missing part/section/information or wrong data or fails to meet the World Bank standards and requirements, the AGSOIZ will revise the pre-feasibility report or get support from a consultant/consulting firm with its own resources.

- If an AGSOIZ demonstrate lack of technical and/or financial capacity for revising the pre-feasibility report, the PIU may hire consultants or a consulting company with Sub-component 3.1. funds to assist the AGSOIZ in preparing the pre-feasibility report or any additional required documents.
- During the review of the pre-feasibility report, if TRGM-PIU requires technical support or expertise, it may get such assistance or expertise from staff within the MoAF or through external consultant/consulting firm to be hired under this Sub-component. The additional technical reports to be prepared by these experts and/or firms will be submitted to the World Bank team, together with the pre-feasibility report.

After the selection of the Subproject to be financed under the Project, the pre-feasibility reports as well as the environmental and social screening documents (see below) and additional technical reports (if any) will be sent to the World Bank for No-Objection and to the Strategy and Budget Office (SBO) for approval, by the PIU through the PCU. During the preparation of TUCSAP project, a total

investment of US\$30M for the sub-component has already been included in SBO’s Annual Investment Plan, the proposed procedure will provide further details on side selection and Subproject scope to SBO for the specific approval of Subproject investments under this sub-component.

(e) Environmental and social screening

Environmental and social screening process is indicated in Section 8.3: Environmental and Social Aspects, of this POM. If the World Bank rejects the screening documents, the PIU will conclude the process by rejecting the proposed Sub-Project.

(f) Preparing Detailed Feasibility Studies and E&S Documents

Before the signing of the Subproject Agreement;

- i) the proposed Subproject should be included in the National Investment Program and
- ii) a detailed feasibility report and Environmental and Social (E&S) instruments shall be prepared, approved by the PIU and sent for a No-Objection decision to the World Bank.

The terms of reference for the preparation of E&S instruments are to be sent to the Bank for non-objection.

After the selection of AGSOIZ and inclusion to National Investment Programme, detailed feasibility reports and E&S instruments will be prepared and submitted to PIU by selected AGSOIZ. In addition, national EIA and ESIA will be prepared. If selected AGSOIZ has not enough technical capacity to prepare detailed feasibility report and E&S instruments, it can receive external consultancy service under TUCSAP. Final evaluation of the above mentioned reports will be carried out and approved by PIU. These reports will be sent to the World Bank for No-objection by PIU through PCU.

(g) Subproject agreement

Financing of Subproject Investments through loans will be provided to the selected AGSOIZ according to the AGSOIZ regulation issued based on the OIZ Law No. 4562. TRGM will make written Draft Subproject agreement (Annex 8) and Draft Sub-financing agreement (Annex 9) with the AGSOIZ to be selected Within the scope of sub-component3.1, the implementation issues including the financial management, Subproject and Financing Agreement to be signed between the TRGM and the selected AGSOIZ, the Organized Industrial Zones Law No. 4562 and the Official Gazette dated 25 November 2017 and numbered 30251. It will be carried out in accordance with the AGSOIZ Regulation published in the OIZ/ AGSOIZ Implementation Regulation and the relevant Presidency decrees. Information and access links regarding the aforementioned legislation are given in Table 11.

Table 11. Related legislation and access links

Legislation Name	Number and date of the Official Gazette	Access Link
Organized Industrial Zones Law No. 4562	24021-15.04.2000	https://www.resmigazete.gov.tr/arsiv/24021.pdf
Agricultural Specialized Organized Industrial Zones regulation	30251 25.11.2017	https://www.resmigazete.gov.tr/eskiler/2009/11/20091110-8.htm

Organized Zones Regulation	Industrial Implementation	30674- 02.02.2019	https://www.resmigazete.gov.tr/eskiler/2019/02/20190202-6.htm
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The Subproject Agreement will be signed between MoAF and AGSOIZ and enter into force, after approval of the Subproject by MoAF, based on final full feasibility assessment and complete E&S instruments, and No-Objection has been granted by the World Bank. A draft of the Subproject Agreement is included in Annex 8. This document will be reviewed by legal entities within MoAF and submitted for no-objection of the Bank, before proceeding with signature by the parties.

Through the Subproject agreement, the beneficiary/selected AGSOIZ commits to provide, promptly as needed, the resources required for the purpose of the Subproject (Table 10).

Through the Subproject Agreement, the AGSOIZ commits to comply with the World Bank procurement, financial management regulations, and the Project's Environmental and Social Management Framework, SEP, RF, LMP and ESCP.

Through the Subproject Agreement, the AGSOIZ commits that the Subproject is carried out in accordance with the Bank's Anti-Corruption Guidelines ("Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants") dated October 15, 2006 and revised in January, 2011 and July 1, 2016.

Through the Subproject Agreement, the amount of finance for the approved Subproject will be based on an estimate of the Subproject costs. The Subproject agreement will recognize that the exact amount of the financing for the Subproject (i.e., Sub-Financing) will be determined after the bidding processes (in line with the Bank's Procurement Regulations) for the Subproject activities, and that the actual amount will be agreed on in a subsidiary Sub-financing agreement (Draft version is in Annex 9).

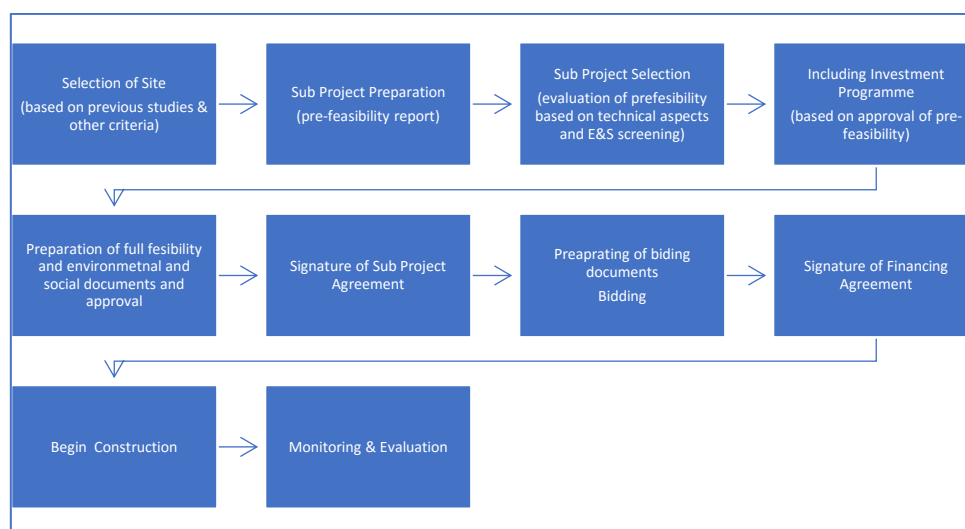
Each Subproject Agreement will require the AGSOIZ to design, construct, carry out and operate the facilities financed under the Project with due diligence and efficiency and in accordance with sound technical, financial and managerial standards.

In addition, the Subproject Agreement will require the selected AGSOIZ to implement and operate the Subproject with due regard to applicable social impact, ecological, environmental and pollution control standards and in accordance with the environmental and social instruments (ESMF, LMP, SEP, RF) and ESCP commitments prepared by MoAF for the Project. The Subproject Agreement will also stipulate that goods, works, non-consulting services and consulting services financed out of the proceeds of the Sub-Financing be used exclusively in the carrying out of the Subproject activities. The selected AGSOIZ will also be obligated to take out and maintain insurance as per standard business practices, which, at a minimum, will insure against hazards incident to the acquisition, transportation and delivery of goods financed by the Sub-financing to the place of use or installation.

MoAF will reserve the right to inspect, by itself or jointly with representatives of the World Bank, if the Bank wishes so, all goods, sites, works, plants, and construction works undertaken in each Subproject, and to request information from the AGSOIZ. Should an AGSOIZ fails to perform any of its obligations under the Subproject Agreement, the MoAF will have the right to suspend or terminate the use of the proceeds of the Sub-Financing.

Following the conclusion of the bidding processes for the Subproject activities, MoAF will enter into a Sub-Financing Agreement with the selected AGSOIZ (see section (i) below). The process regarding the agreements signed between the AGSOIZ and the MoAF is shown in Figure 4.

Figure 4. Subproject Implementation Process



(h) Bidding documents and tender

After the Bank provides No-Objection for site-specific E&S documents, AGSOIZ will take the next step which is preparing of design and bidding documents of the Subproject.

If selected AGSOIZ has not technical and financial sufficient capacity for preparing design, bidding and other related all tender documents, PIU will hire consultants or consultant company for “design review and supervision services”. PIU and World Bank will frame this work together according to the capacity of selected AGSOIZ, type and scope of the Subproject.

Site specific E&S documents will be integrated to the bidding documents as an annex and the awarded contractor will be responsible for the implementation of the all related E&S documents.

PIU will review design, bidding and other related all tender documents, and approve them. Technical TRGM and external experts can be invited by the PIU to evaluate the technical design/scope of the proposal as well as budget implications. The PIU through the PCU send them to the Bank for its comments/no-objection depending on the procurement method thresholds for Bank’s post/prior review of the procurement transactions.

The respective tender/s of the Subproject will be done according to the World Bank rules and procedures.

(i) Revising and assessment of procurement plans

The Procurement Plan/s of the Subproject (s) under this subcomponent will be prepared and submitted through STEP by PIU after approval of bidding and tender documents. If the procurement plan needs to be revised, PIU Procurement Unit coordinates with the selected AGSOIZ.

PIU Procurement Unit provides its comments on the revised Procurement Plan/s and transmits the revised Procurement Plan to other units of PIU for their review/comments/concurrence.

PIU Procurement Unit reviews the inputs/comments on the revised Procurement Plan/s provided by different units of the PIU and submits the Revised Procurement Plan, including inter alia the

new/cancelled/modified activity to the World Bank as mutually agreed by the different units of the PIU.

The World Bank reviews the revised Procurement Plan/s submitted as Final Drafts and gives “no objection”/may recommend some further work for its resubmission. The submission shall be completed when the activity is cleared through Bank’s STEP system. No procurement activity shall be initiated before it is cleared through STEP.

Revised Procurement Plans are created and take effect as they are cleared through STEP.

(j) Sub-Financing Agreement

As above mentioned, following the bidding processes in line with the Bank’s Procurement Regulations for the Subproject activities, the actual amount will be agreed on in a subsidiary Sub-financing agreement. The Sub-financing agreement will specify the principal amount and terms and conditions of the Sub-financing such as interest rate, maturity, grace period, participation share and such terms which will be determined in line with The Procedures and Principles Regarding the Use and Credit of Organized Industrial Zones and Small Industries Sites Projects.

- The estimated cost determined in the Subproject agreement is replaced with the final cost determined in the tender.
- According to the repayment terms of the loan, the interest rate will be 3% annually and the repayment period will be a total of 13 years with a 3-year grace period.

The interest on the loans starts from the date the loan is transferred to the bank account of the relevant AGSOIZ, continues until the date when the entire on-lent amount is fully redeemed, and is collected together with the expenditure tax on December 31 of each year and in any case with the principal installment in the repayment period. Loan installments shall be collected from the AGSOIZ on due date. If any of the installments are not paid on their due date or the provisions of the Sub-Financing agreement are not complied with, maturity is accelerated and the entire debt becomes due, in line with articles 12 and 14 of the Procedures and Principles Regarding the Use and Credit of Organized Industrial Zones and Small Industries Sites Projects (Entered into force on 01.01.2021). After this date, the entire debt balance shall be collected. If the installments are not paid on the due date, a delay interest shall be applied to the amount of unpaid installments at the interest rate applied by the Central Bank of the Republic of Turkey for advance payments. Default interest rate shall be applied, once maturity is accelerated and the entire debt becomes due and the execution proceedings are underway.

After signing, a copy of the Sub-Financing agreement is sent to the intermediary public bank. The public bank performs banking transactions in accordance with the agreement. A draft of the Sub-Financing Agreement is included in Annex 9. This document will be reviewed by legal entities within MoAF and submitted for no-objection of the Bank, before proceeding with signature by the parties

(k) Monitoring & Evaluation

TRGM-PIU in close coordination with the M&E Specialists of the PCU will collect data for results indicators from the AGSOIZ Subproject implementation, monitor the quality of data collection and evaluate results.

In addition, TRGM-PIU will monitor all the activities of the selected AGSOIZ under sub-component in terms of administrative, technical and financial aspects with quarterly, semi-annual and annual reports prepared by AGSOIZ. Moreover, PIU will supervise the works performed in the project area and evaluate the reports through the TRGM technical staff or/and external consultancy service to be

received. These reports will include information such as the progress of the project, whether the planned activities were completed, whether the activities were carried out within the specified time frame, and whether the budget was spent as planned. Reports will provide guidance on whether any adjustments are needed in the management or execution of assigned tasks and whether the work plan needs to be revised based on unexpected and prevailing circumstances.

Consequently, TRGM-PIU will review and verify the data and evaluate results prior to including these results in reports to be sent to the Bank. The progress on meeting the indicators and the evaluation of the data will be provided in the Project reports, submitted bi-annually by MoAF. PIU and AGSOIZ are responsible to submit the relevant data to follow the project indicators.

4.1.3 SC3.2: Promoting the Adoption of CSA Technologies/Practices

The sub-component will expand the use of emerging innovative/disruptive CSA and energy-efficient technologies on small and medium farms to enhance the productivity and profitability of farm operations, increase input-efficiencies and reduce carbon footprint and other negative environmental impacts. This sub-component will primarily focus on awareness creation, dissemination and providing co-funding opportunities for digitally enabled technologies and solutions (smart and precision agriculture), with a focus on focusing on farmer organizations, small and medium-sized agricultural enterprises. The scope of this sub-component activities includes two main instruments.

These are:

- A. Strengthening the enabling environment for smart technologies through awareness creation, capacity development and institutional strengthening.
- B. Matching grant program to cost share the adoption of digital climate smart technologies for the target groups

The target groups of this sub-component consist of farmer organizations (cooperatives, unions, chambers of agriculture, etc.), agricultural companies working with contracted farmers, and private service providers targeting small and medium-sized farmers.

Under this sub-component, initially the adoption of the following digitally-enabled technologies, will be supported:

- Decision Support Systems for Smart Farming Practices
- Aided Steering Systems
- Variable Rate Input Applications

Additional digital technologies could be incorporated, following the detailed assessments as part of the start-up activities, as well as during later stages of project implementation.

Activities related to this Sub-component will begin with the "Rapid Assessment of the Current Situation Regarding Smart Agricultural Technologies". The usage status of smart technologies in the country, the needs and demands of the target group and the current technology supply opportunities will be clearly revealed through this assessment. A Grant Manual will be prepared in the first half of 2023 based on this assessment. The matching grant program activities will start in pilot provinces in the second half of 2023. It is foreseen that 5-7 provinces will be selected as pilot provinces to represent the whole country. However, final decision regarding these provinces will be made based on the findings of the rapid assessment as well, considering crop patterns, climate and geographical conditions, production systems, agricultural infrastructure and production strategies of these provinces, and when possible, evidence of excessive use of inputs and need for improved efficiencies. In these pilot provinces, calls for application for the matching grant program will be launched in a

limited number and subjects. The matching grant program will be implemented in the pilot provinces for 2 years and the Grant Manual may be updated in line with the experiences gained during the implementation period. During these first two years, awareness creation and training material for different stakeholder groups will be developed and tested and a network of trainers and multipliers be established.

After 2 years, the matching grant program and complementary activities will be extended to the entire country.

This sub-component will be implemented by the Agricultural Technologies and Mechanization Department under TRGM. Field activities will be implemented with the participation and support of 81 Provincial Directorates of MoAF. Agricultural Equipment and Machinery Test Center Directorate (TAMTEST) will also join the implementation for Capacity Enhancement of Smart Technology Hub. The support and participation of other departments of MoAF will be facilitated, when necessary, in the realization of the related activities of the sub-component.

A. Strengthening the enabling environment for smart technologies

Within the framework of strengthening the enabling environment for smart technologies through awareness creation, capacity development and institutional strengthening, nine activities are planned as follows:

- i. Rapid Assessment of the Current Status of the Smart Agriculture Technologies
- ii. Awareness Raising and Stakeholder Engagement Studies
- iii. Smart Agriculture Technology Fairs and Field Demonstrations
- iv. Smart Agriculture Trainings and Technical Support
- v. Technical Assistance to Cooperatives
- vi. Smart Agricultural Technologies Platform
- vii. Capacity improvement of TAMTEST
- viii. On-site monitoring of MG beneficiaries
- ix. Evaluation and knowledge sharing

All the activities including (i-ix) logistical and organizational services and/or consultancy services will be carried out by Service Provider/s/Consultant/s together with the TRGM-PIU staff (including MoAF staff from the provinces) based on the Terms of Reference, job descriptions and technical specifications prepared by the TRGM-PIU. Service Provider/s/Consultant/s will be selected and awarded contracts based on the agreed tender procedures.

Awareness raising activities, trainings, field demonstrations, fairs and stakeholder engagement activities will be carried out in line with the TUCSAP Project's Communication Strategy and Stakeholder Engagement Plan (see Section 8.7). Besides, subproject specific SEPs will be also prepared in compliance with/based on TUCSAP-SEP.

Rapid assessment will provide insight on different target needs which will help to design specific communication strategies to improve outreach and awareness raising; and those findings will be shared with the PCU and Communication Specialist.

During the studies, TRGM-PIU will cooperate with the relevant units of the Ministry and other stakeholders if deemed necessary.

i. Rapid Assessment of the Current Status of the Smart Agriculture Technologies:

Within the scope of this sub-component, which aims to adopt and disseminate precision smart agriculture technologies to farmer organizations and small-medium-sized agricultural enterprises, studies will be carried out in order to assess the current status of smart agriculture technologies in the whole country are listed below, respectively. The purpose of the assessment is to inform detailed design of the sub-component activities, including selection of pilot areas, eligible technologies, and other supporting activities, as well as eligibility and selection criteria, implementation and monitoring arrangements for the matching grants.

- a) Preliminary Study for the Determination of the Data to be Obtained from the Field: Aim of this sub-activity is to determine what data is needed in order to assess the current state of smart agriculture technologies in our country. These will include but not limited to;
- Current use of smart agriculture technologies (Which technologies are used),
 - List of smart agricultural technologies which are imported and manufactured in our country (Supplier companies and products)
 - Assessment of the business models, strategies and capacities of technology providers to generate demand for those technologies and provide training and after-sales services
 - Criteria for selecting the pilot provinces in addition to the criteria set by the PIU, if needed.
 - Evaluation of which technologies are suitable for which regions, taking into account of agricultural structure and ecological conditions (land structure and slope (topography), dry/irrigated agriculture situation, average number and size of parcels per enterprise, climatic conditions, crop patterns, etc.).
 - Assessment of the level of awareness and interest of the target groups within the scope of the project (agricultural companies working with contract farmers, farmer organizations -cooperatives, unions, chambers of agriculture, etc.- and private service providers targeting small and medium-sized farmers) in various categories (survey study).
 - Experiences of the Ministry, and other local actors (Chambers of Agriculture, Municipalities, Cooperatives, agribusiness companies, etc.) with relevant digital technologies for small and medium-sized farmers.
 - Understanding of the suitability of different smart and digital technologies for different user groups and their perceived impacts on a range of production variables, gender, the roles of women in the target groups (number, age) in agricultural production (adoption of new technologies, roles in value chains), etc.
 - Data needs and data collection methodologies (mix of qualitative and quantitative data)
- b) Preparation of the data collection instruments and implementation strategy: this includes a sampling strategy, identification of key respondents, sample size, implementation modalities, etc. Forms will be prepared to facilitate the collection of data which will be obtained from the field and will be used in the baseline study. If deemed necessary during this study, the support of subject matter experts will be sought.
- c) Obtaining Data from the Field: Baseline data set and other data which PIU would request per region/province/district will be used to assess the approach of farmers to smart agriculture technologies in our country and to determine the content and pilot provinces of matching grant program.

- d) Determination of Manufactured/Imported Smart Agricultural Technologies: A detailed report will be prepared on which of the Smart Agricultural Technologies are manufactured and which are imported. The report will also include the R&D infrastructure on smart agricultural technologies. The report will also collect data on the strategies implemented by technology providers to generate demand for those technologies and their capacity to provide training and after sales services, and models for technology integration into production schemes.
- e) Smart Agricultural Technology Workshops: The results of the rapid assessment will be evaluated in the workshops organized with the participation of the stakeholders, universities, provincial directorates of the Ministry, sector representatives, relevant public institutions and organizations and farmer representatives. It is planned to organize the workshops in the Aegean, Mediterranean, Central Anatolia and Thrace regions. It might be extended to the other regions if PIU deems necessary.
- f) Preparation of the Current Situation Report: A comprehensive report will be prepared in which all the data and information gathered, and the results of the workshops are included and evaluated in order to determine the current status of Smart Agriculture technologies. This report will guide the other activities under this sub-component and provide guidance for the identification of the smart technologies which will be supported under the grant programs as well as the pilot provinces where activities would be initiated.

ii. Awareness Raising and Stakeholder Engagement Activities

Smart technologies are still new technologies for the majority of farmers as well as for many extension officers at the local level. For this reason, awareness raising and improvement of existing knowledge level will be the initial steps for adopting sensitive and smart agriculture technologies/applications.

The results obtained from the rapid assessment of the current situation carried out under (i) will form the basis of awareness studies. Basic promotional and training materials will be prepared in the form of audio-visual presentations (Billboard, commercial film, etc.), short videos (social media), summary notes (mail, mobile phone) and e-learning material. These materials will be prepared for farmers, cooperatives, unions, agribusiness companies as well as local agronomists and other provincial/district staff. It will provide guidance on the main types of supported smart technologies and the problems each technology can help to solve, the expected benefits and costs, as well as the technical and other requirements for their use. This is an ongoing process which will improve as the project progresses and more experiences and insight are gained.

The following activities will be carried out in the determined pilot provinces (which will be determined on the basis of the rapid assessment). Thus, smart agricultural technologies will be adopted by the target groups faster. In this context:

- a) Field days will be organized, and printed publications (leaflets, brochures, etc.) explaining agricultural practices related to the technology to be introduced and promotions will be distributed.
- b) In the first years of the project, farmer meetings will be held in the provinces which will be determined based on the results of the rapid assessment, with the participation of successful farmers using Smart Agricultural Technologies.
- c) In pilot provinces, extension staff will organize Smart Agricultural Technologies Basic Training Courses for farmers (Small, medium and large enterprises, farmer organizations (cooperatives, unions, chambers of agriculture, etc.), agricultural companies working with contracted farmers, private service providers).

- d) Study visits will be organized for farmers and extension personnel including the extension personnel in the pilot provinces (domestic and abroad).
- e) Specific trainings and seminars will be organized by smart agricultural technology implementing companies for the farmers to determine the technological solutions suitable for their special conditions.
- f) Continuing awareness activities for the adoption of agricultural technologies from the start of the project will play an important role in the dissemination of smart technologies. The information obtained from the implementation will also be shared through a special website (smart agriculture platform) that will be designed and managed by the project.

In the first years of the project, after all the awareness and stakeholder participation activities and workshops to be held in the pilot provinces; based on the experiences gained and outputs obtained, studies will be carried out to expand these activities to all provinces.

iii. Smart Agriculture Technology Fairs and Field Demonstrations

Demonstrations will be conducted in selected pilot provinces for some technologies that are complex (such as variable rate applications), less well-known (such as permanent lane systems and section control) and with limited use.

Demonstration activities will be carried out within the scope of provinces and subjects determined after the completion of the Rapid Assessment of the Current Situation studies. PIU may extend these activities to the other provinces when and if needed.

To this end, firstly, the extension staff and the personnel who will take part in the demonstration studies in the pilot provinces will be determined at the central and provincial level. Studies will be carried out to include the relevant demonstration activities in the annual programs of the Provincial Directorates in the pilot provinces. The technical aspects of each demonstration will be detailed in the execution instructions, including the safety instructions to ensure the safe continuation and conclusion of the demonstration. Established demonstrations will be supported by appropriately prepared printed and visual publications. For this purpose, it will be ensured that the materials, which introduce the innovation and the work, giving descriptive information about the established demonstration, will be delivered to the farmers. Location of demonstrations (on the field/in the MoAF facilities) may differ based on the circumstances. Cooperation with the technology providers will be encouraged.

Field days will be organized in order to demonstrate the precision smart agriculture practices to the farmers and to provide explanatory information on the subject, and the results of the demonstration will be delivered to more farmers with this method.

In each of the target provinces, participation in domestic and international agriculture fairs where project beneficiaries and local agricultural experts can directly experience different technologies and communicate with technology providers will be ensured, and participation of technology companies will be encouraged. Promotional presentations, display and distribution of information materials will be made, and various sessions will be held at the fairs. Smart agriculture technology providers will be invited to present their technological solutions in agriculture, and technology users will be invited to share their experiences. During the studies, information about other activities and matching grant program will also be presented. Similarly, these technology fairs and demonstration activities will be included as part of the communication strategy for the grant program.

iv. Smart Agriculture Trainings and Technical Support:

A training curriculum will be prepared for the training activities to be organized on smart agriculture practices. The training will start with the training of personnel (especially extension staff) working at the central and in provinces. Thus, the institutional capacity in smart agriculture will be strengthened.

In order to increase the knowledge of the personnel on constantly changing and developing technologies, repetitive trainings will be organized at regular intervals to the relevant personnel working in the Central Organization and Provincial Directorates of the Ministry. Regarding participation in these trainings, gender equality will be one of the main considerations.

After the training of the Ministry personnel, trainings will be organized for the agricultural experts and technical staff of the cooperatives, unions and agricultural enterprises, as well as small, medium and large agricultural enterprises, that participate in the grant program.

Besides, special trainings will be provided to project beneficiaries by technology suppliers during and after the installation of precision smart agriculture technologies, for those beneficiaries that participate in the program. In addition, technology providers will provide technical support and guidance for the period specified in the grant agreement, at least 2 years after installation. Technology providers will also provide specific training for extension officers and local technical staff supporting beneficiaries.

Under this activity, a series of e-learning materials will be developed on the technical and other requirements for the use of the main types of precision smart agriculture technologies.

Within the scope of these trainings, training sessions will be organized at the existing agricultural fairs where different technology providers will be invited to exhibit and present their technologies to the relevant audiences.

In addition, to increase the accessibility of the prepared material, they will be displayed in communication tools such as social media, web site and television.

While some of the works under this activity will be carried out by companies that are suppliers in grant applications, the remaining training activities, logistics and organizational services will be carried out with the support of Service Provider/s/Consultant/s depending on the nature of the assignment and MoAF staff.

v. Technical Assistance to Cooperatives:

The technical support will differ for the different types of cooperatives. The first step will be to examine the database of cooperatives in the Department of Organization under TRGM and to make an inventory of cooperatives according to their types.

Meetings will be planned with regional unions and central unions of each type of cooperatives. During the meetings, a general framework will be drawn, especially the level of use of smart agricultural technologies, awareness level and technical support needs, and on-site needs analyses will be made by organizing field visits for the cooperatives that will set an example in the mentioned issues.

Technical support needs will be evaluated and classified within the scope of smart agriculture technologies. This information will guide the consultancy companies that will provide technical support. The data and information obtained from the Rapid Assessment of the Current Situation study will also be taken into account in designing this activity.

vi. Smart Agricultural Technologies Platform

An online platform will be prepared, which will play an important role in strengthening the institutional capacity of the MoAF on smart precision agriculture. This website will be the focal point of smart agriculture in the country.

This platform will facilitate interaction and data sharing between farmers, agricultural service providers, other actors and the Ministry. User experiences, developments, studies and evaluations on precision smart agriculture technologies will also be accessible via the platform. In this way, awareness will be raised and farmers' access to the relevant information will be easier.

This website will contain information and documents, educational materials, posters, brochures, photos and videos, news and announcements on smart precision agriculture. Besides, announcements of the grant programs to be implemented under this sub-component and the follow-up of all kinds of works and transactions related to the grant programs will be executed through a module on this website. In addition, a module that will be used in the follow-up of the MoAF's work and operations regarding the experiments and inspections of smart agricultural technology tools and other mechanization tools will also be developed within the scope of this activity.

There will be a user-controlled login interface in order to keep the website up-to-date by contractor staff and/or Ministry officials. By means of this interface, website can be easily updated without IT programming knowledge.

As a first step, content of the website will be identified by PIU by taking into account of opinions of the relevant stakeholders.

The menu structure and page designs of the website will be prepared. In addition, the necessary interfaces and reporting pages will be designed for each module, and diagrams related to the connections within the site will be prepared.

The website, modules and necessary databases, whose preparations have been completed, will be coded and activated within one year from the start of the project.

This activity will be carried out with the support and guidance of the BTGM under MoAF (including preparation of job descriptions and/or technical specifications). It will be ensured that the BTGM participates in the design and coding stages, so that the changes, maintenance and updates that may be required in the future will be made without any problems.

While the management and updating of the website will be carried out with the support of the contractor company in the first years of the project, it will be carried out by a unit authorized within the TRGM in the following years.

vii. Capacity improvement of TAMTEST

Within the scope of this sub-component, the studies to be carried out for the structures expected to be in a smart agriculture technology center in order to test and develop the technologies developed as a result of R&D projects as well as the technologies manufactured and imported in Türkiye are given below:

- a. *Determining the Current Smart Agricultural Technology Capacity of the Agricultural Tools and Machinery Test Center (TAMTEST):* The Current Situation and Need Analysis will be prepared to assess the technical infrastructure of the TAMTEST, which carries out its activities within the MoAF.

TAMTEST is an organization accredited and approved by TÜRKAK and is the only representative of OECD in the Middle East. With the authorization of the Ministry of Industry and Technology, it also performs tractor and trailer type approvals, tests of agricultural machinery and technologies.

Currently, some tests of the technologies related to manual steering system, automatic steering system, etc which can be shown as examples of smart agriculture technologies are carried out under TAMTEST.

There is a need to improve the infrastructure of the TAMTEST Center in areas such as IoT devices (sensors, cameras, etc), accuracy of cloud- and AI based decision support systems, transfer, development and management of agricultural technologies as well as the data analysis and data storage and processing, and in development of environmentally friendly agricultural activity algorithms (artificial intelligence). For this purpose, a needs analysis will be conducted by a working group. If deemed necessary, subject matter experts from the relevant public, private sector and universities will be recruited in this working group.

PIU and the project team of TAMTEST will collaborate under this activity.

- b. *Receiving Theoretical and Practical Trainings by Visiting the Test Centers in the World as a Reference for TAMTEST Center:* It is planned that TAMTEST will be a competent test center in smart agriculture technologies in Türkiye. Therefore, institutions and organizations such as research institutes, test centers, universities that can be taken as examples in the world will be determined and technical visits will be organized to these reference institutions and organizations. In some of these visits, theoretical and practical trainings will also be provided by the reference institutions based on the programmes that were agreed beforehand.

TAMTEST center will establish relations with national and international organizations on smart agriculture technologies, follow the developments, and conduct joint tests, R&D and training activities.

These works will be implemented in the first phase of this activity and will be carried out by the PIU and TAMTEST center with the support of the Companies awarded contracts under the sub-component. The cost of these activities will be covered from the budget allocated for smart agriculture training activities.

- c. *Ensuring the Installation of Booth-Device-Systems at TAMTEST for Tests Performed in Reference Laboratories within the Scope of Smart Agricultural Technologies:* In order to carry out tests of the equipment, hardware and software used in smart agriculture within TAMTEST center, with the contributions of trainings and experience transfer from the relevant stakeholders (previously determined reference organizations), infrastructure will be established by purchasing stands, equipment, systems and other necessary materials. In addition, purchases will be made for the development of the necessary areas such as the office and meeting room of the relevant center (design of training classes, creation of a database, etc.). This center, to be designed as a "Smart Agricultural Technology Center" in the future,

will also carry out the tests and R&D trials of the new agricultural technologies developed, as well as the training of trainers on technology transfer and technology use.

Within the scope of these studies, the establishment of the institutional data management information system, which is mandatory in terms of accreditation in the tests and training activities carried out within TAMTEST, and which ensures traceability, continuity and accessibility will be ensured. The module that will meet these needs to be developed under the Smart Agricultural Technologies Platform and to be made available to the personnel of the TAMTEST. Through this system, personnel will be able to access procedures, up-to-date instructions and forms faster, and thus the system will be dynamic and controlled.

These works will be carried out by the PIU, project team in TAMTEST and the contractor company company/supplier. Technical specifications for the procurement of goods to be prepared by the PIU and TAMTEST Team, and support will be received from subject matter experts if necessary.

- d. *Launching the Smart Agricultural Technology Center (TAMTEST)*: The activities of TAMTEST, which will gain a new institutional structure by increasing its capacity, will be introduced to the stakeholders of the agricultural sector, to relevant institutions and to farmers via a workshop to be organized. The details of this workshop will be determined by the PIU and TAMTEST team. The cost of this activity will be covered under the Awareness Raising, Basic Training and Stakeholder Engagement budget.

viii. On-site monitoring of Matching Grant program beneficiaries:

The most important goal of the sub-component 3.2 is to ensure the dissemination of smart agriculture technologies, especially among small and medium-sized farmers, through the grant programs to be implemented. With this on-site monitoring study, the satisfaction of the beneficiaries and their adoption of technologies will be measured.

This activity will be carried out to monitor the grant beneficiaries on-site and evaluate their approaches to technology (whether they have adopted it, whether they will continue to use it), whether the desired impact has been created on the target groups, and whether the program can be expanded and replicated in other regions. It will also provide feedback to project managers and decision makers on whether the work continues in accordance with its target.

The studies will be carried out together with the PCU Monitoring and Evaluation specialist and within the scope of the General Monitoring and Evaluation Plan.

For the measurement, below steps will be followed:

- a) *Determination of On-Site Monitoring Criteria for Grant Beneficiaries*: On-site monitoring criteria of grant beneficiaries will be determined by the PIU and the Individual Consultants recruited and/or the Consultant Company as relevant. Through these criteria (questions), it will be analyzed whether the beneficiaries benefitted from the technologies which they got by means of matching grants (decrease in production inputs such as seeds, fertilizers, pesticides, water, energy and labour, increase in efficiency and / or quality) and whether they will continue to use the technology.
- b) *Development of Onsite Monitoring Forms of Grant Beneficiaries*: In order to evaluate the satisfaction/dissatisfaction of the grant beneficiaries regarding the technologies they request;

detailed monitoring forms will be prepared by PIU and the respective Individual Consultants and the Consulting Company for (a) decision support systems for smart agriculture applications, (b) aided steering systems, (c) variable rate input applications (d) technologies compatible with other up-to-date digital solutions (to be determined according to the results of the rapid assessment and applications). These forms may differ on a regional basis (crop, agricultural structure, climate, topography, etc.), as well as for different target groups and different technologies.

- c) *Establishment of Monitoring Units*: Grant Monitoring Units will be established at the central level under PIU and within the Provincial Directorates for on-site monitoring of grant beneficiaries. The monitoring commission to be established within the body of the Provincial Directorates will be supported by the Contractor Company for monitoring activities. In order for the monitoring activities to be carried out efficiently and effectively, personnel from the provincial and district directorates may be assigned if necessary.
- d) *Informative Meetings for Provincial Monitoring Units*: Informative meetings regarding on-site monitoring will be organized by the PIU and the respective Service Providers and the Consultant/s for members of the Provincial Grant Monitoring Units.
- e) *Annual Evaluation Meetings*: Annual meetings will be organized during which the data obtained from the field visits are evaluated in order to determine the suitability and effectiveness of the grants provided to farmer organizations and small-medium enterprises under the matching grant programs. Manufacturers, producers, extension staff, subject matter experts, academicians will be invited to these meetings. During the meetings, experiences, difficulties, problems and deficiencies will be shared, and the Grant Manual may be revised in order to improve the future programs. The respective Service Providers and the Consultant/s awarded contract/s under this sub-component will organize those meetings.
- f) *Preparation of Monitoring Reports*: The final monitoring report will be prepared by the PIU and the contractor company after the data is collected on-site monitoring activities and the findings are discussed at the annual evaluation meeting.

ix. Evaluation and Knowledge Sharing

Similar to the “on-site monitoring of the grant program beneficiaries” activity; effectiveness, efficiency and sustainability of this sub-component will be monitored and evaluated in compliance with the TUCSAP’s M&E Framework.

To this end, performance indicators will be identified by PIU (with the assistance of the respective Consultants recruited to that end) for each category (Category A. Training and Implementation Support and Category B. Support for Smart Technology Adoption), including indicators for each sub-component activity which are explained in this section.

Afterwards, the respective Consultant/s will proceed according to the PIU’s demands. Firstly, it will collect the performance data from the field and evaluate them per region, province, product, technology used. PIU may request different categories for evaluation. Then, a general evaluation will be made. Evaluation reports will be prepared and presented during the stakeholder meetings. Finally, Evaluation Report will be published and shared with the relevant institutions.

B. Support for Smart Technology Adoption (Provision of grant support)

The matching grant program for the adoption of smart agricultural technologies investments will be one of the applications that stand out in terms of budget size among the support applications.

Determining the parameters of the matching grant program and developing the project according to the needs, especially for the following years, will play an important role in achieving the success in providing the expected benefit in practice, and the development of the program will largely depend on the effectiveness and success of other support applications.

For this reason, the matching grant program will be implemented as a pilot in a limited number of provinces during the first two years in order to test the suitability of the model and application procedures to be determined, to ensure that the grant parameters such as grant rate, grant type, grant upper limit are clarified, and to better determine the demands and guide the industry as it needs.

These limited provinces will have a variety that will reflect the agricultural production diversity, especially the product pattern, climate and geographical conditions, the production systems applied, agricultural infrastructure opportunities and production strategies. During the first year, eligible provinces for initial implementation will be determined as described below;

- For aided steering systems and variable rate agricultural input applications, the focus will be on the main commercial areas producing grain and other arable crops such as wheat, barley, rye, sunflower, corn, soybean, cotton, sugar beet, alfalfa. Target Provinces will mainly be selected among the provinces in Central Anatolia, Aegean and Thrace regions, where important commercial production of these products is carried out.
- For other smart technologies that are not connected with field mechanization equipment (such as soil sensors, climate stations, insect traps, etc.), provinces will be selected from the same provinces for arable crops. For fruit and vegetables or other orchards (e.g., olives, grapes etc.), target provinces will be selected primarily from provinces in the Mediterranean or Aegean region.
- For the sake of easy access for beneficiaries and farmers to the demonstrations and fairs to be organized in the target provinces within the scope of the project, a limited number of prominent provinces in other regions may also be included in the pilot application.

The grant programs will be carried out jointly by two separate implementation units at the central and provincial level. The Central Grant Management Unit, which will manage the program, to be established under the TRGM - Department of Agricultural Technologies and Mechanization, and the Provincial Grant Management Units will be established, preferably under the Rural Development Section of the Provincial Agriculture and Forestry Directorates, in the provinces where the grant program will be implemented.

The investments to be supported within the scope of the grant program will be decided after the preliminary studies and workshops and will be clarified during the preparation of the Grant Manual. It will not be ignored that the diversification of investments depending on the results of the pilot application may be possible and the necessary arrangements can be made in technical matters accordingly.

Target groups of the matching grants program are:

- Farmer organizations (cooperatives, unions, chambers of agriculture etc.)
- Agricultural companies working with contracted farmers
- Private service providers targeting small and medium scale farmers

Basically, grant applications of these groups will be evaluated according to:

- Technology use tendency and level, administrative capacity, financial situation, relations with public institutions, consistency between the objectives and activities for farmers' organizations
- Founding purpose, current activity areas, financial and administrative structure for agricultural companies working with contracted farmers
- Services they provide, financial situations, fulfilment of commitments for private service providers, and ability to service farmers and using digital technologies for such purposes;
- Number of farmers benefiting from the technologies and expected impact on farmers (reduced/improved use of inputs such as fertilizer, pesticides, water and fuel; improved resilience against climate change; increased productivity and resource use efficiency, etc)

However, PIU will follow the below steps in order to further refine the target groups and eligibility criteria:

A large-scale market research will be carried out in the first stage as a part of the rapid assessment to examine the sector for Smart Agricultural Technologies throughout the country. Investments that can benefit from grants, supply opportunities and costs in domestic and foreign market conditions will be evaluated. Based on those results, investments under the grant program will be clarified.

While the market research continues, the Grant Manuals of other Grant Programs which are successfully carried out by the TRGM will be subject to administrative and technical review, and the relevant implementation units will be consulted with. The results of this exercise will be reflected in the Grant Manual preparations.

Due to its decisive role in the success of the program, it will be vital to determine the target groups correctly. For this purpose, attention will be paid to the sensitive determination of the target groups among the potential grant beneficiaries based on important factors such as technological level used during the production and processing processes, tendency to use technology, level of financing need, and the effect of serving the Ministry's strategies and policies.

Interviews will be held with potential grant beneficiaries, who will represent the target group and will be determined under the guidance of Provincial Directorates of Agriculture and Forestry, and it will be ensured that other grant program parameters are analyzed and clarified within the scope of the problems experienced in the field and solution proposals. These meetings will be very important guiding activities for the clarification of eligibility criteria, grant type, grant amount and grant rate to be determined within the scope of the program.

Purchasing procedures and alternative methods regarding the purchase of goods and services by the grant beneficiaries will be re-evaluated based on the current experience. At a later stage, it will be necessary to decide which arrangements between the beneficiary and the supplier would be the appropriate procurement method, such as implementation contracts, obtaining a certain number of bids or holding individual tenders.

Project ranking criteria must have been clarified at the call announcement stage in order to determine the grant beneficiaries among the projects submitted by the grant beneficiaries, depending on the budget allocation.

The most important point to be taken as a basis in these definitions will be that a significant part of the ranking criteria serves the MoAF strategies and policies for the use, dissemination and monitoring

of the efficiency of smart agricultural technologies under the title of agricultural technologies and mechanization.

A draft version of the Grant Manual will be prepared within 3 months after effectiveness. It will be refined after the Rapid Assessment Study and will be sent to the World Bank for approval. It will be ensured that the guide is complete and applicable in terms of administrative and technical aspects. In particular, necessary administrative measures will be taken to ensure that all processes for the implementation of the grant program are verifiable, questionable and traceable at all stages.

Preparations for grant applications will be completed in the second half of 2023, and in the first two years matching grant program will be implemented in pilot provinces. It is foreseen that the calls for grants will be twice a year. Final decision and implementation schedule will be clarified by the PIU.

E&S screening of the grant investments is detailed in the E&S documents and will be detailed in the Grant Manual.

4.1.4 SC3.3: Reducing Animal Production Pressures on Water Pollution and GHG Emissions

This sub-component's activities will be carried out by the TRGM Department of Protection of Agricultural Environment and Natural Resources (DAENRP).

The aim of this sub-component is to protect the environment and contribute to agricultural sustainability by reducing the negative effects of agricultural activities, especially animal husbandry, on soil and water resources and the environment. Investments under this sub-component will complement ongoing efforts by MoAF to improve livestock productivity (for example, efforts around pasture reclamation and management, as well as, for the modernization of barns and on farm management of manure), with additional support focusing on innovative technology-based and collective approaches to support pollution management, enhance sustainability, and strengthen climate mitigation.

The activities will be carried out in Kiraz, Ödemiş and Tire districts of İzmir province in the Küçük Menderes River Basin and Akhisar, Salihli, Saruhanlı and Turgutlu districts of Manisa province in the Gediz Basin. This implementation area is under significant pressure in terms of widespread pollution sources due to intensive animal husbandry. It has been determined that agricultural activities (especially animal husbandry) in Küçük Menderes and Gediz Basins, where plant production is intensively carried out in addition to animal husbandry, have extremely negative effects on soil-water resources and the environment.

In order for livestock enterprises not to cause nitrate pollution in waters and environmental problems, a sustainable animal waste and plant waste management network will be established in a way that will serve as a regional example in the axis of rural development. On the other hand, activities related to waste storage facilities, processing facilities, transport/application equipment and machinery and management of this network will be carried out under this sub-component.

The following activities will be performed within the scope of the sub-component:

The activities will focus on piloting and promoting innovative approaches for manure management including: establishment of an information network of relevant stakeholders to share experience and knowledge around manure management; training of professionals to support preparation of manure management plans; piloting incentives/approaches for sustainable manure management.

The sub-component will finance construction works and equipment, equipment for transportation and application of biofertilizer in fields, training and demonstrations and specialized consulting services.

The project activities under this sub-component can be grouped into four categories. At the first step, knowledge/capacity building and awareness activities will be carried out in the project implementation area. Then, an integrated biogas production and manure processing facility will be established in the project region. Procurement of agricultural pollution control and inspection vehicles and establishment of machinery equipment park will be third and fourth categories.

a) Knowledge/Capacity Building and Awareness Activities

Sample implementation areas will be established in the Küçük Menderes and Gediz Basins where the animal manure management, manure management, modern irrigation, land management and other protective/preventive agricultural practices included in the Code of Good Agricultural Practices will be displayed together. In the field of implementation, awareness and capacities of public personnel, farmers and farmer organizations¹⁸, especially women and young farmers, on environmentally sensitive agricultural activities will be increased, and agricultural application techniques and application methods aimed at protecting soil and water resources will be expanded.

Baseline activities: preparation Needs Analysis Report: At the beginning of the project, a study will be carried out to clearly determine the subcomponent implementation area and to assess the actual implementation in the basin(s) of manure management and nitrate pollution-reduction management approaches to identify success and challenges and identify opportunities to address those challenges. Specific needs in relation to the compliance with nitrate directives and overall, on the implementation of practices to reduce pollution from agriculture will be analyzed. Detailed terms of reference for will be prepared. Furthermore, based on the initial need assessment study, consulting firms will be hired to help further detail the scope of the activities to be undertaken in relation to awareness creation, knowledge dissemination, training and pilot demonstrations, as follows:

- Activities Regarding “Code of Good Agricultural Practices (GAP)” Demonstrations,
- Activities Regarding Capacity and Awareness Development,
- Activities Regarding Procurement of Agricultural Pollution Control and Inspection Vehicle,
- Activities Regarding Establishment of Manure Application and Climate-Friendly Machinery and Equipment Park.

In this context, baseline activities will be tendered through service procurement from the consultancy firm, and the Terms of Reference for the said consultancy service procurement will be prepared by DAENRP. If deemed necessary, individual consultant service may be obtained in the preparation of this technical specification. DAENRP will be responsible for the works and transactions related to these activities.

The selection of these consultancies firm will be carried out by DAENRP. In line with the technical specifications prepared by the consultancy firm regarding the activities to be carried out under this sub-component, the respective procurements will be carried out by DAENRP. In this context, services will be procured from consultancy firms.

¹⁸ Cattle Breeders' Association, Sheep-Goat Breeders' Association, Dairy Producers' Association, Red Meat Producers' Association, Chambers of Agriculture, Development Cooperatives, Irrigation Associations, etc.

Baseline activities will be implemented in close coordination with provincial and district directorates of MoAF and under the management of DAENRP. In order to ensure that the work and transactions are carried out in a healthy manner, provincial staff will be appointed as field officers.

The subcomponent will support the implementation of activities around:

“Code of Good Agricultural Practices (GAP)” Demonstrations: At the local level, sample practices will be realized to direct the regional farmers to environmentally and climate-friendly agricultural practices within the balance of protecting and using natural resources. With the sample practices to be realized within the scope of the sub-component, the increase in yield to be obtained from agricultural activities will also contribute to the socio-economy of the local farmers. It will be a sample site for technical visits for the representatives of national and international public and private institutions and organizations, technical delegations and for our farmers with the purpose of promotion and information.

Accordingly, study visits will be made in order to see examples of best practices in the country and abroad during the determination of the implementation areas.

In this scope, many activities in the “Code of GAP” (such as the followings) will be demonstrated, examples are provided below, but the range and emphasis in the practices to focalize demonstrations will be based on the need assessment:

- In scope of the land and pasture management, following issues will be demonstrated: terracing works on sloping areas, creation of vegetated protection bands with local plants in the parcels bordering water resources, planting of waterways in areas with water flow in rainy periods, protective tillage techniques, growing cover crops in winter, stubble management studies, crop rotation program, mulching process and land use planning and management.
- In scope of the manuring management, , following issues will be demonstrated: design and construction of animal manure warehouses, maturation of animal manures, preparation of manuring plans by determining the nutrient contents with soil and manure analysis, taking into account the application periods of manure, and carrying out manure application studies with a safe management.
- In scope of the irrigation management, following issues will be demonstrated: establishment of irrigation systems suitable for the lands where sample practices will be made and making and implementing irrigation plans suitable for the product.
- In scope of the pesticide use management, following issues will be demonstrated: determination of pesticides suitable for the crops and lands on which sample practices will be realized, and their use, creation and use of a waste collection network consisting of containers placed in suitable places for collecting pesticide packaging waste. This activity will be coordinated with TAGEM (SC3.4).
- In scope of the conservative agricultural practices, following issues will be demonstrated: soil and water conservation, organic manure use, biological control, good seed use. The activities to be carried out in scope of the pilot site practices/demonstrations and the task of supervising the practices will be carried out by the staff of headquarter and relevant provincial/district directorates of MoAF. Individual consultancy services can also be used for the planning and implementation of demonstration activities. It is expected that the activities for the GAP Code at the pilot site will be carried out in 2023, 2024, 2025 and 2026. Activities for capacity building, awareness raising and field days in the sample implementation area will continue throughout the project.

Capacity and Awareness Building: DAENRP is responsible for the execution of this activity. Activities will be carried out in close cooperation with provincial/district directorates of MoAF.

In this context, an information network open to all stakeholders will be established where project activities and results will be monitored and disseminated. Consultancy services will be procured to support the *Establishment of Stakeholder Information Network* activity (Activity # CS.TRGM.CS3.3-02).

The trainings to be organized within the scope of *Developing the Capacity of Professionals* will be for the relevant staff from the basins and other provincial and district directorates where the implementations are made.

Trainings will be prepared and implemented as a result of the *Training Needs Analysis* to be realized within the scope of the survey studies to be carried out with potential participants. Service procurement/s will be made for the organizational needs of the trainings. During the trainings, individual consultancy services can be procured for the provision of trainers. The technical specifications of these service procurements will be prepared by DAENRP, and the programs and practices of training and awareness activities will be managed by same Department.

Awareness activities are aimed at farmers (including women and young farmers), farmer organizations, NGOs and other relevant stakeholders, and will include “Awareness Raising of Farmers and Public”, “Development of Tools to Support Technical Experts and Farmers” and “Field Days”. In this context, following activities will be carried out: field day activities and farmer trainings in the pilot sites and farmer meetings to be organized in the settlements, designing, preparing and distributing of awareness materials such as posters, brochures, booklets, video films, etc.

Service procurement/s will be made for all organizational needs of awareness activities. The technical specifications of these service procurements will be prepared by DAENRP.

Collaboration will be made with provincial and district directorates for determining those who will participate in awareness activities and for the implementation of awareness activities. In addition, cooperation can be made with the Education and Publication Department of MoAF on carrying out these studies.

Participation in awareness activities will also be provided by the leading farmers and farmer organizations from the project implementation basin and other provinces. Individual consultancy services can be purchased for the needs of trainers in awareness studies.

Capacity and Awareness activities will also be supported through external consultancies, such as for: the establishment of the Stakeholder Information Network (through consultancy service procurement and goods procurement); Support logistics and organizational needs for Professionals' Capacity Building (through service procurement),

Logistics and organizational needs for the Farmer and Public Awareness (through service procurement), developing tools to support technical experts and farmers (through individual consultancy service procurement and goods procurement), logistics and organizational needs for the field days (through service procurement).

b) Piloting incentives/models for effective controlling nitrate pollution

Under this heading the subcomponent activities will focus on the identification and piloting of incentives frameworks to address bottlenecks to address nitrate pollution, particularly with a focus on technologies around effective manure management in the basin(s). It is proposed to pilot an

“integrated investment infrastructure/facility integrating a) manure collection and transportation network, from production areas to the collection center; b) a manure storage facility for fertilizer production, c) biogas production; and d) infrastructure/treatments for proper disposal of waste.

To implement this integrated facility, consultant services will be recruited for: (i) the preparation of detailed business case (feasibility study) for the establishment of the integrated facility. The assessment will include the feasibility of using public or private entities as third parties for the management of the facility, and the incentives that could be generated to incentive these entities to participate in the pilot. The feasibility will look at cases of China and other regions that have implemented at scale manure management approaches by third party entities; (ii) based on the results of the feasibility assessment, the project will finance the construction of the integrated infrastructure and implementation of the pilot (based on the management arrangement identified in the feasibility assessment); (iii) a subsequent assessment of the implementation of the pilot and its potential for scalability to other regions of the country; and (iv) the preparation of a guidance document on the opportunities to scale-up the approach and requirements for policy implementation.

The implementation of the pilot is based on a positive feasibility report outcome. If this pilot is not feasible, TRGM and the World Bank will discuss other potential strategies that can be piloted to promote technology adoption and contribute to the effective management of manure, particularly in areas with high production and low capacity for absorption as organic fertilizer.

Note: In this scope, at the designing phase of the pilot integrated facility, it was expected that the integrated facility, which was envisaged to be established, would be transferred to a third party and operated by it. However, the Ministry as indicated that it is possible to encounter some legal risks in the construction and operation of the said facility, and that there is no willingness from the district municipalities in the region to operate the facility. In addition, in the view of the Minister, it has been observed that agricultural producer organizations, which are other local stakeholders, do not have the capacity to operate the facility in a sustainable manner. For the stated reasons, the Ministry has evaluated that during the feasibility study phase, there will be a risk of finding a suitable stakeholder to operate the facility after its establishment and the effect to be achieved by the operation of this facility can also be achieved by different implementations for preventing pollution.

In this respect, the Ministry is proposing not to proceed with this specific pilot. Therefore, the activity regarding the pilot of a third party-managed integrated facility for manure management is going to be re-evaluated during the first six months of project implementation to reflect realities on the ground, particularly in relation to regulatory aspects. In this scope, other potential activities are to be discussed between World Bank and MoAF, considering the overall objectives of SC3.3.

c) Strengthening monitoring functions of MoAF

In order to strengthen MoAF’s monitoring, controlling and auditing functions around nitrate pollution arising from agricultural activities, it is proposed to procure 35 vehicles for provincial directorates of MoAF, which are disadvantageous in terms of environmental and economic development.

It is aimed that the suitable agricultural practices to be implemented in the selected pilot region will guide for the solutions to be brought to the same problems determined in other basins. These tools will contribute to the effective implementation of monitoring, data collection, control and audit activities needed for the dissemination of these practices.

The vehicles will be suitable for use in the field and will be used in field sampling for monitoring agricultural pollution and in field studies for the control of agricultural enterprises. They will be

allocated to the provincial directorates of the places determined by the prioritization to be made on the basis of criteria such as "width of the monitoring network, places where agricultural activities and agricultural pollution are intense".

The technical specification for the procurement of these vehicles will be prepared in cooperation with DAENRP.

In addition, services can be procured for the design of the superstructure that may be needed to make the vehicles suitable for the realization of activities. Procurements related to service procurement will also be made by DAENRP.

This activity will require a detailed assessment of feasibility and budgetary implications and would need to be discussed with the World Bank, as part of the overall adjustments to be made to the sub-component.

d) Establishment of Manure Application and Climate-Friendly Machinery and Equipment Park

Within the scope of this activity, it is envisaged that local stakeholders (chambers of agriculture and producer organizations) will be technically supported in order to establish manure application and climate-friendly machinery and equipment park and to lead their members. In this context, it is aimed to allocate the machinery and equipment to be purchased, to the local stakeholders in order to reduce the environmental problems caused by animal wastes and make this equipment available to the farmers, especially in the designated regions of Küçük Menderes and Gediz Basins and also stakeholders in other regions where animal husbandry is intense and having environmental problems originating from animal waste.

In this framework, it is planned to establish machinery parks for some provinces/districts consisting of solid and liquid manure distribution equipment for the application of manure produced in the project area to the agricultural areas in accordance with the Good Agricultural Practices Code, and consisting of stubble drills in order to disseminate reduced tillage practices that contribute to the preservation of soil organic matter.

A need analysis, detailed job description for the establishment of the machinery parks and preparation of technical specifications for equipment will be prepared by the consultant firm/firms. Consultant firm will cooperate with provincial/district directorates under the coordination of DAENRP on this issue. The quantity and technical characteristics of the machinery and equipment to be purchased and the provinces/districts that need machinery park will be determined following the preparation of detailed job description and needs analysis report.

In this context, machinery parks will be established in the districts to be determined in the relevant basins. The required number and variety of machinery and equipment will be purchased for these machinery parks. Procurement of goods and services for machinery and equipment purchases will be made by DAENRP.

Machinery and equipment purchased will be registered as inventory within the relevant Provincial Directorate. In other words, the machines and equipment will be owned by the Ministry.

Together with these provincial directorates, DAENRP will determine the chambers of agriculture and/or producer organizations (unions such as cattle breeders' associations, red meat producers' associations, etc. and/or farmer development cooperatives) that can use the equipment most effectively. Then, with a protocol, the machines and equipment will be allocated to the determined

local stakeholders. The said stakeholders will maintain the machinery and equipment by deploying them in areas that they will determine and approved by the relevant Provincial Directorate.

The local stakeholder will manage the said machinery park, and the responsibility for the maintenance and protection of the allocated machinery belongs to the stakeholder. The inspection of the machines will be carried out by the Provincial/District Directorate.

The aforementioned local stakeholders will make the machinery and equipment available to their members and other farmers within the framework of the principles to be determined by a short-term lease agreement. To which farmers the machines will be leased by the local stakeholder will be determined according to the technical justification to be made based on the condition of the farmer's land and farmer's needs. In this respect, suitable farmers will be determined by DAENRP with the guidance of the relevant Provincial/District Directorate.

Machinery and equipment will be operated by the relevant stakeholder in return for a minimum rental fee to be determined to cover equipment maintenance and repair and other operating expenses. Rental income from machinery and equipment operation will primarily be spent on maintenance and repair of machinery and equipment and operating expenses, and income and expenses will be recorded by the relevant stakeholder. The relevant stakeholder will submit an activity report on the use of machinery and equipment to the relevant Provincial Directorate quarterly (or with the periods to be determined during the implementation phase).

Note: This activity will require a detailed assessment of feasibility and budgetary implications and would need to be discussed with the World Bank, as part of the overall adjustments to be made to the sub-component.

4.2 Sub-components under GKGM

Two sub-components will be implemented by GKGM through a PIU which will be established in cooperation with Animal Health and Quarantine Department, Veterinary Health Products and Public Health Department and Administrative Affairs and Coordination Department.

4.2.1 SC2.1: Strengthening the Capacity of Animal Health Institutes

The purpose of this component is to increase the feasibility of regional diagnosis, analysis and research of infectious and epidemic diseases, including zoonoses, on a regional and international scale, primarily in Eastern and Southeastern Anatolia, Central Anatolia, Black Sea, Central Aegean and Aegean regions and Marmara Region. On the other hand, the capacity of the Veterinary Control Institutes, established on the basis of regional responsibilities, will be increased to find regional solutions and realize projects. In order to monitor the progress in achieving this purpose, indicators have been established at the Project Development Objective (PDO) level and intermediate level (see Chapter 7 – Monitoring & Evaluation Arrangements). In this framework, baseline situation will be laid down at the project start. Necessary data for identifying baseline is already accessible in the databases of the MoAF.

This sub-component mainly consists of laboratory setup (construction and renovation), procurement of equipment and materials, and training and consultancy services. The implementation will be carried out by 5 personnel at the central level through Animal Health and Quarantine Department, 2 personnel through Administrative Affairs and Coordination Department, and 28 personnel in 7 Veterinary Control Institutes. Those personnel will be responsible for the tender and other processes including preparation stages and inspection acceptance works.

Authorizing and assessment officers of GKGM will be responsible for the payments under the component. The procurement and inspection acceptance commissions will be established at the central of GKGM and also at the institutes level (Table 12).

Table 12. Procurement Commission, Inspection Acceptance Commission

Procurement Commission				
<i>Animal Health and Quarantine Department</i>	<i>Department of Administrative Affairs and Coordination</i>		<i>Institute Directorates</i>	
1 Full Member	1 Full Member		1 Full Member	
1 Substitute Member	1 Substitute Member		1 Substitute Member	
Inspection Acceptance Commission				
1 Full Member (Pendik VKEM)	1 Full Member (Konya VKEM)	1 Full Member (GKGM)	1 Full Member* (GKGM)	1 Full Member* (Department of Support Services)
1 Substitute Member (Samsun VKEM)	1 Substitute Member (Bornova VKEM)	1 Substitute Member (GKGM)	1 Substitute* (GKGM)	1 Substitute* (Department of Support Services)

* Will participate in works related to the renovation and construction processes of BSL-2 and BSL-3 Laboratories.

The sub-component will specifically support upgrades to the institutes' infrastructure to increase the biosafety level (BSL) of laboratory units, through investments in critical construction works, equipment, and biosecurity trainings, certification, as well as the establishment of a common laboratory information management system for the targeted institutes.

During project preparation MoAF identified a set of needs that translated in into 12 Veterinary laboratory bio-safety level units (BSL 2) newly constructed or renovated and certified/approved to operate and 7 Veterinary laboratory bio-safety level (BSL 3) units newly constructed or renovated and certified/approved to operate (see Table 13 and described below). The first activity of the project will be to validate these needs through a detailed assessment and analysis of upgrades required. This assessment will be undertaken by an external firm and will be also used for setting up the baseline for the project development indicator “*Increase in the analyses/tests for animal disease/zoonoses diagnostics processed in the upgraded/constructed laboratories (Percentage)*”.

BSL-2, BSL-3 Laboratory Modernization and Set-up Activities: Within the scope of the sub-component, one BSL-2 laboratory where bacterial agents will be studied, one BSL-2 laboratory where viral agents will be studied and one BSL-3 steel construction laboratory where viral and bacterial agents will be studied will be constructed in accordance with international standards in the land taken from Erzurum Provincial Directorate to be used by the Erzurum Veterinary Control Institute. In addition, necropsy and sample preparation units and laboratory devices will be procured.

BSL-3 steel construction laboratory will be built in which bacterial and viral agents can be studied in the campus lands of Adana, Konya, Elazig, Samsun and Pendik/Istanbul Veterinary Control Institute Directorates.

The existing BSL-3 laboratory at the Bornova/İzmir Veterinary Control Institute Directorate will be modernized through maintenance/repair and two BSL-2 steel construction laboratories for one viral and one bacterial will be constructed.

Two BSL-2 laboratories, one viral and one bacterial, will be modernized through maintenance/repair in the existing building of the Pendik/Istanbul Veterinary Control Institute Directorate.

A BSL-2 steel construction laboratory will be constructed in Adana Veterinary Control Institute where bacterial agents can be studied.

Two BSL-2 steel construction laboratories for one viral and one bacterial, will be constructed within the territory of Samsun Veterinary Control Institute Directorate.

A bacterial BSL-2 steel construction laboratory will be constructed within the territory of Konya Veterinary Control Institute Directorate.

Two BSL-2 laboratories, one viral and one bacterial, will be constructed with a steel construction structure within the territory of the Elazig Veterinary Control Institute Directorate.

Table 13. BSL-2, BSL-3 Laboratory Modernization and Set-up Activities

Institute Name	Location	V&B BSL-3 (Steel Structure)	V&B BSL-3 (Renovation)	Bacteria I BSL-2 (Steel Structure)	Bacterial BSL-2 (Renovation)	viral BSL-2 (Steel structure)	viral BSL-2 (Renovation)
Erzurum VKE	Campus Land	one	-	one	-	one	-
Adana VKE	Campus Land	one	-	one	-	-	-
Elazig VKE	Campus Land	one	-	one	-	one	-
Konya VKE	Campus Land	one	-	one	-	-	-
Samsun VKE	Campus Land	one	-	one	-	one	-
Bornova/İzmir VKE	Campus Land	-	one	one	-	one	-
Pendik/Istanbul VKE	Campus Land	one	-	-	one	-	one

BSL-2 and BSL-3 laboratories will be constructed in accordance with international standards determined by relevant international organizations.

The inspection and monitoring of the laboratories after set-up, after the respective accreditations are in place, will be carried out by the personnel of the GKGM who have been trained in this regard.

The national reference services of the institutes will be evaluated and redistributed on the basis of disease, and their norm positions and areas of responsibility will be redefined.

The specifications for the modernization and construction works of the laboratories will be prepared by consultant firms in line with the criteria to be determined by the relevant Institute Directorates, and tender procedures will be carried out by the PIU under GKGM.

Device – Equipment Procurement Activities: Devices and equipment will be procured for BSL-2 and BSL-3 laboratories in line with the requirements and demands of the institutes. Tools and equipment (such as necropsy instruments-equipment and sample containers) will be procured to improve the quality and quantity of the samples to be sent to the Institute Directorates by the veterinarians working in the 81 Provincial Directorates of MoAF and to prevent the risks arising from the collection, storage and transportation of the samples taken upon suspicion of disease.

Specifications for equipment and device requirements other than necropsy instrument-equipment and sample containers will be prepared by consultant firms in line with the criteria to be determined by the relevant Institute Directorates, and specifications for necropsy instrument-equipment and sample containers will be prepared by the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.

Training programs: Biosafety and biorisk trainings will be provided to approximately 100 personnel working in the institute directorates. In addition, approximately 5,000 personnel in charge of animal health services will be trained on necropsy, sampling and preparation, packaging and shipping in 81 Provincial Directorates in MoAF.

Sampling videos will be prepared for the most common and notifiable animal diseases in Türkiye, and broadcast will be through the MoAF’S sample submission system (Veterinary Laboratory Information System / VELBİS), so that accurate sampling information will always be accessible to the relevant personnel.

The specifications for the training programs will be prepared by consultant firms in line with the criteria to be determined by the relevant Institute Directorates, and tender procedures will be carried out by the PIU under GKGM.

Details of the main activities and responsible units are explained in Table 14. This list is not exhaustive with a more detailed subcomponent procurement plan (PP) already prepared for the subcomponent.

In accordance with the Environmental and Social Framework (Section 8 of this POM) and the Environmental and Social Commitment Plan, MoAF will ensure the the BSL2 and BSL3 veterinary laboratory units built/renovated by the project are accredited/certified and maintained their accredited and/or certified status as specified in the ESMF document. Procedures for accreditation and/or certification will be followed, with associated procurement processes. Energy efficiency and resilient aspects will be also considered in the planning and implementation of works and adquisition of equipment.

Table 14. Activities under SC.2.1

Activity Name	Reference Number	Description	Responsible Units and the Roles
Procurement of Consultancy Service for Project Drawings (Architectural, electrical, construction of institutes/laboratories...), Design Reviews, Preparation of Bidding Documents, Provision of	W.GKGM.CS2.1-01	In this activity, consultancy services for project drawings and other tasks mentioned in the activity name will be procured for the tender for the renovation of the existing BSL-3 and BSL-2	The Terms of Reference for the required Services will be prepared by the respective Department of GKGM and the relevant Institute Directorates.
	W.GKGM.CS2.1-02		
	W.GKGM.CS2.1-03		

Support during the Bidding Stage and Supervision Services		laboratories and the setting-up the new ones.	Tender procedures will be carried out by the PIU under GKGM.
Procurement of Consultancy service for the Determination of Laboratory and Device Requirements of Institutes and forming a requirement analysis	CS.GKGM.CS2.1-01 CS.GKGM.CS2.1-02 CS.GKGM.CS2.1-03	World standards will be examined in determining the Laboratory and Device Requirements of the Institutes and in the procurement of devices to be used in BSL-2 and BSL-3 laboratories.	The Terms of Reference for the required Services will be prepared by the GKGM PIU and the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.
Procurement of Consultancy Service for the detection of Location		The lands for the laboratory construction will be evaluated for the Veterinary Control Institute Directorates.	Necessary correspondence will be made by PIU under GKGM and the relevant Institute Directorate and on-site examination will be conducted at the Institute Directorates.
Procurement of Consultancy Services for Education and Training Materials	CS.GKGM.CS2.1-04a, b, c.....	Sampling videos will be prepared for the most common and notifiable animal diseases in Türkiye, and broadcast will be through the MoAF's sample submission system (VELBİS), so that accurate sampling information will always be accessible to the relevant personnel. At the same time, necropsy trainings will be organized for the employees of provincial and district agricultural directorates. Biosafety training service will be provided to the institute personnel through official/private institutions or organizations with domestic or foreign	The Terms of Reference for the Consultant Firms to prepare the Education and Training Materials will be prepared by the GKGM PIU and the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.

		<p>qualifications to be determined by the project implementation unit.</p> <p>Training and training materials will be procured for the above services.</p>	
Recruitment of Consultancy services	CS.GKGM.CS2.1-05 CS.GKGM.CS2.1-06a, b, c.....	Technical experts will be recruited for this activity.	Consultancy services will be provided in line with the criteria to be determined by PIU under GKGM.
Procurement of Non-Consulting Services for trainings on biosafety and necropsy, organization (employees of institute, provincial and district directorates)	NCS.GKGM.CS2.1-01a, b, c.....	<p>Sampling videos will be prepared for the most common and notifiable animal diseases in Türkiye, and broadcast will be through the MoAF's sample submission system (VELBİS), so that accurate sampling information will always be accessible to the relevant personnel. At the same time, necropsy trainings will be organized for the employees of provincial and district agricultural directorates.</p> <p>Biosafety training service will be provided to the institute personnel through official/private institutions or organizations with domestic or foreign qualifications to be determined by the project implementation unit.</p>	<p>The specifications will be prepared by consultant firms in line with the criteria to be determined by the PIU under GKGM and the relevant Institute Directorates.</p> <p>Tender procedures will be carried out by the PIU under GKGM.</p>

		Training will be provided to approximately 5000 personnel on necropsy, and thus accurate and appropriate samples will be sent to the institutes. Biosafety and biorisk trainings will be provided to approximately 100 personnel in the institute directorates.	
Procurement of equipment for necropsy, sampling, preparation and necropsy clothing	G.GKGM.CS2.1.-01a, b, c.....	Necropsy equipment and qualified clothing will be procured as one set for each provincial and district agriculture and forestry directorate.	The specifications will be prepared by the PIU under GKGM and the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.
Procurement of sampling containers	GKGM.CS2.1.-02 a, b,	Special containers will be procured for the transport of samples, at least 3 for each provincial and district directorate.	The specifications will be prepared by the PIU under GKGM and the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.
Design, Supply and Installation of BSL-2 and BSL-3 laboratories in various VCIs	W.GKGM.CS2.1-01 W.GKGM.CS2.1-02 W.GKGM.CS2.1-03	A total of 12 BSL-2 laboratories will be constructed with 10 new buildings and 2 renovations, and a total of 7 BSL-3 laboratories will be constructed with 6 new and 1 renovations.	The specifications will be prepared by consultant firms in line with the criteria to be determined by the relevant Institute Directorates. Tender procedures will be carried out by PIU under GKGM with support provided by the Consultant Firms.
Determination of technical specifications for laboratory equipment and procurement activities	CS.GKGM.CS2.1-01 CS.GKGM.CS2.1-02 CS.GKGM.CS2.1-03	Required tools, equipment and instruments will be procured for the BSL-2 and BSL-3 laboratories.	The specifications will be prepared by consultant firms in line with the criteria to be determined by the

			relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.
Evaluation and distribution of national reference services on the basis of illness, re-determination of norm staffing and areas of responsibility	CS.GKGM.CS2.1-05	For this activity, national reference services will be evaluated and redistributed on the basis of disease, and norm positions and areas of responsibility will be redetermined through the consultant firm. According to the standards of the World Organization for Animal Health (OIE), the evaluation of reference services and the supervision/monitoring of BSL-2/BSL-3 laboratories and ensuring their continuity at the end of the project will be conducted by the GKGM within the scope of the "Veterinary Diagnosis and Analysis Laboratories Regulation".	The specifications will be prepared by the GKGM PIU and the relevant Institute Directorates. Tender procedures will be carried out by the PIU under GKGM.

4.2.2 SC2.2: Strengthening and improving veterinary medicinal product control for communicable, vector-borne diseases and zoonoses in animals

The aim of this component is to establish a new institution (Veterinary Medicine Control Center - VETKOM) which receives international accreditation (OIE, etc.) specializing in veterinary medical products. VETKOM will carry out all tests and analyzes of veterinary medicinal products supplied to the market in Türkiye and pharmacological, toxicological and safety studies to be performed on animals. After the establishment of VETKOM, with the transfer of some activities such as GMP, licensing and pharmacovigilance to VETKOM, it will be ensured that GKGM remains a coordinating, regulatory institution.

VETKOM will (a) have the personnel and equipment to fulfill the necessary technical and administrative requirements, (b) give due importance to the issues related to medicinal products, (c) lead the private sector and control the compliance of the activities and works of the private sector with the relevant technical regulations, and (d) will ensure the preparation of domestic legislation compatible with EU legislation by following the current developments in the world in this field. Thus, Türkiye's animal existence will be treated or protected with high quality, effective and reliable drugs and vaccines.

It is envisaged that the place of VETKOM Project will be a land in Ankara Province. However, the resolution will be decided in the 4th quarter of 2022 after the VETKOM Needs Determination and Needs Analysis (after feasibility needs analysis).

This component will be carried out by GKGM- Department of Veterinary Health Products and Public Health. It is anticipated that 12 personnel to be needed including budgeting, procurement and payment transactions, technical staff as well as a biosafety expert and a civil engineer.

The following activities will be carried out in the facility to be established;

- Performing quality control tests of approximately 2000 licensed drug-class veterinary medicinal products and 600 licensed vaccines and veterinary medicinal products to be licensed for the first time,
- Immunity, bioequivalence, bioavailability and toxicology testing of new veterinary medicinal products Conducting R&D studies on veterinary drugs and vaccines,
- Establishing a National Strain Bank/Collection that vaccine manufacturers and universities can benefit from by keeping the disease agents to be obtained from the studies on diseases seen in Türkiye by the Institute Directorates and Veterinary Faculties researchers.
- Ensuring the production of different experimental animals that Türkiye may be needed.

Procurement of goods, works and non-consulting services under the sub-component shall follow the World Bank Procurement Regulations (November 2020). More information is provided in the Procurement Arrangements section of the POM.

The activities of this sub-component shall be executed in three phases as (i) preparation phase, (ii) construction and installation phase, (iii) accreditation, trainings and initiation of operation. The activities listed below are carried out as per each phase. There shall be at least two contracts for the execution of the following activities. In addition, the works and activities to be carried out by the Ministry within the scope of the project are listed below, as well.

A- Needs Analysis, Projecting, Training, Consulting and Preparedness for Certification: The activities under the preparation phase are (a) identification of the VETKOM needs and need assessment analysis, (b) site selection for VETKOM. In order to carry out the activities under this sub-component, consultancy services will be procured through the tender method in accordance with the national legislation and the World Bank procurement procedures and principles. Additional mechanisms will be set out which is required in the Financial Management and Control Law No. 5018, as well as external borrowing conditions that are to be managed by the PCU.

The above-mentioned consultancy service will be procured though the method as specified in the Procurement Plan. The Consultant will employ at least two technical experts who are experienced in the establishment of national and/or international medical product analysis laboratories and have worked on pharmaceutical and biological medical products, and also employ at least one civil

engineer, one electrical engineer, one mechanical engineer, one biosafety specialist, one veterinarian and one civil engineer to work full time. The CVs and reference letters of these personnel will definitely be submitted to the MoAF during the tender process.

The Consultant/s to be shortlisted for the subject assignment shall submit at least two references stating that they are experienced in the design and establishment of national and/or international medical product control laboratories, medicinal product manufacturing sites, and laboratories working with biosafety. If deemed necessary by the MoAF, a technical visit may be organized to assess the compliance of the reference work/s and the competency of consultants with the specified qualification requirements in the Request for Expressions of Interest Document and a decision can be made according to the results of this visit. The Consultant will submit interim reports at intervals determined by the administration and a final report as a file at the end of the work. The Consultant shall develop a work-time plan in accordance with the calendar determined by the MoAF and submit it to the approval of the MoAF. With the approval of the MoAF, the Consultant may use subconsultants for the following activities as the case may be.

a) Identification of the VETKOM needs and needs assessment analysis: For the works under this title, the Consultant will perform the following important activities;

- Organizational structure and technical requirements of the VETKOM to be established, international standards and guides such as OIE GLP, EU GMP and WHO-BSL will be analysed and reported.
- The European Pharmacopoeia and OIE manual will be reviewed and the in vivo and in vitro tests to be performed within the scope of quality control tests of veterinary medicinal products (vaccine and drug) licensed or to be licensed in Türkiye will be listed.
- In accordance with the purpose and scope of the VETKOM to be established, similar centers in at least three European countries will be analyzed in order to examine similar models in different countries. After the evaluation of these analyses, necessary permits will be obtained by establishing the necessary connections with at least two foreign centers.
- The Consultant shall facilitate obtaining the necessary permits to visit at least two public institutions and organizations in Türkiye, as well as laboratories with GLP certificates where drug and vaccine tests are carried out in the private sector, and experimental animal units where efficacy and safety tests where preclinical and clinical studies will be/are performed. In addition, the Consultant, together with the GKGM experts, will conduct examinations in these centers and present the evaluations in the form of a report.
- Adequate size and sufficient number of laboratories will be defined for all tests specified in the European Pharmacopoeia and OIE manual, considering the number of products and/or the number of batches produced/imported using the data to be obtained from the GKGM.
- Animal units in sufficient number and size will be determined for all animal species (cattle, sheep-goat, horse, cat and dog, poultry, aquaculture) where preclinical and clinical studies of existing and newly licensed products will be carried out, and efficacy and safety tests will be carried out.
- Architectural, construction and technical infrastructure (panel, wall, floor, water, steam, ventilation, plumbing, electricity, automation, laboratory information systems, etc.) needs of experimental animal units and laboratories will be defined in accordance with OECD GLP, EU GMP, OIE, WHO Biosafety Manual, Experimental Animal Welfare Regulation and Ministry of Environment legislation and requirements regarding environment and waste. The technical specifications for these will be created and their approximate costs will be determined. The Consultant shall also provide technical assistance and support for the evaluation of bids received including the verification of compliance of the purchased equipment with the

specifications during the contract management phase. In all of these stages, the opinion and approval of the MoAF will be taken.

- According to the results of the analysis mentioned above, the number of laboratory equipment and experimental animals will be determined, technical specifications will be created according to OIE GLP and EU-GMP requirements, and their approximate costs will be determined. Qualification (DQ, IQ, OQ, FAT, SAT) requirements for critical equipment will be specified. After the specifications of the equipment and animals are determined, the technical specifications will be elaborated and their approximate costs will be estimated. GKGM approval will be obtained in all of these stages.
- The number of personnel and their occupations (animal keeper, boilermaster veterinarian etc.) that should be present outside working hours (nights and weekends, public holidays) in experimental animal units and laboratories will be determined in the VETKOM. The number of lodgings and their features will be determined upon the approval of the MoAF.
- Office works and the number of personnel to carry out these works will be determined and sufficient number of work offices will be defined for them.
- Social areas (meeting halls, guesthouse, restaurant, cafeteria, sports fields, prayer areas, park, etc.) and their sizes will be defined for the employees at the facility. At these stages, the approval of the MoAF will be taken. The Consultant will meet the translation needs during the determination of the needs of the VETKOM and the creation of the needs analysis.
- The Consultant will be responsible for the preparation of the concept and detail projects of the VETKOM in accordance with the above-mentioned requirements, and then checking and giving approval during the construction and installation phases. At these stages, the opinions and approval of the experts of the MoAF will be taken. Permissions related to environmental legislation (“EIA report” or “EIA not required report”) will be obtained and also Bank’s associated environmental & social Documents shall be prepared as indicated in Section 8 of this POM.

b) Site selection for the VETKOM (*Determining the project location and obtaining the necessary permits*): Land allocation studies will be carried out by the project implementation unit for the land where the VETKOM will be established. In order to complete the land allocation works, VETKOM’s location/site will be evaluated in terms of its convenience and other relevant criteria, according to the of the needs analysis study. This task shall be conducted by the MoAF to be verified by the Consulting Firm recruited for its technical adequacy for the intended usage purpose.

c) Projecting: The projects of the VETKOM will be prepared according to the needs determined in the needs analysis final reports and consists of two stages. These are; (i) preparation of facility concept design project, (ii) preparation of detail projects.

In case of deviations from the written requirements specified in the needs analysis file during the both project phases, the deviations can only be applied after obtaining written approval from the MoAF.

In all conflicting situations between the requirements, codes, standards, procurement order and drawings determined during the concept and detail project phase, the approval of the Ministry shall be obtained before proceeding to the design, manufacture or supply of the relevant field/equipment. Ergonomics and feasibility of the VETKOM will be prioritized while fulfilling the needs determined in the design. The contractor is expected to perform the following activities.

The Design Supply & Installation Contractor shall be entirely responsible for the design of VETKOM to obtain necessary accreditation and certification.

1- Preparation of Facility Concept Design Project (including Test and Analysis Laboratories, Vaccine Strain Bank/Collection and Experimental Animal Units, offices and social areas, lodgings)

Concept projects will be prepared according to the specified requirements of all areas defined in the needs analysis phase. Compliance checks of concept projects will be subject to the approval of the Short Term Individual Consultants, if recruited for to advise MoAF in the whole process and MoAF experts who conduct the needs analysis. In this context;

- i. Architectural design of laboratory areas, experimental animal units, R&D laboratories, offices, social areas, support system areas and lodgings will be carried out.
- ii. The appropriate architectural design of the clean room and BSL-required areas will be prepared and the specifications required for clean room qualification and biosafety will be determined such as clean room class, biosafety class, number of air cycles, differential pressure, temperature, etc.
- iii. In all projected areas, Layout plans of the foreseen equipment will be carried out. HVAC zone policy plans will be submitted.
- iv. Personnel, material, waste and process flows will be prepared. In the design of clean rooms and biosafe areas, personnel and material inputs will comply with GMP and Biosafety rules.
- v. A principle chart will be prepared for pharmaceutical water and steam, compressed air, nitrogen, oxygen, CO₂ production, storage, usage points and distribution lines.
- vi. Liquid and solid waste requirements of laboratories and experimental animal units will be determined.
- vii. Room/zone cards will be formed.

The Short Term Individual Consultants, if recruited for to advise MoAF in the whole process shall provide technical guidance to MoAF in reviewing the concept projects in terms of GLP, GMP and biosafety. MoAF's comments on the designs shall be addressed by the Consultant company in a timely manner without extra cost.

2- Preparation of Application Projects (Electrical, civil, mechanical etc.): Preparation of the concept project and then the preparation of the application projects will be carried out. Application projects will be prepared according to the needs and specifications determined by the needs analysis, taking into account the concept project. For any changes to be made, permission will be obtained from the MoAF.

- i. Constructional and Architectural Projects: Preparation of estimates regarding the specified works, collection of bids and evaluation of bids will be carried out. (i) Construction and static projects (ground survey, feasibility etc.), (ii) Preparation of architectural projects, (iii) Designing the equipment, (iv) Determination of material details, (v) Performing quantity take off, (vi) Construction of Landscape, in-plant roads and perimeter wall, (vii) Determining and writing technical specifications for materials (floor, walls, doors, ceiling, equipments, windows) where GMP and BSL requirements are required,
- ii. Mechanical Project Works: Preparation of estimates regarding the specified works, collection of bids and evaluation of bids will be carried out (i) HVAC projects will be prepared and GMP, GLP and BSL requirements will be considered in the projects. In this context, definition of capacity, configuration and location of all Air Handling Units AHU, Sizing of Hygienic Duct System, Pressure Distribution Projects (air flow directions), zone plans for AHUs, P&IDs of HVAC systems, clean room zone project, (ii) Preparation of plumbing project, (iii) Preparation of heating-cooling and hot water project (calculation of heat gain and heat loss, project design and construction for steam installation, AHUs and heating and cooling system of the building,

process cooling water), (iv) Fire Project, (v) Projects for raw water, pharmaceutical water and steam systems will be prepared, (vi) Projects on gas systems (compressed air, nitrogen, oxygen, CO₂) will be prepared, (vii) Laboratory and experimental animal units will be prepared for liquid and solid waste disposal projects, (viii) Projecting the HVAC Automation System, Creating the Automation Scenario of the HVAC and Heating-Cooling Systems, Creating the Point Analysis, Preparing the Principle Schemes, (ix)

- iii. **Electrical Project Works:** Preparation of estimates regarding the specified works, collection of bids and evaluation of bids will be carried out (i) MV power distribution project, (ii) LV projects (Grounding and Grounding and Lightning Protection System, Electric Panel Distribution Systems, Power Distribution, Lighting System), (iii) Weak current projects (Data-Telephone Project, Security-Access Control Project, Camera Project, Fire Alarm System),

d. Consultancy Service: Within the scope of this service, the Consultant will carry out the following activities and no acceptance will be made without the approval of the MoAF (i) Reviewing the final and implementation projects (detailed drawings and calculations) prepared by the Design, Supply and Installation (DSI) Contractor, (ii) Monitoring the progress of the construction work according to the project work-time plan, (iii) Evaluation of changes in the construction phase, (iv) Follow-up of all legal permits to be obtained before, during and after the construction works, (v) Preparation of periodic progress report with the purchase of construction work and equipment, (vi) Follow-up of the contractual obligations of the contractor carrying out the construction works, (vii) Intervening for incompatibilities that may arise during construction work and purchasing equipment, taking urgent measures when necessary, (viii) Supervision of the acceptance and commissioning of the installed equipment and approval process, (ix) The qualification stages of the installed and qualified equipment will be followed, (x) FAT and SAT of the critical equipment to be procured (to be determined by the MoAF) will be carried out with at least 3 (three) MoAF experts. (xi) Provision of Technical Assistance and support in Bid evaluation of the DSI tender (taking into account the price, quality, time, workforce, reference etc. adequacy issues) will be carried out, (xii) The process of inspecting the compliance of the materials to be used in the application with the specification will be carried out. (xiii) Checking the constructional works and installations and giving compliancy report for approval as per the need assessment, (xiv) The Consultant shall evaluate the bids received including the verification of compliance of the purchased equipment with the specifications during the contract management phase.

e) Training: (i) A technical training plan will be prepared for the white and blue collar personnel (at least 100 people) who will work in the operational units of the VETKOM. Training contents and plans will be submitted to the approval of the GKGM. (ii) Within the scope of the trainings, at least 20 (twenty) different trainings will be given for 3 days for each. Meeting room and meals (lunch and coffee breaks) are included. The trainings will cover at least following topics: European Union Veterinary Medicinal Products Legislation, Official Control and Serial Release of Veterinary Medicinal Products, Basic GMP, Biosafety, Basic GLP, ICH guidelines, VICH guidelines GCP, Method Validations, Stability, Regulatory, Pharmacovigilance, Chemical Analysis, Microbiological Analysis, Virological Analysis, Parasitological Analysis, Data Integrity and Validation of Computerized systems, Laboratory Information systems (iii) Trainings can be carried out by domestic and foreign experts having necessary certification. Before the trainings, the CVs of the trainers will be submitted to the MoAF for approval.

(f) Preparation for Validation, Qualification, Accreditation and Certification Studies: (i) Work flow charts and procedures related to basic processes will be prepared at VETKOM, (ii) Necessary expert support will be provided to complete the validation/verification studies of the tests at the facility, (iii) The basic documentation required for VETKOM's BSL-related certification will be prepared. Necessary preparations will be checked and the missing points will be reported to the MoAF, (vi) The

basic documentation required for the OECD GLP certification of the VETKOM will be prepared. Necessary preparations will be checked and the missing points will be reported to the MoAF, (v) The basic documentation required for the accreditation of the tests to be carried out at VETKOM by TURKAK will be prepared. Necessary expert and document support will be provided for validations. Necessary preparations will be checked and the missing points will be reported to the MoAF (vi) It will be ensured that the procedures for obtaining the certificates (GMP, GLP, BSL3, Animal Biosafety Level 3-ABSL3) determined in the needs analysis, which have been prepared by taking the guideline of international standards and guides such as EU GMP and WHO-BSL, will be prepared and the certification processes will be carried out.

B-Construction works, procurement of equipment and animals: Construction works and equipment procurement (turnkey) services will be procured by tender method in accordance with the World Bank procurement procedures and principles. Mechanisms set out in the Financial Management and Control Law No. 5018, as well as additional mechanisms managed by the PCU in accordance with external borrowing requirements will be implemented.

The DSI contractor shall be entirely responsible for construction, installation and commissioning of the VETKOM on a turnkey basis to obtain necessary accreditation and certification. The DSI tender will be carried out according to the International Competitive Bidding (ICB) method. The Contractor shall employ at least one full-time civil engineer, one electrical engineer, one mechanical engineer who is experienced in the establishment of national and/or international medical product analysis laboratories or medical product production sites in the company. The CV and reference letters of these personnel will be submitted to the MoAF for approval.

For post qualification, the most advantageous bidder shall submit at least 2 references (as specified in the respective Bidding Documents) showing that it is experienced in the design and establishment of national and/or international medical product control laboratories, medical product production sites, laboratories working with biosafety. If deemed necessary by the MoAF, a technical visit will be conducted to reference addresses to verify the compliance of the similar works with the post qualification requirements specified in the Bidding Documents and a decision can be made according to the results of this visit. The cost of this study visit shall be borne by the respective PIU through the operational costs.

The Contractor will submit interim reports at intervals determined by the administration and a final report as a file at the end of the work. The contractor shall develop a work-time plan in accordance with the calendar determined by the MoAF and submit it to the approval of the MoAF.

(a) Construction works: The works to be carried out in this context are as follows: (i) Examination of the application projects submitted to itself, prepare the implementation (detailed) projects together with the amendment proposals, if any, and submit them to the Ministry for approval. (ii) Construction (Soil survey and excavation works, rough construction, masonry and stone works, epoxy, tile, garden wall, railing, etc.), electrical works (cabling, generator and UPS etc.), and mechanical works (ventilation, water systems, sanitary installation, heat center etc.) will be carried out by the contractor in accordance with the approved detailed projects.(iii) The approval of the MoAF will be obtained for the changes that need to be made in the projects during the construction period. (iv) At the end of the work, all as-built projects will be prepared and submitted to the Ministry. (v) Documents and reports related to environmental legislation will be provided by the contractor. (vi) Occupational Health and Safety (OHS) rules will be followed during the construction work.

(b) Procurement of Equipment and Animals, Installation and Commissioning (i) The equipment and animals whose specifications have been determined and whose technical specifications have been developed will be purchased as a result of the needs analysis evaluation. (ii) Equipment that does not comply with the specifications or is not approved for inspection and acceptance will be changed with no cost. (iii) FATs of the critical equipment to be procured (to be determined by the MoAF) will be carried out with at least 3 MoAF experts. The cost of the visit shall be covered by the Ministry. (iv) A minimum of two years' warranty will be provided for procured equipment, (v) Animal shelters should be ready before the procurement of animals, (vi) Acceptance and start-up of the installed equipment will be carried out by the contractor. (vii) Qualification of equipment (only for subjecting qualification) will be completed and necessary documentation will be provided.

C- Legislation, Accreditation, Training and Initiation of Operation: The MoAF will monitor the execution of the project according to the determined schedule. The below activities shall be executed by MoAF.

a) Domestic and foreign technical visits and trainings: In order to determine the appropriate model and requirements for the VETKOM, domestic and foreign technical visits will be carried out and their expenses will be covered under the project budget. Domestic and foreign assignments will be made for personnel training. Related expenses and training fees will be covered under the project budget.

b) Preparation of the VETKOM's Establishment Legislation and Internal Procedures: The establishment legislation of VETKOM will be prepared by the MoAF experts. Consultancy services will be received in the preparation of the internal procedures of VETKOM.

c) Personnel Selection and Training: VETKOM personnel will be selected from the MoAF. In this regard, meetings will be planned at provincial directorates and institutes and their expenses will be covered from the project budget. There are 5 training courses (about control of veterinary medicinal products, each one is 2-3 days duration) for the personnel working in the project and to be worked in the center. External companies are to be hired for the provision of the training/s if not under the scope of the DSI Contractor.

d) Preparation for Validation, Qualification, Accreditation and Certification Studies and Submitting Applications: The validation/verification studies of the tests to be used in the facility will be reviewed and supported by the Consultant firm. The basic operational documentation required for VETKOM's BSL-related certification will be prepared. Necessary preparations will be checked, and the missing points will be reported to the MoAF. Procedures prepared by the DSI Contractor will be reviewed by the Consultant firm required for OECD GLP certification. Procedures related to biosafety will be also prepared by the DSI Contractor and reviewed by the Consultant firm. After the aforementioned accreditation and certification procedures are completed, applications will be submitted to the certification bodies by DSI Contractor, and the certification processes will be completed. Application fees and costs related to certifications will be covered under the project budget.

The construction of VETKOM, in its different phases needs to be in compliance with World Bank E&S standards including established procedures of compliance established in the E&S project documents (Section 8 of this POM). Energy efficiency and resilient aspects will be also considered in the planning and implementation of works and acquisition of equipment for VETKOM, facilities.

4.3 Sub-components under TAGEM

4.3.1 SC3.4: Research and Innovations to Support CSA

Activities under this sub-component are to be implemented by TAGEM. While Sub-component 3.4 will focus on validating and mainstreaming commercially available technologies, this sub-component focuses on the development, validation and/or dissemination of in-house (by TAGEM) climate/green agricultural technologies. Activities under this sub-component will support the implementation of a research and innovation agenda around CSA in alignment with priorities identified in the recently launched Green Deal Plan, including reducing the use of pesticides, enhancing nutrient management (through biofertilizers), and enhancing energy and water efficiencies and support climate -related assessments.

The Soil and Water Resources Research Department and the Plant Health Research Department are the responsible technical departments at the central level; however, implementation and monitoring of investments will be carried out by the research institutes spread across the country. Procurement and financial related issues will be carried out by the Administrative Affairs and Coordination Department and final contracts will be managed by Soil and Water Resources Research Department and Plant Health Research Department. PIU under TAGEM will be established with appointed staff of three departments and directly connected to the Deputy General Director of TAGEM.

The activities under this sub-component can be categorized under 4 pillars as pesticide, fertilizer, soil health and climate change.

Pesticide Pillar: The activities under this pillar will focus on strengthening research and training on integrated pest management (IPM), especially biological and biotechnical control methods, in order to reduce the effects of pesticides on the environment and human health and to prevent economic losses. Focal products will mainly be citrus, wheat, potato, and corn. The activities can be grouped in two headings; (a) supporting innovative research in the institutes and (b) capacity building of research centers.

Supporting innovative research in the institutes: The expected investments under this heading are to be realized in Adana and Bornova Biological Control and Research Institutes.

Adana Biological Control and Research Institutes (W.TAGEM/CHR.CS3.4-02) : Citrus is one of the most important export products in the region (in Adana and Mersin provinces). Due to the intensive use of pesticides, the environment and human health are adversely affected, and residue problems arise in the exported products. With this project, the mass production possibilities of 4 different natural enemies in Adana Biological Control Research Institute will be improved with the scope of the activities of this pillar. In addition, practical training will be given to technical personnel on the importance of biological control in citrus production and the destruction of natural enemies with these biological control methods.

Activities:

- Implementation of renovation and improvement of infrastructure conditions of laboratories, climate rooms and greenhouses in Adana Biological Control Research Center
- Improvement of mass production in 4 different beneficial insects as: *Anagrus pseudococci* Girault (Hymenoptera: Encyrtidae), *Leptomastix dactylopii* Howard (Hymenoptera: Encyrtidae), *Sympherobius pygmaeus* Rambur (Neuroptera: Hemerobiidae) and *Nephus includens* Kirsch (Coleoptera: Coccinellidae).

- Conducting practical trainings on biological control and integrated control for technical personnel in provincial and district directorates of MoAF in Adana and Mersin.
- Releasing beneficial insects together with technical personnel in applied trainings.

Bornova Biotechnical Control Research Center (W.TAGEM/CHR.CS3.4-01): Within the scope of this activity, it is aimed to expand the infrastructure of the existing mass production facility in order to increase the production capacity of the mass-produced Mediterranean Fruitfly, to create the necessary infrastructure for the implementation of the Sterile Insect Release Technique (SIT), and to make the area where the Cobalt 60 device will be placed comply with international standards in Bornova Plant Protection Research Institute.

In addition, production studies of the predators *Cryptolaemus montrouzieri* (Col.: Coccinellidae), *Anagyrus pseudococci* and *Leptomastix dactylopii* (Hym.: Encyrtidae) used in biological control against Citrus mealybug will be carried out. For this purpose; It is planned to establish the infrastructure of the beneficial insect production facility for biological control. In this context, insect production rooms and climate rooms will be built. Within the scope of the activity, vehicles are needed to transport the said insects to the application area.

The following activities to be realized;

- Providing the infrastructure of the radiation device in the international standards.
- Expanding infrastructure to increase the mass-rearing capacity of the Mediterranean fruit fly,
- Improving infrastructure of the mass-rearing facility for *Cryptolaemus montrouzieri*, *Anagyrus pseudococci* and *Leptomastix dactylopii*.
- Alternative control methods will be applied to chemical control in Türkiye and quality and healthy products will be obtained.
- Since the use of chemicals will decrease, it will contribute to the country's economy, eliminating problems arising from residues during exports,
- Mass-rearing will be carried out in accordance with international standards with the building and infrastructure works,
- It will contribute to the reduction of beneficial insect imports from abroad and the dissemination of biological control in Türkiye.

Capacity Building of Research Centers: (GO.TAGEM/CHR.CS3.4-01 Group 1a, b, c... and W.TAGEM/CHR.CS3.4-03a, b, c)

Increasing the Capacity of the Agricultural Fauna and Microflora Center: The role of beneficial organisms in pest control is extremely important. With this activity, it is aimed to establish the infrastructure of the laboratories, storage rooms and climate rooms of the Agricultural Fauna and Microflora Center under the Ankara Plant Protection Central Research Institute and to improve the existing ones. Thus, studies to reveal our natural resource reserves in terms of beneficial organisms will gain momentum. Thus, the share of biological control in the fight against pests will be increased and it will contribute to the reduction of pesticide use. In addition, studies on biological diversity will be increased and progress will be made on the traceability of agricultural ecosystems. Infrastructure development studies will be carried out in order to increase entomology, and microorganism culture collection. In this context, taxonomy of invertebrates and microorganisms and biological control agents will be determined and there will be an increase in the number of studies on biodiversity.

The following activities to be realized:

- Establishment of entomological collections of harmful and beneficial species of invertebrates in agricultural ecosystems
- Establishment of culture collections of pathogenic and antagonistic microorganisms
- Carrying out taxonomic studies on these groups and increasing the diagnostic capacity
- Establishment of database and information systems in both groups (invertebrates and microorganisms)
- Carrying out studies to reduce pesticides by supporting IPM and biological control studies
- Increasing the capacity to monitor the effects of pesticide use on biodiversity

Improving the Capacity of Soil-Originated Pathogens Center (GO.TAGEM/CHR.CS3.4-01 Group 2a, b, c ; W.TAGEM/CHR.CS3.4-04a, b, c): A national platform will be established in order to identify and monitor the pathogens that cause yield and quality losses and their pathotypes and races, and to develop materials resistant to them. The laboratory and climate rooms of the Center for Soil-Origin Pathogens will be improved under Ankara Plant Protection Central Research Institute. For this purpose, in order to establish the control management of soil pathogens, the spread of these pathogens will be determined, the pathotype and strains of pathogenicity levels will be revealed and resistant varieties that can be used in areas where soil pathogens are present will be determined.

The following activities to be realized:

- Establishment of laboratory and climate chamber infrastructure
- Soil origin to pathogens starting the counter testing process

Increasing the Capacity of the Pesticides and Toxicology Department (GO.TAGEM/CHR.CS3.4-01 Group 3a, b, c ; W.TAGEM/CHR.CS3.4-05a, b, c , CS.TAGEM/CHR.CS3.4-01a, b, c...): Under this activity, laboratories and climate rooms will be established for the development and production of microbial pesticides in Ankara Plant Protection Central Research Institute. In addition, suitable bioformulations for bioagents will be created, optimum growth and stable conditions for microorganisms in these bioformulations will be determined, formulations will be prepared in the most suitable solid and liquid carrier, shelf life of biopesticides will be determined, physical and chemical analyses will be made, and their quality will be evaluated according to international standards through the technical consultancy.

The following activities to be realized:

- Consulting for the formulation and mass production of microbial pesticides
- Development of laboratory and climate chamber infrastructure
- Initiation of mass production processes
- Initiation of formulation and quality control processes

Fertilizer Pillar: The activities under this pillar will focus on reducing the use of chemical fertilizers in agriculture through the adoption of biological fertilizers and precision agriculture to increase productivity. In order to achieve this goal firstly, appropriate laboratory opportunities will be provided for the development of laboratory infrastructures of five research institutes¹⁹, as well as increasing the production of microbial fertilizers and the development of new materials. In addition, training programs will be organized for the MoAF staff coming from 81 provinces in the research institutes in

¹⁹ Soil Fertilizer and Water Resources Central Research Institute-Ankara, International Agricultural Research and Training Center-Izmir, Black Sea Agricultural Research Institute-Samsun, Central Anatolia Transition Zone Research Institute-Eskişehir, Western Mediterranean Agricultural Research Institute -Antalya

Ankara and İzmir²⁰. The activities can be grouped in two headings under this pillar; (a) upgrading the capacity of agricultural research institutions and (b) training of trainers on fertilizer use.

Upgrading the Capacity of Agricultural Research Institutions: The following actions to be realized for 5 research institutes under this activity (GO.TAGEM/SWRR.CS3.4 -01 Group 1 a, b, c/ GO.TAGEM/SWRR.CS3.4 -01 Group 2 a, b, c/ GO.TAGEM/SWRR.CS3.4 -01 Group 3 a, b, c/ GO.TAGEM/SWRR.CS3.4 -02 Group 1a, b, c/ GO.TAGEM/SWRR.CS3.4 -02 Group 2 a, b, c/ W.TAGEM/SWRR.CS3.4-02a, b, c/ W.TAGEM/SWRR.CS3.4-03 a, b, c/ W.TAGEM/SWRR.CS3.4-04 a, b, c/ W.TAGEM/SWRR.CS3.4-05 a, b, c/ W.TAGEM/SWRR.CS3.4-06 a, b, c).

- Determination of laboratory needs; laboratory infrastructure improvement works will be implemented by the experts in the Research Institutes and the team of experts in TAGEM.
- Sending expert researchers abroad to study new technologies
- Determination of laboratory building maintenance and repair needs, if any, according to the institutes
- Having works for maintenance and repairs done by the Institute Directorates
- Preparation of tool and equipment requirement list for each Institute (5 units); It is aimed to develop the microbial laboratory infrastructure of 5 Research Institutes, who have experts in microbial research. The laboratory equipment and infrastructure requirements of the 5 institutes in the project will be prepared separately. A joint tender can be made for the materials and equipment that are common in the tender process.
- Preparation of technical specifications for tools and equipment to be purchased according to the list
- Establishment of the tender commission,
- Tender announcement and collection of bids
- Execution of the tender and fulfillment of the procurement procedure
- Delivery of tools and equipment
- Establishment of inspection-acceptance commission and control of purchased tools and equipment
- Making the necessary payments to the companies for the tools and equipment obtained as a result of the tender
- End of payment transactions
- Carrying, installing and calibrating and delivering the purchased laboratory instrument equipment to the relevant laboratories by the company in working condition
- Receiving technical user training/s on the use of purchased equipment and devices.
- Preparation of periodical maintenance contracts of purchased equipment and devices, making agreements

Training of trainers on fertilizer use CS.TAGEM/SWRR.CS3.4-06a, b, c/ NCS.TAGEM/SWRR.CS3.4-01a, b, c):

- Determination of academicians and expert researchers who will train trainers
- Developing training programs
- Preparation and preparation of educational materials (Brochure, leaflet, poster, notepad, pen, bag, flash memory, hat, t-shirt, microbial fertilizer, etc.)
- Purchase of materials to be used in training programs (projector, computer, tablet, camera, camera, etc.)
- Identification of trainers and their assignment with an official letter (162 people in total, 2 technical staff from each province for 81 provinces)

²⁰ Soil Fertilizer and Water Resources Central Research Institute, International Agricultural Research and Training Center

- Determining the training place, planning accommodation and other reservation works,
- Establishment of educational demonstration trials (creation of demonstration plots in Ankara and Izmir Research Institutes)
- Preparation of training materials, distribution to provinces, etc.
- Giving a certificate or certificate of participation at the end of the training
- Preparing training materials to be used in training the farmers in their fields by giving them to the trainers participating in the training.

Soil Health Pillar: The activities under this pillar will focus on carrying out research and development studies on modern agricultural mechanization as well as implementation activities under the umbrella of sustainable and climate sensitive agricultural practices in research institutes²¹ affiliated to the Soil and Water Resources Research Department.

Agricultural Mechanization R&D and Innovation Center (W.TAGEM/SWRR.CS3.4-01): Under this pillar, main activities will focus on renovation and enhancement existing R&D innovation capacity on mechanization in five different centres and to cover the expenses of a new Irrigation Technologies R&D Innovation Center (SU-TEAM) to be established UTAEM which will focus on innovative Irrigation Technologies for increased water efficiency. The project will cover the expenses of the construction of a new centre and renovation of existing five centers including the laboratory, research and IT equipment. The innovation center on irrigation technologies (SU-TEAM) will carry out mainly research activities on water efficiency, therefore, the activities to be carried out under this heading and the activities to be carried out under enhancing the R&D innovation capacity for water efficiency are intertwined. It may be possible to jointly use the budget allocated during the implementation of the project.

It is planned to combat climate change effectively with environmentally friendly renewable energy sources by improving the infrastructure for electrical energy supply. Thanks to renewable energy investments, it is aimed to prevent environmental problems caused by fossil energy sources. Within the framework of a model to be created for this purpose, agricultural mechanization will be developed and transformations that will provide maximum adaptation to the sector will be realized.

Climate Change Pillar: The activities of this pillar will focus on (a) establishing living laboratories, (b) enhancing the R&D innovation capacity for water efficiency, (b) conducting a study on Climate Change Awareness Assessment and Capacity (SHARP), (c) carbon footprint assessment

Establishing Living Laboratories for Renewable Energy Usage (GO.TAGEM/SWRR.CS3.4 -03 Group 1 GO.TAGEM/SWRR.CS3.4 -03 Group 2 GO.TAGEM/SWRR.CS3.4 -03 Group 3): International Agricultural Research and Training Center Directorate (UTAEM) and GAP Agricultural Research Institute Directorate (GAPTAEM) Plans to Establish Living Laboratories for Renewable Energy Use. In this context:

- Mobile Hybrid Milking Machine,
- Electric Tractor (65 HP) Prototype
- Solar Powered Mobile Irrigation System Supply

(The machinery, system or equipment planned to be purchased under this title may be revised within the framework of the Ministry's policy changes or technological developments.)

²¹ International Agricultural Research and Training Center Directorate-Menemen/İzmir, GAP Agricultural Research Institute Directorate/Şanlıurfa, Atatürk Soil Water and Agricultural Meteorology Research Institute/Kırklareli, Soil Water and Combating Desertification Research Institute.

Although the living laboratories approach has been adopted by TAGEM with this project, it may be possible to make changes in the technologies in living laboratories depending on the strategies of the MoAF that may change during the project implementation period.

Enhancing the R&D Innovation Capacity for Water Efficiency (GO.TAGEM/SWRR.CS3.4 -07a, b, c.):

Within the scope of this activity, a center of excellence will be established in accordance with international standards, which will carry out the technical research, laboratory, material, test and quality control activities needed for sustainable agricultural irrigation management within the framework of R&D innovation. It is envisaged to be established within the body of TAGEM International Agricultural Research and Training Center (UTAEM) in İzmir and to be named Irrigation Technologies R&D Innovation Center (Su-TEAM). Thus, R&D innovation capacity will be increased for water efficiency. The center will ensure the development of new generation materials, method systems and products based on advanced technologies. Developing digital technologies, conducting experiments and tests, and organizing national and international vocational training activities are the main objectives of the center. Aegean Region and İzmir are important development centers among the sectors that produce and distribute irrigation systems and materials.

Infrastructure preparation and feasibility studies for building installation will be started in 2022, following World Bank procurement rules. The infrastructure will be completed in approximately 2 years, and the purchase of laboratory and test materials will be completed in the coming years. The realization of the tender and the fulfillment of the procurement procedure will be carried out by the TAGEM Administrative Affairs and Coordination Department, and the coordination and follow-up will be carried out by the Department of Soil and Water Resources Research and the International Agricultural Research and Training Center (UTAEM). With the completion of the center, training and demonstration studies will be carried out to develop institutional and individual capacity.

Activities under this action:

- Evaluation of environmental and social impacts within the scope of ESMF based on the requirements of national legislation and World Bank ESS
- Project risk stratification and project-specific plans, and determination of methods for ESA
- Compliance with local regulations if the risk class of the project is low
- Determination of the land, concept drawings of the project by the Consulting Firm, preparation of specifications, site lists and approximate cost
- Administrative specification contract draft and tender process
- Signing the contract and starting the construction
- Building Construction
- Establishment of in-building infrastructure (determination of laboratory departments and capacity)
- Determination of test area and capacity (Regulation on Test and Inspection Principles of Agricultural Machinery and Agricultural Technology Tools, TSEN ISO 9261 (Drip Irrigation Agricultural Irrigation Equipment - Drippers and Drip Pipe - Feature and Test Methods)
- Determination of office and rest areas capacity
- Personnel Employment and Human Resources (MoAF General Directorate of Personnel Principles on Employment of Contracted Personnel)
- Training and Capacity building

Climate Change Awareness Assessment and Capacity (SHARP) CS.TAGEM/SWRR.CS3.4-02

CS.TAGEM/SWRR.CS3.4-03: The aim of this activity is to combat the current and future negative effects of climate change on the Mediterranean Basin and Turkey, which is a part of it, and to adapt and reduce these effects to sustainable agricultural production. In addition, using the FAO-SHARP tool, a guide will be prepared in order to determine the vulnerabilities of producers to climate change, to

measure their resilience, and to identify and prioritize the activities necessary to increase their resilience to climate change. Cooperation will be made with FAO Sub regional office on consultancy and the analysis of the data from survey studies for the sharp model.

Activities Climate Change Awareness and Capacity Building – SHARP:

1. Training of Trainers

- Determination of instructors and expert researchers who will train trainers
- Creation of the training program
- Preparation and preparation of educational materials (brochure, sharp models and modules, survey questions by region, leaflet, bag, flash memory, hat, t-shirt)
- Procurement of materials to be used in training (projector, camera etc.)
- Identification of trainers and their assignment with an official letter (A total of 150 people will be trained)
- Printing of training materials and distribution to trainers participating in the training
- Sending experts abroad to examine sharp model studies abroad
- Giving certificate and participation certificate at the end of the training
- Preparing training materials to be used in training the farmers in their fields by giving them to the trainers participating in the training.

2. GPS Equipped Tablet Purchase Sharp Model Setup, Conducting Surveys

- Preparation of the tablet purchase list for each Institute (8 units) and the Provincial Directorates of Agriculture and Forestry where the institute is located.
- Preparation of technical specifications for tablets to be purchased according to the list
- Tender announcement and collection of bids
- Establishment of the tender commission,
- Execution of the tender and fulfillment of the procurement procedure
- Calibration of tablets to institutes and provincial directorates and delivery of work
- Installing the Sharp Model on Tablets
- Arranging the modules and survey questions in the Sharp Model according to the regions to be studied
- Consultancy for experts to participate in surveys
- Conducting surveys by region
- Making the necessary payments to the companies for the tablets obtained as a result of the tender
- End of payment transactions

Carbon Footprint Assessment (CS.TAGEM/SWRR.CS3.4-04):

This study is under the coordination of TAGEM and it will be conducted by the Olive Research Institute Directorate/İzmir, Fig Research Institute Directorate/Aydın, Apricot Research Institute Directorate/Malatya, Hazelnut Research Institute Directorate/Giresun) Research Institutes. Carbon emission measuring instruments and tools and equipment for irrigation systems will be installed in 8 demonstration areas.

1. Training of Trainers (year 2022)

- Determination of instructors and expert researchers who will train trainers
- Creation of the training program
- Preparation and preparation of training materials (brochure leaflet, bag, flash memory, certification, hat, t-shirt)
- Purchasing of materials to be used in education (projector, photograph, camera, etc.)

- Identification of trainers and their assignment with an official letter (100 people will be trained in total)
- Printing, distribution, etc. of educational materials.
- Sending experts abroad for on-site examination of carbon footprint studies and certification studies abroad
- Giving a certificate or certificate of participation at the end of the training

2. Selection and Installation of Demographic Areas (2023)

- Selection of 8 demonstration areas, 2 for each Institute (4 each).
- Creating lists of tools, equipment and production inputs for each institute
- Preparation of technical specifications for tools, equipment and inputs to be purchased according to the list
- Tender announcement and collection of bids
- Establishment of the tender commission,
- Execution of the tender and fulfillment of the procurement procedure
- Ensuring compliance
- Establishment of inspection-acceptance commission and control of purchased tools and equipment
- Carrying, installing and calibrating and delivering the purchased tool equipment in a working condition by the company at the demonstration sites
- Receiving technical user trainings on the use of purchased equipment and devices.
- End of payment transactions

4.4 Sub-components under BTGM

4.4.1 SC1.2: MoAF Digital Blueprint for Sectoral Information Collection and Management

Activities under this sub-component aim at strengthening the data collection and sectoral information management capacity of the Ministry of Agriculture and Forestry to support climate smart sectoral policy including the following:

- (i) Development, testing and implementation of improved data collection methods and modelling approaches for monitoring crop production and yields;
- (ii) Provision of production forecasts;
- (iii) Contribution to agriculture planning for food price monitoring, food security assessments, and other applications;
- (iv) Carrying out stakeholder engagement activities;
- (v) Analysis of data collection and modelling approaches implemented by other countries for crop, yield, and production forecasting; and
- (vi) Upgrading and integration of current institutional information systems to enhance monitoring of agriculture support programs.

General Directorate of Information Technologies (BTGM) is responsible for the implementation of this sub-component and will carry out the process in close cooperation with the General Directorate of Agricultural Reform (TRGM) and other relevant General Directorates.

For the implementation of the sub-component, the Ministry of Agriculture and Forestry will establish a Technical Committee with the participation of the Scientific and Technological Research Council of Türkiye (TUBITAK), the relevant scientific institutions, Presidency of Strategy and Budget and the relevant General Directorates of the Ministry.

Component activities are to be guided by a feasibility study to be carried out by TÜBİTAK within the scope of a Protocol signed between this institution and the MoAF, which is expected to be signed by August 2022 and last for about a year (ending in August 2023). The feasibility report will include due diligence, needs, analysis and determinations for the development of the crop yield estimation model and will be shared right after its delivery with the Strategy and Presidency of Strategy and Budget and the World Bank through the PCU.

The budget and detailed activities for this sub-component will be finalized after the feasibility study conducted by TUBITAK. In this context, POM document will be updated including how the activities will be carried out, by whom and according to what (legislation, printed format, if any); when the technical specifications will be prepared, by whom and according to what; the tasks of the provincial directorates if there will be any. An ad hoc committee has been established, with the participation of TUBITAK and relevant MoAF's General Directorates, to evaluate opportunities for advancing relevant activities under this subcomponent, potentially even before the full feasibility study is completed.

4.5 Component under ABDGM

4.5.1 C4. Project Management, Monitoring and Evaluation

Activities under this component will support all project management functions. It will include support for a Project Coordination Unit (PCU) and Project Implementation Units (PIUs) under TRGM, TAGEM, BTGM and GKGM, for (i) strengthening capacity for day-to-day project management of technical, fiduciary, Monitoring and Evaluation (M&E), E&S issues; (ii) E&S risk management, including preparation of site-specific E&S instruments required; (iii) grievance redress, citizen engagement, and communications; and (iv) M&E of project activities, including impact assessments, beneficiary satisfaction surveys, and development of an integrated system for project management and monitoring of project outputs and outcomes. The strategy for communication will be coordinated by the PCU and implemented together with the PIUs.

Since TUCSAP is an umbrella project and consists of 8 sub-components, a separate unit for overall management and monitoring of the Project is deemed necessary. To this end, Project Coordination Unit, supervised by the Deputy Minister, is established under the ABDGM. The PCU will be strengthened by recruiting qualified consultants to the PCU within 60 days after effectiveness. The consultants will support the public officers in the day-to-day implementation of the Project. PCU will cooperate with, guide and support the Project Implementation Units (PIUs). Details of the institutional arrangements are explained in Chapter 3.

Following activities will be carried out within the framework of this Component:

Capacity strengthening for daily project management: Currently, 6 MoAF specialists are working in the PCU, including a PCU Coordinator. In addition to this team, 19 specialists will be recruited (outsourced) in the PCU in the following fields.

Table 15. Specialists at the PCU (Externally hired)

1 Project Coordinator
1 Lead Financial Management Specialist
1 Financial Management Specialist
1 Lead Procurement Specialist
3 Procurement Specialists
1 Lead Monitoring & Evaluation Specialist
2 Monitoring & Evaluation Specialists
2 Translators
1 Communication Specialist
1 Lead Environmental Specialist
2 Environmental Specialists
1 Lead Social Specialist
2 Social Specialists

Terms of References for these specialists have been prepared and request for expression of interest has been published on July 22, 2022. It is expected that the recruitment process will be completed and the PCU will become fully functional within 60 days of the effectiveness date of the project.

In addition to the staff recruitment, necessary equipment for PCU and PIUs including laptops, printers, photocopy machine, furniture etc. will be purchased for office furnishing in the first year of the Project.

Management of Project Designated Account: A designated account will be opened in the Turkish Republic Central Bank by MoTF. All the payments will be made to the contractors, suppliers and consultants from this account through the MoAF Central Accountancy Office. Management and reporting in relation to the Designated Account will lie with the PCU. The lead Financial Management Specialist and Financial Management Specialist will deal with the ex-ante provision of transaction numbers for payments, monitoring and accounting of payments, documentation and internal controls, replenishment and accounting. The financial management of the Project will be carried out using an adapted off-the-shelf accounting and reporting software. The PCU prepared a detailed FM Manual describing the details of the FM arrangements and procedures summarized in Section 5 of the POM.

Coordination of Procurement Operations: The Lead Procurement Specialist will be responsible for planning and providing procurement services. She/he will carry out activities related to procurement and project implementation, enable necessary coordination and provide technical assistance to the PIUs and PCU. While the Procurement Specialist/s recruited under the Project shall be responsible for specific components (2 Procurement Specialist/s for SC1.1, SC3.1, SC3.2 and SC3.3 activities (TRGM), and 1 Procurement Specialist for all C2 activities (GKGM), the Lead Procurement Specialist shall be working on the remaining activities, in addition to his/her supervising, reporting and coordination duties, but without any limitations of the respective responsibilities of these Specialist/s that may interchangeably be directed towards other General Directorates' activities as necessary. Details of the Procurement Arrangements are explained in Chapter 6.

E&S risk management: Lead Environmental Specialist and Lead Social Specialist will be responsible for the activities of BTGM, TAGEM and ABDGM in addition to their supervision duties including preparation of site specific E&S instruments/documents. Remaining 1 social specialist and 1 environmental specialist will work for PIU of TRGM and 1 social specialist and 1 environmental specialist will work for PIU of GKGM. Details of the E&S Risk Management are explained in Chapter 8.

Grievance Mechanism: Grievance Mechanism will be established in order to address the complaints and comments that may arise during the implementation of the Project within 30 days from the effectiveness date of the Project. Those complaints/comments will be directed to the relevant DGs/PIUs. A reasonable solution/response will be provided by the DGs/PIUs. PCU will closely monitor this process. Alo 180 – TIMER and CIMER will be utilized for this mechanism. Besides, a specific grievance form will be developed and be used through the Project website (see section on E&S requirements).

Citizen Engagement and Communication: A Communication Strategy will be prepared by Communication Specialist. This Strategy should cover and/or be linked to the specific events under the sub-components. In this context, the web page, media accounts, all kinds of printed material, meetings, workshops, campaigns, relations with media, communication materials, videos, newsletters, etc. studies will be carried out. Preparation and Implementation of the Citizen Engagement Plan also lies with the Communication Specialist along with the Stakeholder Engagement Plan. (See Chapter 8.7 and 8.8)

Monitoring and Evaluation (M&E): The Lead M&E Specialist and 3 M&E Specialists will monitor the Project activities in terms of both performance and impact. M&E plans and semi-annual reports, Mid-

Term Review (will be prepared after the third year of the Project implementation) and Project Completion Report will be prepared. Semi-annual M&E reports will also be taken into account for the preparation of the Annual Work Plan and Budget.

- Lead M&E Specialist will also chair the Technical Working Group for M&E (see Chapter 3.5) which will be established in the first two months of the Project.
- A software will be purchased and a Monitoring Information System will be established in the first year of the Project.
- Details of the M&E Arrangements are explained in Chapter 6.

Annual work plan and budget (AWPB) preparation: PCU will work in close cooperation with the Strategy Development Board and PIUs and manage the preparation of the AWPB. Drafting AWPB will start in June and will be refined through annual meetings which will be held in October. Draft AWPB will be presented to the PSC first, and then will be submitted to the World Bank until 15 November each year. Necessary steps will be taken for the inclusion of the AWPB (including annual procurement plan) into the Annual Investment Program in close cooperation with Presidency Strategy and Budget Office.

Secretariat of Committee Meetings: PCU will bear the responsibility for the organization and secretariat of the Project Steering Committee (PSC) and Technical Coordination Committee (TKK) meetings. Details regarding these Committees can be found in Chapter 3.3 and 3.4.

In addition, short-term expertise/consultancy needs that may arise during the implementation of the Project activities, training and translation activities and other operational activities will be organized and financed within the framework of this component.

5. FINANCIAL MANAGEMENT

The PCU, through its Financial Management Unit, is responsible for (i) coordinating the budgeting and planning for all project activities including the assessment of their compliance with the project objectives (ii) managing the Designated Account and ensuring fund flows, (iii) maintaining the accounting records, (iv) ensuring the compliance of the project transactions with the generally accepted internal control procedures and documentation requirements, (v) preparing the interim unaudited financial reports (IFRs), and (vi) assisting the Treasury Controllers during the annual external audit of project accounts.

The PCU has the overall responsibility for the management of the Designated Account opened in the name of the Project at the Central Bank of the Republic of Türkiye (TCMB).

Transactions in this area will be carried out in accordance with the Financial Management Manual prepared by the PCU (Annex 10). The Financial Management Manual describes in detail all the procedures, distribution of powers and responsibilities and workflows concerning the financial management of the project (budgeting and planning, withdrawals and designated account management, internal controls, accounting, reporting and auditing).

5.1 Project Cost and Financing

The budget of the project is 341,270,000 dollars equivalent to 304,800,000 euros. The financing source is a loan from the International Bank for Reconstruction and Development (IBRD) affiliated to the World Bank group. The implementation period covers the years 2022-2028.

Table 16. Budget Categories and Allocated Loan amount

Category	Allocated Loan Amount (euro)	Percentage of Expenditure to be Funded (including taxes)
(1) Goods, works, consulting services, non-consulting services, Training and Operating Expenses for the Project	250,500,000	100%
(2) Sub-financing under SC 3.1 of the Project	24,800,000	100%
(3) Matching Grants under SC 3.2 of the Project	29.500.000	100%
TOTAL QUANTITY	304,800,000	

5.2 Funds Flow and Disbursement Arrangements

The *Designated Account* will be opened at the Central Bank of the Republic of Türkiye and the management of this account will be the responsibility of the PCU within ABDGM.

In the project, the traditional payment procedure will be used through the use of Designated Account, all payments to contractors, suppliers and consultants will be made from this designated account with the authority of the responsible personnel in the implementing units, the said payments of the Ministry of Agriculture and Forestry will be made through the Central Accounting Office.

5.3 Accounting System and Procedures

While the Accountant of the Ministry of Treasury and Finance will keep the accounts of the Ministry of Agriculture and Forestry in Turkish lira through the Integrated Financial Management System, a parallel system in foreign currency will be used for accounting and reporting in the PCU and the special reporting requirements of the project will be met through this system.

Off-the-shelf accounting and reporting software will be purchased for the foreign currency accounting and reporting of the project. The Project Coordination Unit will define the detailed charts of accounts prepared for the TUCSAP to this purchased accounting program and will start keeping the accounting records. The quarterly Interim Un-audited Financial Reports (IFRs) required for the Project will be automatically generated through the accounting software (Template of IFRs is given in Annex 11).

Projects financed through external debt in line administrations are subject to the General Budget. The Project accounts are expected to be maintained on a cash basis. The financial reports will also be prepared on a cash basis.

All original documents to support the statement of expenditure will be retained by the relevant PIU-General Directorates for at least seven years after the audit report for the financial year of the last withdrawal from the Designated Account has been received by the Bank, and the financial information will be kept for review during the audit by World Bank personnel and will be available for annual audits. Besides, copies should be available in the FM Unit of the PCU.

Authorized personnel for payment transactions and accounting records will be determined (Financial Management Coordinator (Lead Financial Management Specialist) and Financial Management Specialist appointed by the Project Coordination Unit), and it will not be possible for another person to log in or access the records. In addition, the procedures and principles regarding the taking of accounting record backups will be determined.

5.4 Reporting

Through the Financial Management Unit, PCU is responsible for preparing the IFRs or reports required for the World Bank and the Ministry of Treasury and Finance. The PCU is also responsible for reconciling World Bank and Central Bank records on a regular basis.

The financial statements (IFRs) requested by the World Bank will be prepared quarterly, including the period, year and cumulative realizations, plans and deviations, and will be uploaded to the World Bank's Client Connection System within 45 days following the period. Reports will be generated automatically from the accounting software.

5.5 National Budgeting Procedure

Since the use of the loan within the scope of the TUCSAP is possible within the framework of the Public Financial Management and Control Law No. 5018, it should be included in the Presidential Investment Program and the Central Government Budget Law for the use of the loan.

The TUCSAP was included in the 2022 Investment Program with the Presidential Decision No. 5123 published in the Official Gazette dated January 15, 2022 and numbered 31720 (repeated).

In this framework, the Annual Work Plan and Budget (AWPB) is prepared by the implementing units under the coordination of PCU, in order to form a basis for the budget. This plan includes the activities

to be carried out within the scope of the project, their timing and estimated budgets. These plans prepared by the PIUs are reviewed by the PCU in terms of their compliance with the project objectives, the procurement plan and the distribution of the activities' budgets. The entries of the budget proposals are made by each PIU in accordance with the Budget Preparation Guide and according to the program budget classification over the SGB.net system of the Ministry of Agriculture and Forestry.

Strategy Development Board (SGB) evaluates the compliance of the proposals within the entire Ministry's budget, and organizes meetings to reach an agreement with the relevant units when deemed necessary. SGB submits the budget proposal of the Ministry of Agriculture and Forestry to the Presidency of Republic of Türkiye Presidency of Strategy and Budget (SBB). SBB evaluates and approves the budget proposal according to the Investment Program. The Ministry of Treasury and Finance makes the necessary arrangements and submits the proposal to the Turkish Grand National Assembly (TBMM). As a result of the negotiations in the TBMM, the Budget Law is accepted, published in the Official Gazette and enters into force.

5.6 Internal Controls

MoAF's existing controls, which were established in line with the Public Financial Management and Control Law, will be used. Additional control points specific to the project transactions may be added where necessary. These procedures are described in the Financial Management Manual. In addition, MoAF will determine and document the specific details of the internal control framework, workflows, document and fund flows mechanisms for the grant schemes.

5.7 Auditing

The Treasury Controllers will be the auditors of the project as the external auditors for Bank-financed projects. The annual financial statements of the project will be audited in accordance with the International Standards on Auditing and in line with the Terms of Reference attached to the Minutes of Negotiations. The audit reports and Management Letter of auditors will be uploaded to the Client Connection system of the world Bank by June 30th following the end of each calendar year in which the project is effective.

6. PROCUREMENT ARRANGEMENTS

The procurement of Goods, Works, Non-Consulting Services and Consulting Services under the Project will be carried out by taking into account the following Procurement Arrangements.

6.1 Procurement Regulations

The following WB Guidelines and procedures shall be pursued in procurement implementation under the Project²²:

- The WB Procurement Regulations for IPF Borrowers – November 2020 ("[Procurement-Regulations](#)"),
- Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits & Grants, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 ([Anti-Corruption Guidelines](#))
- The provisions stipulated in the Legal Agreement,
- The Bank's Standard Procurement Documents and/or Bidding Document templates as agreed by the Bank,
- Site specific ESA Documents (They will be integrated to the bidding documents as an annex and the awarded contractors will be responsible for the implementation of the related ES management plans)

In terms of national legislation, all investments including the financing from International Financial Institutions are required to be in the investment program of MoAF. In this regard, the requirements of Public Law No.5018 (Public Financial Management and Control Law) shall be applied to the Project.

6.2 Procurement Governance

6.2.1 General Information

The governance of procurement shall be managed through clear and transparent lines of accountability, and the clear definition of the roles and responsibilities of each party.

²² (a). According to Article 3 (c) of the Public Procurement Law No 4734 "*Procurement of goods or services and construction works to be executed with the external financing provided in accordance with international agreements which specifies that different tender procedures and principles will be applied in the financing agreement*" is exempted from the provisions of the Law No 4734 as in the case of TUCSAP.

(b). In the Article 81 of the Regulation No. 30674 ([OIZ Implementation Regulation](#)), it is stipulated that the OIZs' works, goods and Consultancy services tenders, in which the Ministry (MoAF) credit is provided by external financing within the framework of international agreements, can be made by the Commission established by the Ministry (MoAF), considering the tender procedures and principles of the lender.

All procurement activities for works, goods, Non-Consulting Services and Consulting Services to be carried out under the TUCSAP shall comply with the procedures outlined in the Loan Agreement and this POM and will be aimed at achieving economy and efficiency.

The procurement management is handled jointly by respective PIUs, the PCU, the Procurement Specialists and staff of relevant Departments. They will be responsible for all procurement, financial management, quality assurance, monitoring and evaluations under the Project. The PIUs in the respective GDs will be the central unit, and responsible for day-to-day operations of the Project and will work with all related departments on matters related to project preparation and implementation.

Procurement transactions will be carried out within the framework of the Procurement Strategies prepared specifically for the Project. It is possible to update the Procurement Strategies according to the realizations during the implementation of the project. In addition, detailed Procurement Plans have been prepared on the basis of the General Directorates (including ABDGM) responsible for the components for the first 18 months of the project as provided in Annex 12.

World Bank's STEP System will be used in procurement transactions.

6.2.2 Procurement Principles

Bank's Core Procurement Principles of value for money, economy, integrity, fit for purpose, efficiency, transparency, and fairness will be pursued.

The Procurement Objective under the Project is the selection of most qualified and experienced consultants, most advantageous solutions to MoAF Project Implementing Units through a fair, transparent, open and competitive process with consideration given to value for money, fit-for purpose solutions and integrity for successful implementation of the activities in the project's components. This Objective will be achieved through:

- Effective procurement monitoring and contract management to ensure that activities are undertaken in accordance with established timelines and prompt the flagging of resolution of delays and bottlenecks in the system.
- Formulation of internal control systems to guide procurement processes and procedures.
- Effective coordination among procurement and technical teams to prevent delays, miscommunication and misunderstanding of requirements.

6.2.3 Procurement Responsibilities

The Bank will conduct its procurement functions, including implementation support, monitoring and procurement oversight, in a risk-based approach to ensure that funds are used only for the purposes for which the financing was provided.

The MoAF is responsible for carrying out procurement activities financed by the Bank in accordance with [Procurement-Regulations](#). This includes planning, strategizing, seeking and evaluating Applications/Quotations/Bids/Proposals, and awarding and managing contracts. The MoAF shall retain all Procurement Documents and records of procurements financed by the Bank, as required in the Legal Agreement.

3 Procurement Specialists and 1 Lead Procurement Specialist, whose ToRs are given in Annex 2 of this POM to be employed within the Project Coordinating Unit (PCU) shall be responsible for overall coordination of the procurement implementation under the Project and located at the GD of EU and Foreign Relations (ABDGM). The Lead Procurement Specialist will be responsible for overall planning

and provision of procurement implementation support to the Project activities. She/he will carry out activities related to procurement and project implementation, enable necessary coordination and provide technical assistance to the PIUs and PCU. The Lead Procurement Specialist at the PCU will communicate with the World Bank, monitor the procurement activities of the PIUs, be responsible for the preparation of all kinds of documents such as ToRs, tender documents, and the preparation of notifications and reports on procurement transactions.

While the Procurement Specialist/s recruited under the Project shall be responsible for specific components (2 Procurement Specialists for SC1.1, SC3.1, SC3.2 and SC3.3 activities (TRGM), and 1 Procurement Specialist for all C2 activities (GKGM)), the Lead Procurement Specialist shall be working on the remaining activities, in addition to his/her supervising, reporting and coordination duties, but without any limitations of the respective responsibilities of these Specialist/s that may interchangeably be directed towards other General Directorates' activities as necessary.

Project Implementation Units (PIUs) which are established at each leading GD responsible for specific sub-components of TRGM, GKGM, BTGM and TAGEM will conduct their procurement transactions with the support of the Procurement Specialists in the PCU and each unit will make its own STEP entries. It is planned that all procurements will be conducted by the Administrative Affairs and Coordination Department/s of relevant GDs and the eventual contracts are to be signed/managed by the relevant Departments. In addition, PIUs/PCU will cooperate with the Support Services Department of MoAF in the tender and supervision stages of all construction works. With respect to procurement, the Project Implementing DGs will draft the terms of reference (ToR), technical specifications, bidding documents, and requests for proposals (RFPs) and also conduct the selection of consultants and procurement activities; sign, pay and manage contracts; monitor; and report and all other procurement-related activities. Also, the respective provincial directorates will be responsible for the regular supervision/monitoring of all investments including those under the matching grant/s, operation and maintenance and social and environmental aspects of the activities.

Under Sub-component 3.1, the selected specialized greenhouse (geothermally heated) AGSOIZ will prepare and submit a Subproject Investment Plan (Subproject) along with the PPSD prepared for the contracts envisaged under each individual Subproject. The Subproject Investment Plan, including the PPSD and resulting procurement plan will be submitted to MoAF-TRGM and SBO approvals, and for Bank's non-objection prior to Subproject implementation. MoAF-TRGM will conduct procurement assessment of the selected AGSOIZ, identifying risks and mitigation measures for implementation and procurement arrangements of the Subproject. The AGSOIZ will conduct the procurement activities under its investment plan (Subproject) and when requested by the AGSOIZ, TRGM will provide hands-on support to the AGSOIZ in conducting Subproject's procurement with consideration given to avoid any conflict of interest. The procurement contracts, under the investment plan (Subproject) will be signed by the AGSOIZ and the contractor. AGSOIZ will be responsible for the contract implementation and the payments to the contractors. TRGM will provide close monitoring and will verify compliance of requirements before payments by the AGSOIZ can proceed.

If and when hands on implementation support is required by the respective AGSOIZ, the TRGM PIU shall in pursuance with Article 81 -3 of the Regulation on OIZ Implementation:

- I. provide technical assistance in the preparation of /prepare the SPNs, the Request for Proposals/Bids Documents, clarifications and/or amendments to the Bidding Documents, organizations of site visits and pre-bid meetings, establishing shortlists for the Consultancy services and etc.,
- II. establish the Evaluation Committee/s with participation by the respective AGSOIZ thereof by providing members for the successful implementation of those investment

- proposal/Subprojects and organize the evaluation of the bids by the Evaluation Committee and obtain the necessary approvals,
- III. draft the contracts, provide implementation support in contract management.

Upon completion of the procurements as per Procurement Regulations by TRGM PIU on behalf of the AGSOIZ/s, which are the owner of the investment proposal/s, that AGSOIZ will be responsible for the implementation of the activities via the contracts finalized by TRGM PIU. The consultancy services contracts will be signed by either the MoAF TRGM or the AGSOIZ, depending on the conditions and agreements of each party as included in each Subproject agreements. The AGSOIZ will have the right to include the cost of such consulting services in the investment package or if not included by the AGSOIZ, the MoAF TRGM will have an option to finance such services under the Project.

The procurements under the small matching grants scheme that will be implemented by TRGM under Sub-component 3.2 of the project will be carried out by the eligible project beneficiaries through their established procurement arrangements. However, it is not possible to identify the individual procurement packages at this stage for contracts under the small matching grant schemes of Sub-component 3.2 due to their demand-driven nature. The procurement arrangements for the small grant schemes will be detailed in the Grant Manual agreed by the Bank with due consideration to acceptable commercial practices of the grant beneficiaries.

The contractor/s will be responsible for the implementation of the Contractor's Environmental and Social Management Plan (C-ESMP) and Management Strategies and Implementation Plans (MSIP). MoAF (through the PCU and PIUs) will be responsible for the review and approval of all documents and the quality of each ESIA/ESMP. MoAF will also be responsible for monitoring the implementation of the E&S documents and report the status of implementation to the Bank. All relevant DGs' PIUs through the support of the PCU's members will prepare Stakeholder Engagement Plan (SEP)s for the project activities under their implementation in line with the SEP before civil works begin.

The hiring of the individual experts required for the PCU and PIUs will be conducted by the GDs following the individual consultant selection procedures specified in the Procurement-Regulations. These include, but may not be limited to, procurement specialist/s, financial management specialist/s, social development specialist(s), environmental specialist(s) to be recruited under the PCU and relevant technical experts under the PIUs and the PCU as the case may be.

The MoAF PIU/s, PCU and the AGSOIZ are responsible for management of all steps of procurement cycle which includes, but are not limited to the following operations (as applicable in accordance with the procurement procedures concerned):

- Preparation of Procurement Plans (PP);
- Finalization of technical specifications and terms of reference and submission to the Bank for review and no-objection, in a format acceptable to the Bank;
- Preparation of General Procurement Notices, Specific Procurement Notices and Requests for Expressions of Interest and submission for publication;
- Preparation and Finalization of bidding documents/requests for proposals, and their clearance with the World Bank;
- Issue of bidding documents.
- Receipt of expressions of interest;
- Preparation of short list, Firms' Ranking Report in the case of CQS if required;
- Dissemination of bidding documents/requests for proposals;
- Submission of bids to the Evaluation Committee for opening

- Public opening of bids/proposals, if required;
- Preparation of technical evaluation report based on evaluations by the Evaluation Committee.
- Recording and keeping original copies of bidding/performance/advance payment guarantees, bonds, insurance certificates or securities;
- Submission of the Letters of Expression of Interest (LEI)/bids/proposals/CVs to the Evaluation Committee for evaluation;
- Preparation of evaluation reports and their submission to the Bank for “no-objection” if required;
- Preparation of draft contracts and finalization with the management of PIU/s, PCU and the AGSOIZ under Sub-component 3.1;
- Notifications to unsuccessful bidders and returning of bid guarantees/securities if applicable;
- Publication of Contract Award Notices;
- Contract management; review of contract execution documentation (reports, acceptance certificates and delivery documents, etc.) and ensuring its compliance with contract conditions;
- Record keeping; all documentation with respect to each procurement will be retained by MoAF PIU/s, PCU and the AGSOIZ according to the requirements of the Loan Agreement. MoAF PIU/s, PCU and the AGSOIZ will furnish such documentation to the World Bank upon request for examination by the World Bank or by its consultants/auditors. Documents with respect to procurement subject to post review will be furnished to the World Bank upon request.
- Providing assistance, procurement related documents and information during implementation support and post review missions of the Bank;
- Preparing progress reports on procurement as part of the overall project progress reports.
- Administration of payments to contractors/consultants/suppliers as described in this Manual.
- Upon completion of the contract, release of Performance Securities.

The PCU’s and PIUs’ role and responsibilities on the steps/stage/s of the selected procurement method/s are given in Annex 13-Process Flow Tables as per Procurement Methods. However, for a short overview, are also given briefly below (Table 17).

Table 17. Procurement Specialists per Department/Component/Sub-component

Component / Sub-component	Technical Departments to lead implementation	Procurement supported by	
ABDGM PCU			
Component 4	Department of International Organizations	Administrative Affairs and Coordination Department	Lead Procurement Specialist
TRGM PIU			

Sub-component 1.1. Narrowing information gaps to enhance soil health and land-use planning/management	Soil Conservation and Land Evaluation Department	Administrative Affairs and Coordination Department + Support Services Department ²³	Procurement Specialist 1 + Procurement Specialist 2	
Sub-component 3.1 Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production	Organized Agriculture and Livestock Zones Department			
Sub-component 3.2: Promoting the adoption of CSA technologies/ practices	Agriculture Technology and Mechanization Department			
Sub-component 3.3: Reducing animal production pressures on water pollution and GHG emissions.	Department of Protection of Agricultural Environment and Natural Resources			
GKGM PIU				
Sub-component 2.1: Strengthening the capacity of veterinary control institutes	Animal Quarantine Services Dept.	Administrative Affairs and Coordination Department	Support Services Department	Procurement Specialist 3
Sub-component 2.2: Strengthening and improving veterinary medical product controls for animal infectious and vector-borne diseases and zoonoses	Veterinary Health Products and Public Health Department			
BTGM PIU				
Sub-component 1.2: MoAF digital blueprint for sectoral information collection and management	Department of Project and Institutional Architectural Development Department	Administrative Affairs and Coordination Department	Lead Specialist	Procurement
TAGEM PIU				
Sub-component 3.4: Research and innovations to support CSA in Turkiye	Soil and Water Resources Research Department	Administrative Affairs and Coordination Department + Support Services Department	Lead Specialist	Procurement
	Plant Health Research Department			

*The respective responsibilities of these Specialist/s may interchangeably be directed towards other General Directorates' activities as necessary.

²³ In Sub-components 1.1 and 3.1 and in other sub-component Activities where the activity involves civil works.

Effective coordination among PCU and PIUs

Effective coordination shall be established among PCU's and PIU's procurement and relevant department technical teams to prevent delays, miscommunication and misunderstanding of requirements. Effective procurement monitoring and contract management to ensure that activities shall be undertaken in accordance with established timelines and prompt the flagging of resolution of delays and bottlenecks in the system. Formulation of internal control systems to guide procurement processes and procedure are set up among PCU and GD PIUs. Effective coordination within PIUs and between PCU and PIUs shall be kept under regular review of General Director of relevant directorates and PCU's functions will be overseen by the leading Deputy Minister.

6.2.4 Project Procurement Strategy for Development (PPSD)

As required by the [Procurement-Regulations](#), the MoAF has developed a Project Procurement Strategy for Development (PPSD) and uploaded into World Bank's Systematic Tracking of Exchanges in Procurement (STEP) whereby how procurement activities would support project operations under the Project for the achievement of the Project Development Objectives are defined in detail.

Supplementary PPSDs will be prepared for additional activities/procurements identified after the completion of the Feasibility Plans as in the Case of Sub-component 1.2.

The PPSD/s will be updated during the project implementation based on actual procurement progress (e.g., after feasibility studies finalized, if necessary) and further developments on operational context, institutional capacity, market conditions.

Once a contract package is determined by AGSOIZ under Sub-component 3.1, the MoAF TRGM will assess its procurement capacity and submit an update to the project PPSD to the Bank for its review and approval. Furthermore, the resulting procurement plan will be submitted by the MoAF and approved by the Bank before initiating the procurement.

No procurement process shall be initiated before the approval of the relevant E&S studies by the Bank and if needed, preparation of the supplementary "Project Procurement Strategy for Development – PPSDs" for activities that involves/requires preparation of E&S studies.

Specific ESF instruments, including Environmental and Social Impact Assessments (ESIAs) as deemed necessary by the Bank for specific investments shall be developed during project implementation and disclosed and consulted before the tendering process for civil works initiates.

6.2.5 Procurement Plan (PP)

A procurement plan covering the first 18 months is agreed by the Bank and attached to this POM as Annex 12. Given that some of the contracts are demand driven and their scope, size, and duration can only be determined after a needs analysis is conducted, indicative contract amounts, and time schedules were given for these contracts in the procurement plan. The MoAF PIU/s will prepare an update to the project PPSD for such contracts determined after the needs analysis, and procurement plan will be updated accordingly. The contracts, envisaged as to be multiple contracts in the Procurement Plan shall be uploaded into STEP when the related activity is due to support project implementation and meanwhile still allowing the necessary time required for the relevant procurement transactions in the initial stages of procurement roadmap.

All procurements shall be undertaken in accordance with the Procurement Plan.

The Procurement Plan and their updates shall be subject to the Bank’s review and approval. In agreement with the Bank, the procurement plans will be updated by the PIUs and the PCU at least annually or as required during project implementation to reflect any substantial changes in procurement approaches and methods to meet actual project implementation needs, market fluctuations, and improvements in institutional capacity. The update of the procurement plan should be based on the readiness of the selected Subprojects/activities for implementation upon assessment of the quality and readiness by the PIUs and the PCU as relevant. Only activities included in the procurement plan agreed with the World Bank may be procured and financed from IBRD loan proceeds.

6.2.6 STEP System

In accordance with [Procurement-Regulations](#), the Bank’s Systematic Tracking and Exchanges in Procurement (STEP) System will be used to prepare and manage Procurement Plans and to conduct all procurement transactions for the Project, including preparing, updating and clearing this plan, and seeking and receiving the Bank’s review and No-objection to procurement actions as required.

PCU and PIUs will use STEP to create and publish all procurement notices under the project, including the General and Specific Procurement Notices, Requests for Expression of Interest, and Contract Award Notices as and when required, i.e., in international competitive procurement where the agreed market approach is “Open International” in the agreed Procurement Plan.

The MoAF PIUs and the PCU shall create the Procurement Plan through STEP as a pre-requisite to initiating any procurement activity. All the procurement-related complaints will be recorded in the STEP complaint module by the respective PIU/PCU.

A list of procurements that may be performed by beneficiaries under Sub-component 3.2 will be recorded in a format agreed by the Bank and specified in the Grants Manual, and these records will be uploaded into STEP by the TRGM PIU at least annually but not later than the closing date of the project.

6.2.7 Methods for Procurement, Procurement Thresholds and Monitoring by WB

The following conditions and procurement methods apply to all procurement activities under the Project. The other elements of the Procurement Plan as required under paragraph 4.4 of the [Procurement-Regulations](#) are set forth in STEP, including brief description of the activities/contracts; the selection methods to be applied; cost estimates; time schedules; the Bank’s review requirements; and any other relevant procurement information.

Table 18. Procurement Methods, Procurement Thresholds for Goods, Works and Non-Consulting Services

Procurement Method	Procurement Method Threshold	Prior Review Threshold (at or above the threshold)
RFB/Open International Works	No procurement method threshold	US\$10,000,000
RFB/Open National Works	Contracts valued less than US\$ 30,000,000	US\$10,000,000
RFB/Open International		US\$2,000,000

Goods, Information Technology and Non-consulting Services	No procurement method threshold	
RFB/Open National Goods, Information Technology and Non-consulting Services	Contracts valued less than US\$ 2,000,000	No prior review
RFQ-Works	Contracts less than US\$200,000	No prior review
RFQ-Goods, Information Technology /Non-consulting Services	Contracts less than US\$100,000	No prior review

Table 19. Procurement Methods, Procurement Thresholds for Selection of Consultants

Selection Method	Selection Method Threshold	Prior Review Threshold (at or above the threshold)
Quality and Cost Based Selection (QCBS)	No selection method threshold	US\$1,000,000
Selection Based on Consultants Qualification (CQS)	Contracts valued less than \$300,000	No prior review
Individual Consultants (INDV)	No selection method threshold	US\$300,000

The terms of references of any financial management, audit, procurement or legal consultants financed by the project shall be sent to the Bank for its comments.

Special Arrangements

- The Bank's Standard Procurement Documents²⁴: shall be used for all contracts subject to international competitive procurement and those contracts as specified in the Procurement Plan tables in STEP. For the procurements not subject to international competitive selection the procurement documents agreed by the Bank shall be used. When approaching the national market, bidding documents accepted by the World Bank shall be used.
- Advance Procurement: Advance procurement will be considered under the project, subject to the conditions defined in paragraph 5.1 of the [Procurement-Regulations](#) for Borrowers.
- Review Procedure: The procurements under the project are subject to the Bank's prior review as stipulated in above tables and in STEP.
- Procurement of Second-Hand Goods: Not applicable.
- Domestic preference (as specified under paragraph 5.51 of the [Procurement-Regulations](#)): Not applicable.
- Operational costs will not be considered under World Bank procurement implementation.

²⁴ The Bank's Standard Procurement Documents are available at the following address: "[Bank's Standard Procurement Documents](#)"

6.2.8 Publication of Procurement Opportunities

For international competitive procurement, the procurement notices will be published automatically through STEP on the Bank's external website and United Nations Development Business (UNDB) Online, as well as locally on MoAF's website and in at least one newspaper of national circulation in the Borrower's country or in the official gazette by the Procuring Entity, whether it be a PIU, the PCU and the selected AGSOIZ under Sub-component 3.1. For procurements with National Open Market approach, the Procuring Entity shall advertise the Specific procurement notice/s (SPN/s) on its free access website and in at least one newspaper of national circulation in the Borrower's country or in the official gazette.

6.2.9 Procurement Monitoring by the World Bank

The World Bank will review the procurement arrangements performed by the Procuring Entities under the Project, including contract packaging, applicable procedures, and the scheduling of the procurement processes, for their conformity with the Legal Agreement. Procurements that did not have ex-ante due diligence by the World Bank will be subject to ex-post due diligence on a sampling basis, in accordance with the procedures set forth in Paragraphs 4 and 9 of Annex II of the [Procurement-Regulations](#). A post-review of the procurement documents will normally be undertaken annually and/or during the World Bank's supervision mission, or the World Bank may request to review any particular contract at any time. In such cases, the PIU/s, the PCU and the AGSOIZ/s selected under Sub-component 3.1 and the beneficiaries under Sub-component 3.2 will provide the World Bank the relevant documentation for its review.

The PIU/s, the PCU and the AGSOIZ/s selected under Sub-component 3.1 and the beneficiaries under Sub-component 3.2 will keep a complete and up-to-date record of all procurement documentation and relevant correspondence in its files which will be reviewed by Bank staff during implementation support missions. Procurement and contract management monitoring reports will be submitted semi-annually as an integral part of the reporting on project implementation.

Using STEP, comprehensive information of all contracts for goods, works, technical services and consultants' services awarded under the whole Project, no matter those are subject to the World Bank's prior-review or post-review, will be available automatically and systematically on an annual basis and/or whenever required, including but not limited to: (a) reference number as indicated in the Procurement Plan and a brief description of the contract; (b) estimated cost, (c) procurement method; (d) timelines of the bidding process, (e) number of participated bidders, (f) names and reasons of rejected bidders, (g) date of contract award; (h) name of awarded supplier, contractor or consultant; (i) final contract value and (j) contractual implementation period.

Procurement activities, as per the agreed procurement plan which are subject to prior review will require the World Bank's No Objection. Prior review of the procurement process by the Bank is indicated in the procurement plan and the documents listed in Paragraph 7 of Annex II of the Bank's [Procurement-Regulations](#) shall be submitted by the Procuring Entities under the Project for Bank's prior review and no objection, and these documents shall be retained as specified in Paragraph 8 of the same.

Mis-procurement: If the Bank determines that the goods, works or services were not procured in accordance with the agreed procedures, as reflected in the Loan Agreement and detailed in the Procurement Plan approved by the Bank or that the contract itself is not consistent with such procedures, it may declare mis-procurement as established in the Bank's [Procurement-Regulations](#). The Bank shall promptly inform the Borrower the reasons for such determination.

6.2.10 Bid Evaluation Committee

Bid Evaluation Committee (BEC) shall be formed of three (3) to five (5) members depending on the size of the Procurement to evaluate and analyze bids, assign technical committees, if necessary, report on bid's evaluation results and conclude the evaluation result. One member shall be appointed to act as the Head of the Committee. When assigning Bid Evaluation Committee members, special attention shall be paid to assign staff with relevant experience and knowledge on the subject matter of procurement. The competence and integrity of the members of the Evaluation Committee are crucial for ensuring a fair and objective evaluation of proposals. To the extent possible the Evaluation Committee should be composed of individuals of comparable hierarchical level. The Evaluation Committee members may be selected from:

- a) Procurement officers of the concerned unit of the Procuring Entity; and
- b) officers experienced in technical, commercial, financial or legal matters.

To ensure the integrity of the selection process, members of the Evaluation Committee should exercise their function in accordance with the highest ethical standards. The Committee Members are expected to be impartial and objective in the process and disclose any actual or potential Conflict of Interest in writing to the Procuring Entity. The concerning official must be removed from that particular procurement. A file shall be documented accordingly.

The Procuring Entity, whether it may be the MoAF PIU/s, the PCU an/or the AGSOIZ under Sub-component 3.1 shall treat information relating to the examination, clarification, and evaluation of Applications/Bids/Proposals in such a way as to avoid disclosure of their contents to any other Applicant/Bidder/Proposer/Consultant participating in the selection process, or any other party not authorized to have access to this type of information, until the Procuring Entity notifies the outcome of evaluation of Applications/Bids/Proposals, in accordance with the procedures in the applicable Procurement Documents. Additionally, the members of the Evaluation Committee should confirm that:

- they are not in any conflict of interest (Annex 14 for CoI Declaration);
- they understand the rating and scoring system²⁵ in case of Selection of Consultants and the Evaluation Criteria in case of RFB/RFQ methods;
- they have been provided with evaluation worksheets; and
- they agree on the method to evaluate the proposals before the opening of the Eols/proposals/bids/quotations as appropriate.

In the Selection of Consultants:

1. the Evaluation Committee shall agree upon criteria and sub criteria definitions, and on rating and scoring methods before the receipt of the applications/proposals and each committee member shall evaluate the proposals independently
2. Whenever possible, the Evaluation Committee should include one or more members of the team responsible for preparation of the TOR. If the relevant PIU or the PCU lacks the expertise to carry out the evaluation, it shall hire an independent consultant to assist the Evaluation Committee.
3. Members of the Evaluation Committee should not have any communication with applicants/shortlisted firms/individuals from the date of their committee membership appointment to the date on which the contract is awarded. The Evaluation Committee submits its report and recommendations to the designated decision-making authority for review and

²⁵ In the Selection of Consultants,

transmission to the Bank for no-objection if the contract is subject to its prior review, or for review and award for contracts subject to post review.

6.2.11 General Procurement Procedures

Applicability

The rights and obligations of the Procuring Entity/ies, the PIU/s, the PCU and the AGSOIZ under Sub-component 3.1 of the Project and the providers of Goods, Works, Non-consulting Services and Consulting Services for Investment Project Financing (IPF) operations are governed by the relevant request for bids/request for proposals document and by the contracts signed by the Procuring Entity/ies and the providers of Goods, Works, Non-consulting Services, and Consulting Services, and not by the [Procurement-Regulations](#) or the Loan Agreement under which these contracts are financed.

Eligibility

The Bank permits eligible firms and individuals from all countries to offer Goods, Works, non-consulting Services, and Consulting Services for Bank-financed projects. The provisions governing eligibility under Bank financed projects are further detailed in paras.3.21- 3.24 of the [Procurement-Regulations](#).

Tenders cannot be limited to domestic bidders. With regard to eligibility to participate in tenders, no restriction can be imposed on the nationality of the bidder and / or on the origin of the goods, except as provided for in paragraph 3.23 of the Procurement Regulations. No restriction may be imposed on a foreign tenderer who wishes to bid.

Participation in tenders cannot be limited to previously registered companies, and foreign bidders may not be required to register with local authorities as a precondition for bidding. Joint ventures should be allowed to participate, provided that joint venture members are held jointly and severally liable under the contract. Contracting authorities shall use the tender documents agreed with the Bank.

6.2.12 Development of Technical Requirements

Standards and technical specifications in applicable Procurement Documents shall promote the broadest possible competition, while ensuring performance or other requirements for the procurement. To the extent possible, in international competitive procurement, the Borrower shall specify internationally accepted standards with which the equipment, materials or workmanship shall comply. When such international standards do not exist or are inappropriate, national standards may be specified.

In all cases, the Procurement Documents shall state that equipment, material, or workmanship meeting other standards that are at least substantially equivalent to the specified standards will also be accepted.

Specifications shall be based on relevant technical characteristics and/or performance requirements. References to brand names, catalogue numbers, or similar classifications shall be avoided.

6.2.13 Competitive selection

The default market approach is open competitive selection under Bank procurement. The use of other methods/market approaches requires justification/further elaboration in the PPSD and/or its updates.

6.2.14 Standard Procurement Documents

The most recent Standard procurement documents applicable to the [Procurement-Regulations](#), available on its external website at www.worldbank.org/procurement/standarddocuments shall be used for all the procurements under the project, irrespective of their value. In exceptional cases and for small value procurements, altered bidding documents can be used based on prior approval from the World Bank.

For all procurement subject to international competition (open or limited), MoAF PIUs/PCU shall require the winning bidder to provide Beneficial Ownership information. Until the 2021 version of SPDs are updated by the Bank to reflect the requirement for the winning bidder to provide Beneficial Ownership information, the following provisions shall be completed by MoAF to reflect application of this requirement. The following is based on SPD-RFBs for Goods, 2021. Similar changes shall be made, as appropriate, on procurement documents based on other SPDs.

1. Specific Procurement Notice (SPN): Paragraph 8 shall be completed to read *“Attention is drawn to the Procurement Regulations requiring the Borrower to disclose information on the successful bidder’s beneficial ownership, as part of the Contract Award Notice, using the Beneficial Ownership Disclosure Form as included in the bidding document.”*
2. Bid Data Sheet (BDS) ITB 45.1: It will be specified that *“The successful Bidder shall submit the Beneficial Ownership Disclosure Form.”*

6.2.15 Short-Listing in the case of QCBS Method/Firms’ Ranking Report in the case of CQS Method

The Administrative Affairs and Coordination Department/s will organize and coordinate the evaluation committee’s meetings for preparation of the short lists/Firms’ Ranking Reports, based on the expressions of interest (EOIs) received. Copies of the EOIs will be timely provided to members of evaluation committee/s, and criteria for evaluation will be agreed among committee members.

The objective of a request for EOIs is to provide sufficient information so that the implementing agency may evaluate the consultants; capabilities and eligibility to undertake the assignment. The information requested shall be the minimum required to make a judgment on the firm’s suitability and not be so complex as to discourage consultants from expressing interest. EOIs shall at a minimum include the following information applicable to the assignment: required qualifications and experience of the firm, but not individual experts’ bio data; short-listing/ranking criteria; and conflict of interest provisions.

Assignments completed by the Consultant’s individual experts working privately or through other consulting firms cannot be claimed as the relevant experience of the Consultant, or that of the Consultant’s partners or sub-consultants, but can be claimed by the Experts themselves in their CVs.

No less than 14 (fourteen) days from date of advertisement shall be provided for responses, before preparation of the short list. No evaluation of key staff should be done or allowed at this stage. Information to be sent by consulting firms should include the following: (1) core business and years in business, (2) qualifications in the field of the assignment, (3) technical and managerial organization of the firm, and (4) general qualifications and number of key staff. If consulting firms wish to express interest indicating that a joint venture would be established, the firm shall send information for each member, as a separate assessment will also be done for each firm in the proposed joint venture. In addition to the information asked for by the request for EOIs, consultants should call the implementing

agency's attention to any conflicts of interest that they know about that may affect the objective performance of their services for the agency. Given the often-large number of submissions, firms should pay attention to the importance of brevity of the information to be sent. No legal documents such as certificates of incorporation of the firm, powers of attorney, financial statements, or translations of standard brochures will be requested or sent.

6.2.16 Bidding Procedure

The time allowed for the preparation and submission of Bids/Proposals shall be determined with due consideration of the particular circumstances of the project and the magnitude, risk, and complexity of the procurement.

The minimum period allowed for preparation of Bids/Proposals shall be thirty (30) Business Days for open international competitive procurement, unless otherwise agreed with the Bank. For complex procurement, the Borrower may arrange a preBid/pre-Proposal conference in which potential Bidders/Proposers/Consultants may meet with Borrower representatives to seek clarifications.

The Borrower should also provide reasonable access to project sites for prospective Bidders/Proposers/Consultants.

The deadline and place for the receipt of Bids/Proposals shall be specified in the SPN and the request for bids/request for proposal document.

Potential Bidders/Proposers/ Consultants may submit Bids/Proposals by mail or in person.

6.2.17 Evaluation of Bids

Evaluation criteria and methodology shall be specified in detail in the request for bids/request for proposals document. The evaluation criteria and methodology shall be appropriate to the type, nature, market conditions, and complexity of what is being procured.

For international competitive procurement, the Bank's requirements for the submission of Bid/Proposal prices (format, structure and details), and method of comparison and evaluation of Bid/Proposal prices (including treatment of taxes levied in the Borrower's country for procurement of Goods, Works, Non-consulting services, and Consulting Services) are detailed in the appropriate Standard Procurement Documents (SPDs).

Evaluation of bids/quotations: Evaluations will be carried out in accordance with the provisions of the bidding documents.

Evaluation committee/s will perform the evaluation of received bids (or quotations) / and prepare the evaluation reports. Evaluation reports with the recommendation of contract award are to be signed by all the members of the Evaluation Committee/s.

Evaluation of consultants' technical proposals: After an Evaluation Committee (EC) has been appointed, the Procurement Specialists (the person who is in charge of the subject solicitation) and the Manager of the PCU or PIU should familiarize the committee members with the subject RFP (in particular the TOR, evaluation criteria and sub-criteria specified in the Data Sheet) and with all related procedures. If needed, a pre-opening meeting or workshop regarding the function of the committee may be held. This is to help EC members to achieve a common understanding of the evaluation method, the evaluation criteria and sub-criteria, and a joint definition of the rating system, including the definition of the ratings. The meeting/workshop shall be organized latest shortly before the

deadline for submission of the proposals. If the scoring system were defined after opening the technical proposals, the definition of the scoring system and of the technical scores could be biased by the knowledge of the contents of the proposals. To minimize the risk of undue influence on any member of the evaluation committee, these meetings should take place before the opening of the proposals. The members of the EC should confirm that:

- they are not in any conflict of interest;
- they understand the rating and scoring system;
- they have been provided with evaluation worksheets; and
- they agree on the method to evaluate the proposals.

After the proposals have been received, the EC proceeds with the opening session and evaluation meetings of the technical proposals while the financial proposals remain sealed and secured. Each committee member should evaluate proposals individually without taking the original document outside the premises where the tender document submitted. Each member will establish, as part of the evaluation process, whether the proposals are substantially responsive, that is, if there are no material omissions or deviations from the stated objectives, ToR, or other key requirements of the RFP. The EC will establish whether a proposal passes the minimum technical score, if one is provided in the RFP. Results of individual evaluations are recorded on pre-established worksheets.

The technical evaluation report should include an analysis of the strengths and weaknesses of each consultant in support of their technical scores. The technical evaluation report is sent to the WB for review and no objection.

Evaluation of consultants' financial proposals: After receipt of the WB's no objection, the opening of the financial proposals is organized, and proposals are opened in public (depends on the pandemic situation). After the Head of the EC verifies that financial proposals have remained sealed, the authorized representative opens them. The name of the consultant, the quality scores, and the proposed prices are read aloud and recorded as each financial proposal is opened. No modifications to the financial proposals are permitted. The Procurement Specialist prepares the minutes of the public opening, which should be attached to the Financial Evaluation Report. The committee will first review the proposals for arithmetical errors and consistency between the financial and technical proposals (e.g., omissions of items included in the technical proposals). Arithmetical errors should be corrected, omitted items evaluated, and the corresponding adjustments made to the offered prices to obtain the final evaluated prices. For example, if a technical proposal indicates the presence of the team leader at the assignment site for 12 months and the financial proposal indicates only 8 months, an adjustment should be calculated by adding the corresponding amount of staff remuneration to the proposed amount. For the purpose of comparing proposals, evaluated prices should be converted to a single currency using the exchange rate, date and source indicated in the RFP. The scores of the evaluated prices should then be calculated according to the formula provided in the RFP.

Preparations for negotiations with consultants: The Procurement Specialist will notify in writing the consultant which obtained the highest combined technical and financial score, for contract negotiations. The notification will indicate the date and time set for negotiations. The Evaluation Committee of the subject contract and the PIU/PCU Director will lead the negotiations and could use other technical staff (if necessary) who are familiar with the ToR. Before the negotiation process, the attending members shall meet in order to discuss the weaknesses of the consultants' proposal, what to be asked further, any unclarified matters related to the technical and financial proposal which to be corrected before contract signature, and any recommendations of DGs' technical and/or field personnel who will work with the consultant in the field.

Items subject to negotiation: Depending on the selection method and proposed type of consulting contract, technical and financial items that may be negotiated include as per the Procurement Regulations and the tender documents: scope of the work; technical approach and methodology; work plan and activity schedule; organization, staffing, and time schedule for key staff; deliverables; counterpart staff; counterpart facilities and equipment; contract conditions; reimbursable expenses and proposed contract price. Unit rates, such as staff remuneration or unit rates proposed for reimbursable expenses, and proposal price cannot be negotiated **when cost is a factor for the selection.**

6.2.18 Award of Contract

Following the decision to award the contract (or in the case of FAs, the decision to conclude a FA), the Procuring Entity under the Project shall promptly and simultaneously provide, by the quickest means available, and as further specified in the request for bids/request for proposals document, written notification of the Procuring Entity's intention to award the contract to the successful Bidder/Proposer (Notification of Intention to Award), (or, in the case of FAs, notification of intention to conclude a FA). Such notification shall be sent to each Bidder/Proposer that submitted a Bid/Proposal (unless the Bidder/Proposer has previously received notification of exclusion from the process at an interim stage of the procurement process).

6.2.19 Standstill Period and Debriefing by the Procuring Entity

Transmission of the Procuring Entity's Notification of Intention to Award (or in the case of a FA, notification of intention to conclude the FA), begins the Standstill Period. The Standstill Period shall last ten (10) Business Days after such transmission date. The contract shall not be awarded either before or during the Standstill Period.

On receipt of the Procuring Entity's Notification of Intention to Award, an unsuccessful Bidder/Proposer/Consultant has three (3) Business Days to make a written request to the Procuring Entity for a debriefing. The Procuring Entity shall provide a debriefing to all unsuccessful Bidders/Proposers/Consultants whose request is received within this deadline. Where a request for debriefing is received within the deadline, the Procuring Entity is required to provide a debriefing within five (5) Business Days, unless the Procuring Entity decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the Standstill Period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the Standstill Period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Procuring Entity shall promptly inform, by the quickest means available, all Bidders/Proposers/Consultants of the extended Standstill Period.

Where a request for debriefing is received by the Procuring Entity later than the three (3) Business Day deadline, the Procuring Entity should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Contract Award Notice.

Requests for debriefing received outside the three (3) Business Day deadline shall not lead to an extension of the Standstill Period.

Debriefings of unsuccessful Bidders/Proposers/Consultants may be done in writing or verbally.

The Procuring Entity shall not impose undue formal requirements that would restrict the Bidder's/Proposer's/Consultant's ability to receive a timely and meaningful debriefing. The Bidder/Proposer/Consultant shall bear their own costs of attending a debriefing meeting.

As a minimum, the debriefing shall repeat the information contained in the Notification of Intention to Award and respond to any related question(s) from the unsuccessful Bidder/Proposer/Consultant. The debriefing shall not include:

- point-by-point comparisons with another Bidder's/Proposer's/Consultant's Bid/Proposal and
- information that is confidential or commercially sensitive to other.

A written summary of each debriefing shall be included in the official procurement records, and copied to the Bank for contracts subject to prior review Bidders/Proposers/Consultants.

6.2.20 Notification on the Results of the Tender

For all contracts, whether subject to the Bank's prior review or post review, the Procuring Entity shall publish a public notice of award of contract (Contract Award Notice) within 10 (ten) Business Days from the Notification of Contract Award to the successful Bidder/Proposer/Consultant. The Paragraphs 5.94 and 5.95 of the Bank's [Procurement-Regulations](#) underlines the minimum information requirements that the Contract Award Notice shall include and where it shall be published.

For all procurement subject to international competition (open or limited), Contract Award Notice publication shall include the Beneficial Ownership Disclosure Form provided by the successful bidder/proposer/consultant.

6.2.21 Contract Management

The aim of contract management is to ensure that all parties meet their obligations. Contracts shall be actively managed by the Procuring Entities throughout their life to ensure that Contractor/Consultant/Supplier performance is satisfactory, appropriate stakeholders are informed and all contract requirements are met.

6.2.22 Conflict of Interest

The MoAF PIUs, the PCU and the AGSOIZ/S under Sub-component 3.1 of the Project is responsible for carrying out project procurement activities in accordance with the [Procurement-Regulations](#). This includes the application of the Core Procurement Principles, and in particular the principles of fairness, integrity and transparency.

Under the Bank's Procurement Policy, the Procuring Entities must ensure all parties involved in Bank-financed procurement do not have a conflict of interest. The Project shall follow the provisions stipulated in para. 3.15 in the case of Goods, Works and Non-consulting Services for a firm to be considered to have a conflict of interest and para.3.17 in the case of Consulting Services for the Consultants not to be hired under such circumstances.

6.2.23 Procurement related Complaints

Immediately upon received, all the procurement related complaints will be recorded in the STEP complaint module by the respective Procuring Entity, i.e, the MoAF PIU/s²⁶ and the PCU.

In any case, none of the Procuring Entities will proceed with the next stage/phase of the procurement process, including with awarding a contract without satisfactory resolution of the complaint(s). Complaints will be responded by the MoAF PIU/PCU/AGSOIZ under Sub-component 3.1 within a reasonable timeframe and no later than fifteen business days. **Not recording Complaints in STEP constitutes procurement noncompliance per paragraph 3.25 of the [Procurement-Regulations](#).** In cases of procurement noncompliance, the World Bank may, in addition to exercising the legal remedies set out in the legal agreement for the project, take other appropriate actions, including declaring misprocurement.

The World Bank monitors how Borrowers/Recipients handle Complaints received on all contracts to ensure that they are addressed promptly and fairly. However, for contracts not subject to prior review, the PIU/s, the PCU and the AGSOIZ as the case may be, are not required to submit the proposed draft response to the Complaint for the World Bank's review prior to its issuance to the complainant. When selecting a sample of contracts to be post reviewed, contracts that have a Complaint will be prioritized.

Right to Complain

Circumstances in which a formal complaint may be lodged against a Procuring Entity, whether it be MoAF PIU, the MoAF PCU or the selected AGSOIZ under Sub-component 3.1 are outlined below and are by no means exhausting all possibilities:

- a) in the case of National Procurement Procedures (NPP) as per paras 5.3 -5.7 of the [Procurement-Regulations](#), Request for Bids (Open International) and Request for Quotations Methods:
 - i. advertisement procedures not properly adhered to;
 - ii. bid Documents not ready when the advertisement was published by the Procuring Entity or not available when requested by a potential Person, where applicable;
 - iii. failure to respond to a request for clarification from a potential Bidder as per the Bidding Documents;
 - iv. technical specification that can be met by only one or a small number of manufacturers;
 - v. failure to hold an advertised pre-bid meeting or to properly notify potential Persons of a change in the date, location, time, etc. that resulted in some potential Persons failing to attend the meeting, where applicable;
 - vi. failure to hold the Bid opening as stated in the Invitation for Bids or improper conduct at the Bid opening, where applicable;
 - vii. mishandling of Bids received from Persons resulting in the early opening of one or more Bids that produces either a loss of confidentiality of the Bid or an actual failure to open a Bid at a public opening;

²⁶ AGSOIZ/s under Sub-component 3.1 when received such procurement related complaint/s, shall share it in writing with the MoAF TRGM PIU, for to be processed in STEP by the same in consultation with the relevant AGSOIZ.

- viii. failure to open all Bids which were received prior to the deadline for the submission of Bids;
 - ix. failure by the Bid Evaluation Committee to evaluate the Bids in compliance with the evaluation criteria stated in the Bid Documents;
 - x. any attempt by the Procuring Entity to 'negotiate' with the successful Bidder;
 - xi. perceived unfair or erroneous award of Contract; and
 - xii. possible corrupt or collusive or similar practices.
 - xiii. Bidding restricted to domestic bidders/ pre-registered firms,
 - xiv. foreign bidders required to be registered with the local authorities as a prerequisite for submitting bids
 - xv. Restrictions on the origin of goods
- b) in the case of Requests for Proposals as per Quality and Cost Based Selection (QCBS) and Consultant's Qualification-based Selection (CQS):
- i. failure on the part of the Procuring Entity to maintain confidentiality of the Proposals;
 - ii. failure to evaluate the Proposals in accordance with the evaluation criteria set out in the RFP;
 - iii. perceived unfair conclusion of the negotiations and proceed to the next ranking Consultant/award of Contract; and
 - iv. possible corrupt or collusive practices.
- c) In the case of Commercial Practices under Sub-component 3.2 if the following documentation have been prepared and under use in the procurement process:
- i. technical specification that can be met by only one or a small number of manufacturers;
 - ii. perceived unfair or erroneous award of Contract/Purchase Order; and
 - iii. possible corrupt or collusive or similar practices.
 - iv. Bidding process not properly adhered to specified terms and Conditions;

Those other complaint/s when such Bidding Documentation is/was not prepared in case of Commercial Practices under Sub-component 3.2, the Grievance Redress Mechanism (GRM) established for the Project shall be used for lodging complaints. This will be ensured through informing the relevant chambers of commerce/arts & craftsman and etc. about the Project and its GRM.

General requirements for Procurement-related Complaints

Complaints submitted in writing to the Procuring Entities by 'interested parties'²⁷ and identifying the name, contact details, and address of the complainant are subject to the timelines and procedures set out below:

²⁷ An interested party for this purpose means an actual Bidder/Proposer/Consultant seeking to obtain the contract at issue. Potential Applicants/ Bidders/Proposers/Consultants are also interested parties in relation to complaints challenging request for bids/request for proposals document, or any other Borrower document requesting bids/Proposals or Applications.

Timeline and process for review and resolution of Complaints

The MoAF PIU/s, the PCU and the AGSOIZ under Sub-component 3.1 will handle all procurement related complaints in strict compliance with [Procurement-Regulations](#) and particularly as described in Annex III of [Procurement-Regulations](#) **when using the Standard Procurement Documents of the WB.**

When, in exceptional cases and for small value procurements where altered bidding documents are used, the complaint submitted to the Procuring Entity in writing including the Name/Title, Address and Contact Information of the complainant party shall be subject to the timetable and procedures given below²⁸:

- The complaint, for opposing to the documents for the invitations to the proposal/quotation and other Procuring Entity documents for requesting proposals/quotations shall be submitted to the respective Procuring Entity at least three (3) Business Days prior to the deadline for submission of Proposal/bid/quotation: the Borrower shall confirm in written the receipt of the complaint no later than the following business day and submit the response to the complainant party in no later than 3 (three) business days following the date of receipt. In the case of the Borrower's decision to change the document for the invitation to the proposal (RFB/RFP/RFQ or other bidding documents) or other documents, the Procuring Entity shall issue an addendum and extend the deadline for proposal/bid/quotation, if necessary.
- The complaint challenging the exclusion from a procurement process prior to contract award at least three (3) Business Days following the Procuring Entity's transmission to the interested party of notice of such exclusion: The Procuring Entity shall confirm in written the receipt of the complaint no later than the following Business Day and submit the response to the complainant party in no later than 3 (three) business days following the date of receipt. In the case of the Procuring Entity's decision to change the result of a previous phase of the bidding, the Procuring Entity shall immediately submit a notification regarding the results of the revised evaluation as well as the document defining the next steps.
- The complaint for opposing the Contract Award Decision within the Standstill Period, the Procuring Entity shall acknowledge in writing the receipt of the Complaint within three (3) Business Days, shall review the Complaint and respond to the complainant, not later than three (3) Business Days from the date of receipt of Complaint. If, as a result of the Procuring Entity's review of a complaint, the Procuring Entity changes its contract award recommendation, it shall notify the revised intent to award to all previously notified Bidders/Proposers/Consultants, and shall proceed with the contract award.

Table 20. Business standards for procurement-related complaints (where the procurement is subject to Prior Review by WB)

Process step	Responsible Entity	Timeframe
Complaints challenging (i) the terms of prequalification;	Potential Bidders/	Complaints shall be submitted at least ten (10) Business Days prior to the deadline for submission of Applications/Bids/Proposals

²⁸ This procedure shall be specified in the respective Procurement Documents.

(ii) initial selection documents; (iii) request for bids/ request for proposals documents, or (iv) any other Borrower document requesting Bids/Proposals or Applications	Proposers/ Consultants	PIU/PCU or the AGSOIZ under Sub-component 3.1 through consultation with TRGM- PIU shall respond not later than seven (7) Business Days from the date of receipt of complaint.
Notify Applicant/Bidder/Proposer/Consultant of the basis for exclusion from consideration for a contract; rejection of Bid submitted; or intention to award.	PIU/PCU or the AGSOIZ	The timeframe will be specified in the respective documents governing the procurement process. As a general matter, notification should take place promptly after PIU/PCU or the AGSOIZ has made the relevant determination. Upon receipt of a Complaint challenging the above determination, PIU/PCU or the AGSOIZ through consultation with TRGM- PIU shall respond to the complainant not later than seven (7) Business Days after the receipt of complaint.
Complaints following transmission of the notification of the intention to award the contract shall be submitted to the PIU/PCU or the AGSOIZ within the Standstill Period.	Bidder/ Proposer/ Consultant	Complaints should be submitted within the Standstill Period. PIU/PCU or the AGSOIZ through consultation with TRGM- PIU shall respond not later than 15 Business Days from the date of receipt of Complaint.
Request for debriefing.	Bidder/ Proposer/ Consultant	Within three (3) Business Days from the receipt of the PIU's/PCU's or the AGSOIZ's notification of the intention to award the contract.
Conduct debriefing when requested in a timely manner.	PIU/PCU or the AGSOIZ	PIU/PCU or the AGSOIZ shall hold the debriefing within five (5) Business Days of receipt of the request. For all other requests for debriefing, the PIU/PCU or the AGSOIZ shall hold debriefing not later than fifteen (15) Business Days from the date of publication of public notice of award of contract.
Acknowledge receipt of Complaint.	PIU/PCU or the AGSOIZ	Within three (3) Business Days from the date of receipt of the Complaint
Forward complaint to PIU/PCU, if Complaint is submitted only to the Bank	World Bank	Within three (3) Business Days from the date of receipt of the Complaint
Forward Complaint to the Bank, along with all relevant information and documentation.	PIU/PCU or the AGSOIZ through MoAF TRGM PIU	As soon as possible after receipt of Complaint

6.2.24 Anti-corruption Guidelines

The World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016 ([Anti-Corruption Guidelines](#)) will apply to the project.

It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), subcontractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.

The Bank intends to maintain close oversight and will carry out prior review of all major contracts according to the thresholds that will be regularly reviewed and adjusted as needed in the Procurement Plan.

The following measures will be applied to mitigate governance and corruption risks:

- Training of fiduciary staff starting from project launch and periodically thereafter; training will be customized to the procedures and methods required for the next 12-month period.
- Prior review: There will be close implementation support by the Bank's operational and procurement accredited staff. This will include but is not limited to technical prior review of ToRs and technical documentation, all civil works contract amendments introducing new items or quality of materials, as well as other aspects as agreed with the Bank team during implementation of the project.
- Publication of Advertisements and Contracts: All publications for advertisements and contract awards will be published as per the relevant provisions of the [Procurement-Regulations](#).
- Debarred Firms: Appropriate attention will be given to ensuring that debarred firms or individuals (to be verified from the Bank's external website) are not given opportunities to compete for Bank-financed contracts.
- Temporarily suspended firms: Appropriate attention will be given to ensuring that temporarily suspended firms or individuals (to be verified through Client Connection) are not given opportunities to compete for Bank-financed contracts.
- Complaints: All complaints by bidders will be handled by a Complaint Handling Committee to be established by the Procuring Entity for each specific procurement activity or for whole Project procurements. A special protocol will be developed for the purpose of establishing and operating the Committee. The protocol, once agreed with the Bank and adopted by the PIU/s/PCU and/or the AGSOIZ is an integral part of the POM.
- Monitoring of contract awards: All contracts are required to be signed within the validity of the bids/proposals and, in case of contracts subject to prior review, promptly after the Bank's "no objection" is issued. The Procurement Plan format will include information on actual dates (of "no objections" and award) and will be monitored for undue delay which will be reviewed on a case-by-case basis to identify the reasons.
- Monitoring of payment against physical progress: Monitoring reports prepared for the Bank will be customized to include a form to monitor physical progress compared to payment installments.
- Timeliness of payments: Payment to contractors, suppliers and consultants will be monitored through semi-annual IFRs to ensure timely payments MoAF, through ABDGM, will maintain a system/database (acceptable to the Bank) covering procurement, contract administration and financial management to (a) monitor all commitments and unpaid obligations, (b) ensure sufficiency of uncommitted funds before entering into obligations, (c) track payments to ensure that payments to suppliers, consultants and contractors are paid without delay according to the conditions of the contract.

As mentioned above, a firm or an individual sanctioned pursuant to the Bank's Anti-Corruption Guidelines and in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework shall be ineligible to be awarded a Bank-financed contract, or to benefit

from a Bank-financed contract, financially or in any other manner, during such period of time as the Bank shall determine.

The supplier/s, contractor/s, consultant/s (firm or individual) selected will be checked against the list of temporarily sanctioned firms in the client connection and list of debarred firms at Bank's external website:

<http://www.worldbank.org/html/opr/procure/debarr.html>.

MoAF, through its PIU/s, PCU will observe and will have the AGSOIZs selected under Sub-component 3.1 and beneficiaries of Subprojects under Sub-component 3.2 of the Project observe the Bank's anti-corruption measures and will not engage services of firms and individuals debarred by the Bank.

6.2.25 Documentation and Keeping of Records

The MoAF, through the PIUs, the PCU and the AGSOIZ under Sub-Component 3.1, will keep a complete and up-to-date record of all procurement documentation and relevant correspondence in its files, which will be reviewed by the Bank staff during supervision missions. Separate files should be maintained for each contract (including both hard copy and electronic copy).

This documentation would include, but not be limited to tender documents, bids/ tenders submitted by the bidders/ tenderers, the original signed contract, the analysis of the respective proposals, and recommendations for award, for examination by the Bank or its Consultants.

The Borrower shall retain all documentation with respect to each contract (including contracts subject to prior review by the Bank) during project implementation and up to two years after the closing date of the Loan Agreement and then these shall be transferred to the Government Archives.

The originals of various valuable documents (such as bid security, performance guarantee, advance guarantee) will also be kept in the safe by the MoAF PIUs, PCU and the AGSOIZs selected. The MoAF PIUS, the PCU and the AGSOIZ/s selected will furnish such documentation to the WB upon request for examination by the WB or by its consultants/auditors.

7. MONITORING AND EVALUATION ARRANGEMENTS

The project's approach to Monitoring & Evaluation consists of three main pillars:

- a. Monitoring project outcomes (PDO results and intermediate indicators);
- b. Stakeholder-based monitoring approaches to understand adoption of technologies and perceptions of the benefits and tradeoffs of such technologies and associated service provision; and
- c. Impact-based assessment approaches to understand the benefits of the technologies promoted by the project, particularly the most novel ones.

Regarding PDO results and intermediate indicators, during the first six months of project implementation, M&E staff under the PCU, working closely with the PIU will define specific indicators for collecting data and reporting, for each of the PDO and intermediate indicators. Regarding stakeholder-based monitoring approaches and impact-based assessment approaches, M&E staff under the PCU, working closely with PIUs, will define the specific work program for the tools that are to be used under the relevant components to assess stakeholder-based perceptions (see Annex 15 – M&E Plan).

Activities under the sub-components will be used to monitor perceptions on the technologies and associated service provision dimensions, complemented with farm-based tools such as surveys and/or self-assessment tools, online platforms and farm fora. This stakeholder-based participatory nature of the monitoring activities will be complemented with more structured evaluations (using semi-experimental approaches, if possible) to assess the effectiveness, results and impact of the various technologies at field/farm level for different types of producers, crops and regional conditions. These evaluations will generate more robust evidence about the enabling conditions for successful use of the different technologies, the type and magnitude of benefits generated (economic, environmental), under which conditions technologies are profitable, and which type of support - technical and financial - is required. Together with user testimonies, the results of the evaluations will support the broader uptake of smart technologies by enhancing farmers' interest and willingness to invest, and financial institutions' willingness to finance them.

The overall project M&E will be under the responsibility of the PCU, which will be supported in this task by dedicated staff. The PCU will coordinate with the PIUs of respective general directorates at the central level on M&E activities, including for collecting data on their respective activities and results indicators per the project's results framework. PCU will also be responsible for overall M&E of project outputs and results as well as the development and monitoring of annual work plans.

An integrated Monitoring Information System (MIS) will be established, which will consolidate information needed for the assessment of implementation performance, but also to monitor achievement of indicator targets.

Fulltime M&E specialists will be appointed for leading the results measurement, with guidance from the WB, and for compiling M&E data for consolidation into project progress reports. The definition/description of the indicators, frequency, data source and methodology and responsibilities for data collection will be included in M&E Plan which will be prepared by M&E Specialists.

Besides, an M&E technical working group will be established to further refine the overall M&E strategy for the project including alignment of measurement approaches and strategies for data capture, reporting and evaluation. The M&E working group will be coordinated by the Lead M&E Specialist.

The project mid-term review (MTR) will assess overall implementation progress and identify and resolve any key issues affecting implementation and, if necessary, adjust project design. The preparation of assessments/studies to inform the MTR, which is to be undertaken three years after project effectiveness, will focus on evaluating the achievement of project outcomes and impacts. In relation to project impacts, the focus will be particularly on the extent to which the project is creating conditions for a further scaling up of technologies and approaches promoted by the project and ensure inclusion (small scale farmers, women, youth).

Within six months after the project closure, a final assessment will be made in order to provide inputs for the Implementation Completion and Results Report (ICR). This report will be prepared in order to evaluate the final results, assess overall performance, and capture key lessons.

Specific M&E activities will be incorporated into the budget of each sub-component, while the most transversal assessments (i.e. mid-term evaluation/studies and final assessments— to be carried out by independent specialists that will be recruited under the project) will be covered under Component 4 budget.

7.1 Results Framework

The project has 4 PDO indicators and 18 intermediate indicators. Different general directorates are responsible for the realization of the PDO and intermediate indicators.

The project development objective of the project is to strengthen the capacity for sustainable and competitive agricultural growth and promoting the use of climate-smart agriculture in targeted regions. In this framework, 4 PDO indicators are grouped as follows:

Two indicators have been identified for enhanced capacity for sustainable and competitive growth in agriculture and two indicators are targeted for increased use of climate smart technologies in the agriculture sector. The below table shows the baseline and end-target values of the indicators as well as the responsible general directorates.

Table 21. PDO Level Indicators

Indicator Name	Baseline	End-Target	Responsible GDs
Land area with integral information to develop sustainable and competitive agricultural land planning/management (Hectare(Ha))	0	14,000,000,000	TRGM
Increase in the analyses/tests for animal disease/zoonoses diagnostics processed in the upgraded/constructed laboratories (Percentage)	0	100	GKGM
Farmers adopting CSA technologies (disaggregation by gender) (Number)	0	42,500	TRGM
Farmers adopting improved agricultural technology (disaggregation by gender) (CRI, Number)	0	42,500	TRGM/ TAGEM

Intermediate indicators have been identified based on the components:

- Five indicators were identified for the first component for which TRGM and BTGM are responsible.
- Four indicators were identified regarding the second component, under the responsibility of GKGM.
- Seven indicators were identified regarding the third component, that will be realized by TRGM and TAGEM.
- Two indicators were identified for the fourth component, under the responsibility of the ABDGM.

Table 22. Intermediate level indicators

Indicator Name	Baseline	End-Target	Responsible GDs
Component 1: Institutional Capacity Strengthening for CS Agri-food Policy, Planning and Investment			
Area with soil analysis and soil mapping performed (Hectare(Ha))	8,500,000	22,500,000	TRGM
Information and decision support sub-systems to narrow soil and land information gaps and/or support soil/land monitoring (Number)	0	5	TRGM
Area where land notes have been prepared under the project (Hectare(Ha))	0	78,300,000	TRGM
Yield/production forecasting/warning models developed, piloted and under implementation (Number)	0	2	BTGM/ TRGM
Users of the information supported by the project that apply it to support decision making (Percentage)	0	75	BTGM/ TRGM
Component 2. Enhancing Animal Health Capacity for Effective Disease Surveillance/Diagnosis & Control			
Veterinary laboratory bio-safety level units (BSL 2) newly constructed or renovated and certified/approved to operate (Number)	0	12	GKGM
Professionals from the network of animal health, veterinary institutes trained (including of the Veterinary Medicinal Control Center) (Number)	0	5,250	GKGM
VETKOM established and in operation (Percentage)	0	100	GKGM
Veterinary laboratory bio-safety level (BSL 3) units newly constructed or renovated and certified/approved to operate (Number)	0	7	GKGM
Component 3: Investments for Enhanced Productivity, Resource-Efficiency, and Climate Resilience			
Area prepared for climate-resilient greenhouse infrastructure (Hectare(Ha))	0	179	TRGM
Infrastructure and service provision models piloted and lessons for scaling-up consolidated. (Number)	0	2	TRGM
Beneficiaries reached with financial support to adopt CSA technologies (Number)	0	55,000	TRGM
Farmers trained on the application of CSA technologies and practices (disaggregation by gender) (Number)	0	77,550	TRGM
Farmers trained on the application of CSA technologies and practices, disaggregated by women (Number)		19,800	TRGM

Extension staff/service providers trained on the use of CSA technologies and practices (Number)		3,274	TRGM/ TAGEM
Extension staff/service providers trained, disaggregated by women (Number)	0	915	
Women benefiting from financing support provided by the project (Number)	0	13,700	TRGM
Research and development (R&D) initiatives on sustainable and CSA technologies and/or practices implemented (Number)	0	39	TAGEM
Component 4: Project Management, Monitoring and Evaluation			
Project Monitoring Information System developed and operational (Percentage)	0	100	ABDGM
Share of project beneficiaries with rating 'Satisfied' or above with Citizen Engagement process (Percentage)	0	75	ABDGM

7.2 Reporting

During the project implementation period, various type of reports (Semi-annual Progress Reports, Environmental, Social, Health and Safety (ESHS) performance of the Project, including but not limited to the implementation of the ESCP, status of preparation and implementation of E&S documents required under the ESCP, stakeholder engagement activities, functioning of the grievance mechanism(s) etc.) will be prepared by PCU for planning, performance and impact monitoring and evaluation. In addition, these reports will be presented not only to the World Bank supervision, but also to the decision makers of the implementing agencies as well as the PSC. Thus, it is aimed to manage the project effectively throughout the implementation period.

The PIUs will request contractors to provide to themselves (PIUs) monthly progress reports, including environmental and social monitoring reports, on all Subproject sites, and monitor quality of reporting throughout the duration of work. Besides, The PIUs will include reporting requirements in bidding documents of contractors. Reporting activities will be conducted in cooperation with the PCU, PIUs and the provincial organizations of MoAF (Provincial Directorates, Research Institutes, Veterinary Control Institutes etc.). Reporting will start 30 days after the construction contractors begin the respective activities and thereafter monthly throughout contract implementation. If requested, these monthly reports will be submitted to the Bank through the Project Coordination Unit (PCU).

Semi-Annual Progress Report: The WB organizes two mission visits in a year in order to monitor, evaluate and supervise the activities related to the project. For this purpose, 6-month progress reports should be prepared and shared with the World Bank, preferably in January and June, before the starting of these missions. In the progress reports, financial performance, fulfillment of legal covenants and the grievances mechanism as well as the physical progress in the activities of the project will be presented. Physical progress in the project will be evaluated based on the targets set in the results framework. For this reason, the same PDO and intermediate indicators specified in the POM should be used in the preparation of progress reports.

Annual Work Plan and Budget (AWPB): During the project implementation, annual plans and budgets according to the progress of the project will be prepared, namely AWPB-Annual Work Plan and Budget, by participation of all implementing units. AWPB will cover chapters regarding achievements in a given year and budget allocation planning per project activity for the next year.

While preparing AWPB, a simple and understandable format should be used. AWPB consists of two main sections;

- a) Annual planning process and allocated budget for each GDs and
- b) Work plan for proposed activities.

In the first section, the issues taken into consideration while making the annual budget study and the reasons for prioritizing the activities to be financed that year will be briefly mentioned. Then, the consolidated budget according to the implementing agencies (General Directorates) and the detailed budget allocations according to the sub-components/activities will be presented in table format.

In the second section, the 12-month timeline of the planned activities will take place. A work schedule will be prepared according to the activities under each sub-component. In this section, the period in which the activities related to the sub-components that will start or continue for that year to be recorded in the 12-month calendar.

AWPB studies will be carried out in two separate periods. The first period can be considered as a "Performance Evaluation". Performance evaluation meetings will be held in January of each year and both physical and financial performances of the previous year will be evaluated in this meeting. Problems experienced during implementation and solution suggestions will also be discussed at this meeting.

An important dimension of the preparation of the AWPB is to synchronize the planning of the activities with the Annual Investment Program. For this purpose, special attention should be given to the annual planning of the project in accordance with the investment program calendar of SBO and to include the project activities in the investment program on time. Within this frame, as a second period of work, PIUs in the implementing GDs submit their proposals to PCU with respect to the next year's activities before the end of June. Activity and budget projections from implementing units will be evaluated. Then, the first draft of the annual plan and budget will be prepared by PCU and uploaded to the KAYA system at the end of the June. Lastly, according to the budget limitations and considering the discussions with SBO and implementing GDs, the AWPB needs to be finalized. These discussions continue until October. A final evaluation of the proposed activities and budget requests will be completed at the meeting to be held in October with the participation of all implementing GDs. The revised activities and budgets within the framework of the decisions taken after the meeting will be sent to the PCU by the PIUs and the AWPB will be finalized. The final budget document will be sent to the World Bank for approval before 15th of November. After the World Bank approval is received in November, the finalized AWPB will be entered into the "KAYA" system of SBO before the end of November.

Table 23. The Calendar for Preparation of AWPB.

Activity	Timing
Preparation of first draft of budget proposals by PIUs	June
PCU collects each budget proposals of the PIUs.	June
PCU prepares the consolidated first draft of the AWPB and uploaded the KAYA system.	End of June
Discussions between SBO and implementing GDs	July - August
Evaluation Meeting and finalization of AWPB	Before the end of October
Submission of the AWPB to the WB and receiving approval	First half of November

Final version of the AWPB uploaded to the KAYA system	Before the end of November
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Table 24. List of Reports

List of Reports	Timing
Semi-Annual Progress Reports	Every 6 months: end of January and end of June
Annual Work Plan and Budget	Annually
Mid-term Report	At the end of 3rd year
Project Completion Report	At the end of the project (within six months after the project closes)
Beneficiary Surveys	At the end of Every 2 year

8. ENVIRONMENTAL AND SOCIAL ASPECTS

Environmental and social (E&S) assessment of the TUCSAP Project has been carried out and provided in the ESMF which will guide the project implementation. The ESMF which is based on national laws and regulations, the WB's ESSs, WB Group's Environmental Health and Safety (WBG's EHS) General and sector-specific guidelines, and Good International Industry Practices (GIIP) examines the overall risks and impacts of the project and determines the scope of the comprehensive environmental and social management approach to be adopted to address the potential environmental and social impacts of the proposed Project. With this perspective, the ESMF provides an assessment of the national ESA framework and World Bank ESSs identifying the existing gaps between the national legislation and World Bank ESSs and relevant measures to close the gaps have been specified and will be followed during the project implementation.

All project activities under TUCSAP which have E&S risks and impacts are subjected to the mandatory ESA and will be in compliance with the National Regulatory Framework and WB Environmental and Social Standards. Guidelines and procedures for environmental and social screening and assessment of project activities and criteria for categorization are indicated in Section 6 of the ESMF document. MoAF (through the PCU and PIUs) will be responsible for monitoring the implementation of the E&S documents and report the status of E&S implementation of the project to the Bank. The ESMF specifies Subproject specific E&S instruments (ESMP, ESMP Checklist, LMP, RP, SEP, etc.) which will be part of the bidding documents, contracts, and grant documents, as deem necessary.

8.1 Project environmental and social risks and impacts

As it is stated in the ESMF, environmental risk rating of the project is considered as Substantial within the framework of the following issues;

- The project activities associated with the civil works might generate a series of adverse risks and impacts and specifically: emissions of dust and vehicle exhausts impacting air quality; noise and vibration; generation of hazardous and non-hazardous waste and soil pollution; OHS-related risks; traffic and road-related risks from increased traffic volume and movement of heavy-duty vehicles; associated community health and safety (CHS); health risks associated with pest management activities in greenhouses; and risks of spreading COVID-19.
- Under Sub-component 3.3 which will support improving manure management activities as well as potentially construction and equipment to set up the biogas and organic fertilizers production facilities, the project may generate in addition exposure to pathogens and vectors due to manure collection and management for biogas generation (at this stage of project development no details on proposed activities or feasibility studies are available), potential for creating point sources of pollution, technical safety issues, GHGs emissions.
- Activities under Component 2 targeted at "Enhancing animal health capacity for effective disease surveillance and control" that would support along with upgrades to the institutes' infrastructure to increase the biosafety of veterinary laboratories up to BSL2 and BSL3 by investing in critical construction work and equipment needs, biosafety, and biosecurity trainings, and the establishment of a centralized VETKOM, will also generate during operation phase in addition a series of biosafety risks.
- While building infrastructure for getting access to geothermal energy (by financing a series of activities in this regard such as: geothermal drilling and geothermal heating power production facility; energy transmission line and network backup power line as well as an electrical substation; potable and utility water reservoirs and pumping stations; telecommunication center; drainage network; gas supply; local roads; etc.) or building associated facilities financed by private sector (construction of new greenhouses and fruit

processing facilities) or of the AGSOIZ infrastructure (wastewater treatment plant; facility for harvesting rainwater; biogas production plant and generating renewable energy; and organic fertilizer production facility), there might be some impacts on natural habitats and supporting by them flora and fauna resources.

In ESMF document, Project social risk rating is considered as Substantial within the framework of the following issues;

- The activities of Sub-component 1.1 will support execution of soil survey studies. MoAF already carries out the soil surveys with an approach to minimize E&S impacts and risks: the studies cannot commence without the consent of its owner and priority will be given to carrying out the studies when the lands are not cultivated, etc. Therefore, land acquisition and land use restrictions are not expected due to activities under Sub-component 1.1. If any damage occurs on the lands subject to soil survey or on the adjacent lands, these will be compensated in accordance with the entitlements defined in RF.
- The construction activities will likely require land acquisition and will inevitably bring along temporary/permanent land use restrictions, rights of easement, impacts on livelihoods/removal of assets and structures from the land for Sub-components 2.1, 2.2 and 3.1. However once details of the Subprojects are identified, potential risk and impact assessment and relevant mitigation measures are included the project's E&S instruments. Physical displacement of people is not expected. Apart from the land acquisition needs, the civil works will have standard, temporary and site-specific construction impacts.
- Majority of the activities under Sub-components 1.2, 3.3, and 3.4 will focus on provision of technical assistance for a wide range of stakeholders to build their capacity, execution of stakeholder consultations/awareness campaigns, dissemination/analysis of data collection and acquisition of software/hardware/equipment, technical expertise and field validation of digital solutions.
- Social risks and impacts are associated with labor and working conditions, OHS, land acquisition and resettlement, CHS (including COVID-19). Turkey has a good OHS legal framework, but enforcement is weak and there is a risk that potential issues may arise during project implementation. The project is not expected to have adverse impacts *on vulnerable groups (farmers, women, poorer or young/elder farmers, etc.)* and will engage them actively in project implementation in line with the SEP.
- The vulnerable individuals/groups identified are woman farmers, elderly farmers, illiterate farmers, tenant farmers, illiterate workers, seasonal agricultural workers including migrants, persons with disabilities. Special attention will be given to incorporate the views of disadvantaged/vulnerable groups/individuals and make them to fully benefit from the opportunities of the Subprojects. The SEA/SH risks associated with civil works are assessed as low. The national law and legislation on SEA/SH is in place and it includes robust measures for addressing SEA/SH risks, including Codes of Conduct for employees and contractors.

8.2. Environmental and social standards relevant to the project

The World Bank ESF sets out the World Bank's commitment to sustainable development, through a Bank Policy and ten Environmental and Social Standards (ESSs) that are designed to support projects. The ESSs set the requirements to be met by Borrowers with respect to the identification, evaluation and mitigation of social and environmental risks and impacts associated with projects supported by the Bank through Investment Project Financing.

These ESSs establish the standards that the Project will meet throughout the project life cycle through defining objectives and requirements to avoid, minimize, reduce, and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts. Eight out of ten

ESSs establish the standards that the Borrower and the Project will meet through the project life cycle, as follows:

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts
- ESS2: Labor and Working Conditions
- ESS3: Resource Efficiency and Pollution Prevention and Management
- ESS4: Community Health and Safety
- ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS8: Cultural Heritage
- ESS10: Stakeholder Engagement and Information Disclosure

In addition to ESSs, World Bank Group Environmental, Health, and Safety (EHS) Guidelines which are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP) will be applied in the Project, which are;

- General EHS Guidelines
- EHS Guidelines for Annual Crop Production
- EHS Guidelines for Geothermal Power Generation
- EHS Guidelines for Electric Power Transmission and Distribution
- EHS Guidelines for Water and Sanitation
- EHS Guidelines for Waste Management

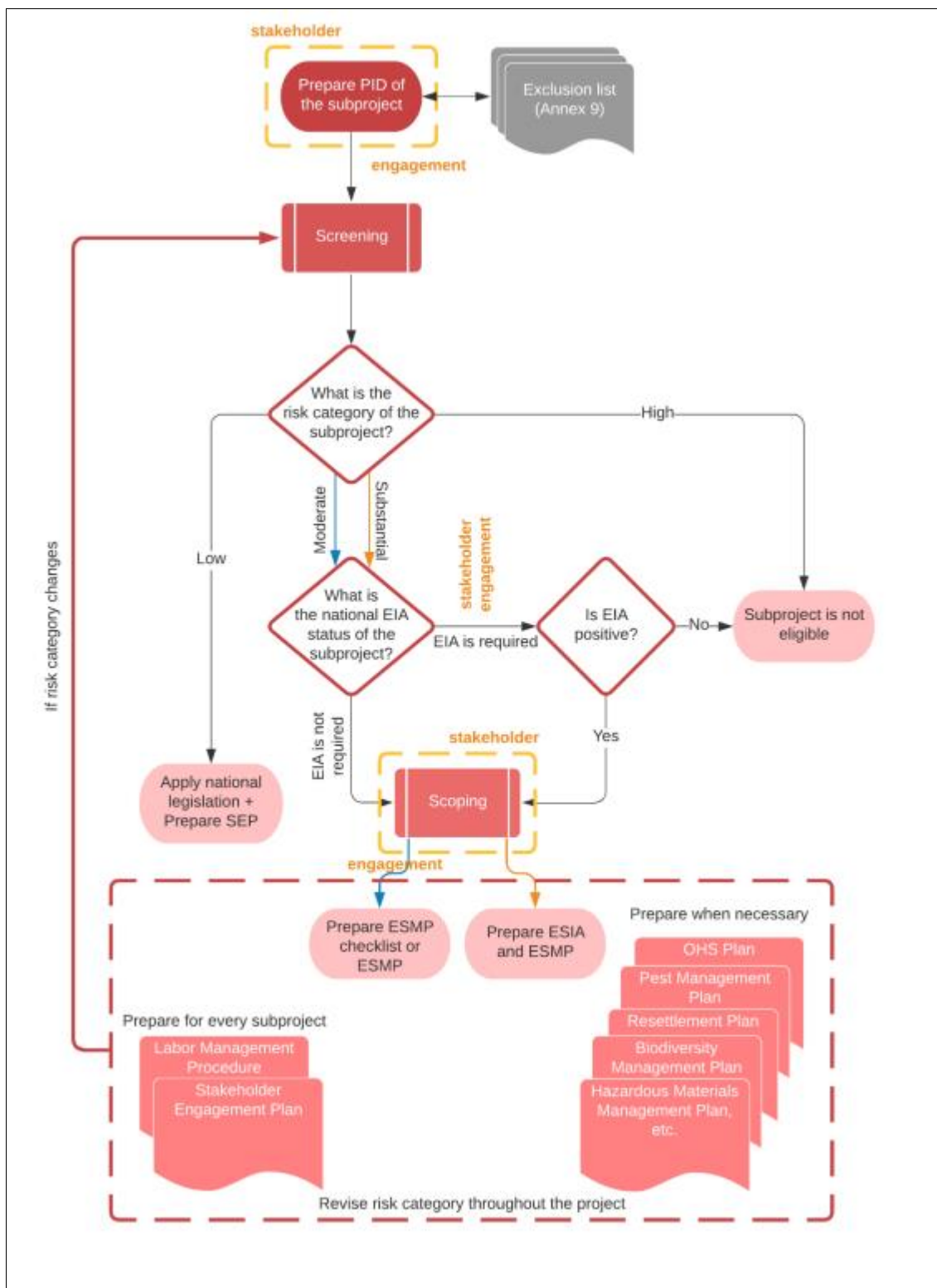
These EHS Guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. In cases where the Turkish requirements differ from the levels and measures presented in the EHS Guidelines, the more stringent one (such as the most stringent discharge and emission standards) will be applied in the project specifications.

Section 4 of ESMF identifies the gaps between national environmental and social legislations and define measures to close these gaps where necessary.

8.3. Procedure on environmental and social assessment

The environmental and social risks and impacts of the Subprojects will be assessed proportionate to the potential risks and impacts of the project activities as given in Figure 5.

Figure 5. Flowchart for ESA of project activities and criteria for categorization



Source: ESMF Figure 24

The process will begin after the final design of the Subproject. In cases where several separate activities are combined in such a way to produce one single output, then these activities will be evaluated as a single Subproject. The identification of the Subproject will be framed according to the exclusion list which is given in Annex 7. Any Subproject which falls into this exclusion list will not be

financed. If the Subproject is not in the exclusion list, then the risk classification of the project (see Annex 10 of ESMF for WB risk classifications) and the ESF instruments that will be prepared for the proposed Subproject will be determined through the screening and scoping stages. The process is explained in detail in the following:

1. **Screening:** The environmental and social assessment of the Subproject will begin with the screening stage. Once it is confirmed that the Subproject is not part of the list of non-eligible types of Subprojects (Annex 7 – Exclusion List), the potential significance and level of environmental and social risks of the Subproject will be identified based on the initial information on the (i) type and nature, (ii) location, (iii) sensitivity, and (iv) magnitude of the proposed Subproject which are explained in Section 6.1 of ESMF.

The “Environmental and Social Screening Template” given in Annex 11 of ESMF, will provide a guideline to assess the risk level of the proposed Subproject considering above considerations. The Screening Checklist includes a series of potential environmental and social risks and impacts to which the Subproject beneficiaries must provide, answers, based on their own knowledge and experience and/or being advised by external consultants. As a result of the screening, the highest risk category among the answers to the questions will be selected as the risk category of the Subproject. While assigning the project risks category the E&S specialists will be considering potential environmental and social risks and impacts as per criteria specified above and the experience under other WB projects in the country. These answers will be used by PIU Specialists to provide the project risks category, considering that in specified risks will be generated then the risk Category would be always higher.

This screening process will be conducted by the PIUs E&S specialists and confirmed by the PCU (see Section 6 of ESMF for roles and responsibilities of PIUs and PCU). PIUs will send the proposed Subproject category along with the justifying documents to PCU for review and approval. Then, PCU will submit the proposed screening category and the related documents to World Bank for clearance. The related documents will include the environmental and social assessment requirements and the key environmental and social issues to be analyzed together with information substantiating the category selection. The World Bank will have the opportunity to review and provide its no objection to the screening process, including a social and/or environmental due diligence prior to Subprojects that are qualified with substantial risks. While the WB will do prior review of the ESF documents for all Subprojects of substantial risks category, for Subprojects with moderate risks, prior review will be done only for first 3 Subprojects and then, only post review will be made.

Subprojects that are considered as “High Risk” will not be financed.

The anticipated risk categorization of the sub-components and the national EIA requirements based on currently available information (see Section 5 of ESMF document) is given in Annex 16. These categories will be updated after screening of the Subprojects during the implementation of the proposed Project.

2. **Environmental and Social Assessment:** The next stage in environmental and social assessment will be the scoping stage. It will be conducted for only Subprojects that have moderate or substantial risk category. In scoping stage potential environmental and social risks and impacts on which the environmental and social assessment will focus, the methods to be used and the level of effort needed to fully understand the risks and impacts and the options for mitigating them will be identified. Depending on the current level of information

about the proposed Project at this stage, the ESF instruments that will be used in the Project are:

- a) **Environmental and Social Impact Assessment (ESIA)**. It is an instrument to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures. The indicative outline of ESIA is given in Annex 12 of ESMF document.
- b) **ESMP Check List**. It is an instrument developed for very limited, well understood and be easily mitigated construction projects to ensure that basic good practice measures that are compatible with World Bank's ESSs are recognized and implemented. In the proposed project, it will be used in small-scale construction and refurbishment works with low environmental and social impacts. The indicative outline is given in Annex 13 of ESMF document. It has three sections: (a) Part 1 constitutes a descriptive part ("site passport") that describes the project specifics in terms of physical location, the project description and list of permitting or notification procedures with reference to relevant regulations. Attachments for additional information can be supplemented if needed; (b) Part 2 includes the environmental and social screening in a simple Yes/No format as well as specifies mitigation measures; and (c) Part 3 is a monitoring plan for activities carried out during the rehabilitation activities.
- c) **Environmental and Social Management Plan (ESMP)**. It is an instrument that details (i) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (ii) the actions needed to implement these measures. The indicative outline is given in Annex 14 of ESMF document.

Without compromising the scoping work to be done during the implementation phase of the project, at this stage it is proposed that ESIA and ESMP will be prepared for Subprojects of substantial risk category, and ESMP Checklist or ESMP will be prepared for projects of moderate risk category.

The non-exhaustive list of additional ESF instruments that can be decided to be prepared during the scoping stage of the Subproject is given below (the ones envisaged at this stage of the project are shown in Table 9 of ESMF document).

- Occupational Health and Safety Plan (OHS Plan)
- Pest Management Plan (PMP) including Integrated Pest Management (IPM) and/or Integrated Vector Management (IVM)
 - Hazardous Waste (including Asbestos Containing Materials-ACM) and/or Materials Management Plan including their transportation
- Waste Management Plan
- Emergency Response Plan/Emergency Preparedness Plan/Emergency Preparedness and Response Plan/Emergency Management Plan
- Traffic Management Plan
- Labor Influx Plan
- Livelihood Restoration Plan/Livelihood Plan/Livelihood Improvement Plan
- Resettlement Plan (RP)
- Biodiversity Management Plan/Biodiversity Action Plan
- Stakeholder Engagement Plan (SEP)
- Labor Management Procedure (LMP)
- Social Conflict Plan

For construction and civil works under Sub-component 1.1, 2.1, 2.2, 3.1, 3.3 and 3.4 the Contractor will also develop its own equivalent management plans such as Contractor's ESMP (C-ESMP), Contractor's ESMP Checklist (C-ESMP Checklist), Contractor's LM Plan (C-LM Plan) and other relevant plans.

3. *Preparation of ESF instruments*

The ESF instruments decided to be prepared during the scoping phase will be prepared by the PIUs or will them be prepared through outsourcing in accordance with this ESMF. During ESIA, special analyses might be conducted such as hazard analysis²⁹ or although it is not foreseen to be prepared during the scoping phase, it may be decided to prepare new ESF documents according to the new information obtained during the ESIA. The risks and impacts identified at ESIA will be incorporated into the project design of the ESMP along with the mitigation measures for them.

For Subprojects of low-risk category, no ESF instruments except SEP(s) will be prepared, the application of national regulations will be sufficient.

4. Rules and procedures for E&S assessment of associated facilities

As specified above under Component 3.1 there will be several associated facilities: (a) wastewater treatment plant, (b) rainwater harvesting infrastructure, (c) biogas production plant, (d) organic fertilizer production—to be financed by the AGSOIZ; and (e) greenhouses where fruit and vegetable production; and (f) fruit and vegetable processing facilities —to be financed by the private sector.

A Zone Directorate is established in each AGSOIZ, which is responsible for executing the administration of the AGSOIZ and performing other assigned duties. One of most important duties of this body is to organize conducting a detailed feasibility study and to prepare the AGSOIZ Development Plan which will identify all investments to be further implemented. The feasibility study must include a site specific ESIA and ESMP document which will subject of review of approval by national environmental authorities as well as of WB team which will provide its acceptance to the document, making sure it follows the WB ESF and its ESSs requirements. The zone directorates consist of administrative and technical personnel. In terms of environmental and social issues these Directorates do not have assigned staff and all related activities (Subproject feasibility studies and ESIA and ESMP, RP, SEP) are to be done by external E&S Consultants hired for this purpose. While for the project to be financed by the project the ESMF is providing with great details all necessary rules and procedures for ESA activities, in terms AFs to be implemented by the AGSOIZ (wastewater treatment, rainwater harvesting facility, biogas, and organic fertilizers production plants) was agreed all ESF documents will be done by experts employed under respective zone directorate, as well as by the MoAF based on the authority given to them by Law No. 4562. It is expected the TRGM-PIU in coordination with PCU will work with the AGSOIZ helping with preparing the ToRs for the ESF studies and instruments. In this regard the TRGM-PIU in coordination with PCU will provide the current ESMF documents which specifies all necessary rules and procedures for the ESA. TRGM-PIU in coordination with PCU will also help AGSOIZ Similarly, for the AF to be financed by private sector, TRGM-PIU in coordination with PCU the AGSOIZ helping with preparing the ToRs for the ESF studies and instruments. In this regard the PCU will provide the current ESMF documents which specifies all necessary rules and procedures

²⁹ Hazard Identification, Hazard and Operability studies, Process Safety Management, Quantitative Risk Analysis, Failure Mode and Effects Analysis, Risk Hazard Assessment

for the ESA. The PCU and PIUs will also help AGSOIZ to hire Supervision Consultants for implementing ESF site specific instruments and for reporting in this regard. Similarly, for the AF to be financed by private sector, the PCU and PIU will help them in terms of preparing the ToRs for ESF documents in the case of construction of new greenhouses and fruit processing facilities. This assistance will also be provided for the implementation phase, - for hiring supervision consultants.

To ensure quality of the ESF documents and compliance with the WB Environmental and Social Standards the AGSOIZ will follow the rules and procedures for proposed investments specified in this ESMF document. Respectively, the AGSOIZ once initiating an AF activity or receiving a Subproject proposal from private sector for construction of greenhouse or fruit processing facility, will prepare an initial screening checklist, then based on the decision of the TRGM PIU will proceed with scoping and preparing the ToRs for ESF instruments, which will be reviewed and accepted by the PIU in consultation with the PCU. After that the AGSOIZ/private sector, will hire consultants for preparing the ESF documents, which need to be further reviewed and approved by the TRGM PIU. Respectively the site-specific instruments are to be included in the contracts with the contracting companies. During the implementation phase the supervision consultants hired by the AGSOIZ and private sector will provide compliance reports to be submitted also to the PIU. The PIUs representatives will also conduct randomly site visit to ensure an efficient ESF implementation. The representatives for AGSOIZ will be invited to participate in the training on ESF basics.

5. Disclosure of ESF instruments and public consultations

Stakeholder engagements will be held in accordance with the requirements of both ESS10 and national EIA legislation. The stages in which stakeholder meetings will be held in the process of environmental and social screening and assessment of project activities are shown in Figure 25 of ESMF document.

The first-round stakeholder meeting(s) will be held for the Subprojects that require national EIA. According to the national legislation, stakeholder engagement meetings (referred as "public participation meetings" in the regulation) are only required for projects that require national EIA. In the proposed project, it is foreseen that only activities in sub-components 3.1 and 3.3 might require national EIA. Whether these sub-components require national EIA or not will depend primarily on their capacities, which will be determined by their final designs, and then on the decision of the Ministry of Environment, Urbanization and Climate Change (MoEUCC).

If EIA will be required for these two Subprojects, an EIA application file will be prepared and submitted to the MoEUCC. If EIA application file has all the required information, then MoEUCC and the Governorate will state that the application has been made regarding the Project, the EIA process has begun, the EIA Application File has been opened to public opinion, and the opinions and the suggestions about the project can be given to the Governorate or MoEUCC until the completion of the EIA process, through announcements, pending announcements and the internet. In addition, a Public Participation Meeting will be held on a date to be determined by MoEUCC, at a central place and time determined by the Governorate, where the local community, who is expected to be most affected by the project, can easily reach, to inform the public about the investment and to receive their opinions and suggestions regarding the project.

The second round of stakeholder meeting(s) will be during ESIA—if ESIA will be conducted—and upon the completion of draft versions of the ESF instruments. In line with the general implementation practice of WB, it is necessary to disclose the ESF instruments for Subprojects with moderate or substantial risk categories. For all Subprojects with ESIA and/or ESMP, face to face consultations will be organized. In the context of COVID-19 pandemic or when it is clear no direct impacts on local population is expected (mostly when the proposed activities are located far away from the residential areas and will not have adverse impacts on environmentally sensitive areas such wetlands, forests, legally protected areas, etc.), or in the case of ESMP Checklist for rehabilitation of existing facilities this can be done virtually (i.e., using ZOOM platform). For that purpose, it is necessary to disclose in advance the ESF documents (about two weeks) on proposed Project's website, involved provincial organizations of MoAF's or Subproject beneficiaries' websites as well as providing hard copies to local public administrations and key interested parties (including environmental authorities).

Chapter 10 of ESMF document and SEP details disclosure and public consultation processes.

6. Review and approval of ESF instruments

The WB will review and approve the final versions of ESF instruments for all Subprojects with substantial risks as well as for the first three Subprojects with moderate risks. The ESF instruments of rest of the Subprojects will be reviewed and approved by PCU. Final versions of the ESF instruments will be disclosed on the proposed Project's website and on WB's website. No works regarding the Subproject will commence until the approval, disclosure, and consultation of the ESF documents and implementation of the Subproject RPs, if any.

These ESF instruments will be annexed to the bidding documents of Contractors' and tailored for grant documents, and they will be responsible for implementing the specified mitigation measures.

7. Supervision, monitoring and reporting of ESF instruments

The environmental and social issues included in the ESF instruments will be monitored and supervised by the supervision consultant, contractors, PIUs and PCU. Environmental and social monitoring system will start from the preparation phase of the Subproject through the operation phase to prevent negative impacts of the project and observe the effectiveness of mitigation measures. This system helps the WB and the PCU/PIUs and Subproject beneficiaries to evaluate the success of mitigation as part of project supervision and allows taking an action when needed.

Environmental and social monitoring to be implemented by the PCU/PIU and supervision consultant must provide information about key environmental and social aspects of the Subprojects, particularly the project environmental and social impacts and the effectiveness of taken mitigation measures. In this regard the Monitoring Plan identifies monitoring objectives and specifies the type of monitoring, and their link to impacts and mitigation measures. Specifically, the monitoring section of the ESMP provides: (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements; and, (b) monitoring and reporting procedures to: (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and

results of mitigation. A Monitoring Plan Format is presented in the Part 4 of the ESMP Checklist enclosed in ESMF in Annex 13.

The supervision consultant, will carry out control over the observance of obligations by Contractors to comply with the ESMP and LMP requirements in full, including the submission of monitoring reports on ESMPs' implementation on quarterly basis.

During the project implementation, the supervision consultants and the PCU/PIUs will perform regular inspections of Subprojects with the purpose of confirmation of compliance/non-compliance of measures being performed with the requirements stipulated in ESMP. In case of any inconsistency, the supervision consultants and the PIUs will determine causes of this non-compliance and propose measures for bringing the Subproject into compliance with these requirements. Notwithstanding regular inspections of the PIUs/PCU, the Bank's experts will also visit the facilities periodically to confirm the compliance with these requirements.

The supervision consultants and contractors will prepare and submit detailed reports on the Subproject on a monthly basis to the PIUs, specifying if all ESMP measures have been implemented or not. The ESMP monitoring reports shall contain photo reports and graphic materials on performed works (photographs of the initial conditions and general appearance of the facility before the start of repair works, layout of the facility subject to reconstruction, photographs of works being performed, photographs of the results of works, etc. The final report shall be submitted by supervision consultants and contractors to the PIUs after the completion of all works at the facility.

Reports on Subprojects' ESMP implementation shall be submitted together with an assessment of compliance with the agreed measures of environmental mitigation in a form of semi-annual reporting to the PCU by PIUs. Respectively the supervision consultants and contractors shall be responsible for the accuracy and timeliness of reporting to the PIUs. The PCU shall compile these reports and submit a half-year summary report on ESMF/ESMPs implementation to the Bank.

8. Summary of roles and responsibilities

Distribution of the responsibilities of all parties involved in the project is given in Table 10 of ESMF document. The preparation and implementation of ESF instruments is expected to cost a relatively small fraction of design and construction cost, as most mitigation measures will be very generic, off-the-shelf, and implementable without specialized skills, experience, or equipment. Moreover, it is assumed that most of the cost is covered in the bid proposals.

8.4. Institutional Arrangements and Capacity for ESMF Implementation

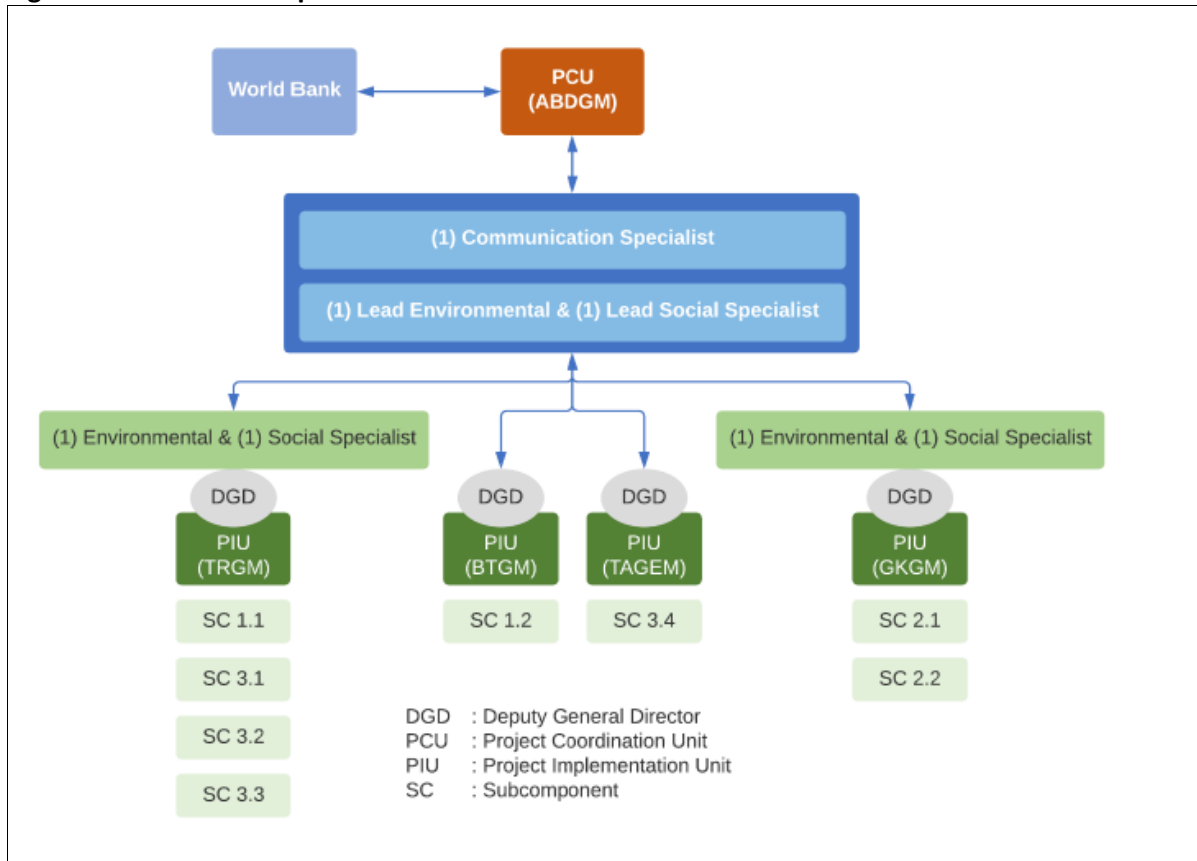
The institutional arrangements for the ESMF aspects of the full project management and implementation are described in Section 7 of ESMF document.

In total there will be three environmental specialists and three social specialists (see Annex 2 for ToRs) in the proposed Project and one communication specialist. Of the six Environmental and Social (E&S) specialists two would be lead (one social and one environmental), responsible for the overall compliance of the proposed Project with the ESF requirements, the E&S documents prepared for the proposed Project and will provide direct support to low risky activities developed by TAGEM and BTGM. Two specialists (one social and one environmental) will be hired under the TRGM-PIU and other

two (one social and one environmental) under GKGM-PIU. However, all specialists hired within the scope of the Project will be able to provide support across sub-components as needed. All these specialists will be recruited at the beginning of the proposed Project and will remain their positions throughout the project implementation.

The organizational structure of the ESMF implementation is given in Figure 6.

Figure 6. ESMF main responsibilities at PCU & PIUs



Source: ESMF Figure 25

Table 25. Roles and responsibilities in E&S screening and assessment of project activities

Responsible Party	Responsibilities
World Bank	<ul style="list-style-type: none"> Review and approve risk category of the Subprojects and final versions of the ESF instruments for all Subprojects with substantial risks as well as for first three Subprojects with moderate risks. Disclose approved project level ESF instruments on WB’s website Review of relevant ToRs for the PCU and PIUs E&S specialists as well as for thematic specialists to be hired on temporary basis (Biosafety specialist; Geothermal specialist; Manure Management specialist; etc.) reference who will be responsible for ensuring ESCP commitments are being met Conduct implementation support and supervision missions to ensure that the Project is following WB ESS requirements

Responsible Party	Responsibilities
PCU	<ul style="list-style-type: none"> • Ensuring ESCP commitments are being met • Review the results of the screening done by the PIUs and send the proposed risk category of Subproject with substantiating documents to World Bank for review and approval • Review scoping done by PIUs and send the list of ESF documents to be prepared for the Subproject with substantiating documents to World Bank for review and approval • Review the site specific ESF documents and provide comments to be addressed • Provide approval of final versions of the ESF documents (for all Subprojects with low risks and moderate risks (except first three sub projects with moderate risk, which will be approved by WB) • Disclose approved site specific ESF documents on Project’s website • Incorporate approved ESF instruments to into bidding documents and grant documents • Organize ESF training and information dissemination activities for all involved parties in the project implementation • Advice and provide on the job training for PIUs on implementation of ESF instruments • Provide guidance on all ESF issues to the construction contractor and supervision consultant • Provide regular reporting on the implementation ESF instruments to the MoAF and WB • Set up a multi-level GRM, monitor and address grievances related to the project under specified timelines • Conduct randomly E&S supervision and meet affected groups and local environmental authorities regarding environmental aspects of project implementation during site visits, as necessary • Coordinate and liaise with WB supervision missions regarding environmental and social safeguard aspects of project implementation • Prepare and implement a Program of capacity building activities for the whole duration of project implementation.
PIU	<ul style="list-style-type: none"> • Conduct screening and send the proposed risk category of Subproject with substantiating documents to PCU for review and approval • Conduct scoping for moderate and substantial risks Subprojects site specific ESF instruments and send them for review and approval to the PCU • Prepare site specific ESF documents for moderate and substantial risks or have them prepared through outsourcing and send them PCU for review • Incorporate approved ESF instruments into the bidding documents and grant documents • Ensure E&S monitoring and supervision of ESF instruments jointly with representatives of Provincial Organizations of MoAF/Veterinary Control Institutes • Perform inspections of the implementation of ESF instruments by the construction contractor, make recommendations and decide whether additional measures are needed or not • In case of non-compliance, ensure that the contractor eliminates the noncompliance and inform the WB about the noncompliance • Hold consultation meetings through Provincial Organizations of MoAF and prepare and distribute leaflets or other informative documents to inform communities

Responsible Party	Responsibilities
	<ul style="list-style-type: none"> • Prepare/design training and tools for Subproject beneficiaries
Supervision Consultant ³⁰	<ul style="list-style-type: none"> • Perform inspections on the implementation of ESMP and LMP by the construction contractor, make recommendations and decide whether additional measures are needed or not • Prepare regular progress reports to PIUs
Contractor	<ul style="list-style-type: none"> • Implement ESMPs on site, if required can revise the ESMP together with PIU • Implement LMPs • Manage the grievance mechanism at the contractor, communicate grievances to PIU regularly through ESMP monitoring reports • Prepare the ESMP progress reports for the review of PIU • Compensate or fix all damages occurred during construction (i.e., damages to crops, infrastructure) as set out by the ESMP or RP/RF.

Source: ESMF Table 10

Capacity Building

ESS trainings will help to ensure that the requirements of the ESMF and subsequent ESIA and ESMPs are clearly understood and followed by all project personnel throughout the project period. Both PIUs and RDs/PDs will be continuously supported in technical terms by the ESF Team of the PCU in preparation of WB ESF documents (PIUs) and their implementation as well as compliance with national legislation (PIUs and PDs). The training will be provided to the project staff, construction contractors, and other staff engaged in the Project. Training will cover all staff levels, ranging from the management and supervisory to the skilled and unskilled categories. The scope of the training will cover general environmental and social awareness and the requirements of the relevant ESSs under the ESCP, ESMF, ESIA (where relevant) and the ESMP, with special emphasis on sensitizing the project staff to the environmental, social and gender aspects of the region.

Table XX provides a summary of various aspects of the environmental and social safeguards training to be conducted under this project. The initial ESF training for PCU E&S specialists which are responsible for organizing and conducting ESF training for other involved parties, will be done by the WB task team which will continue provide on the job training during their supervision mission. The PCU will hire, as needed, external consultants who will conduct training on particular topics, - for this purpose the project will provide necessary funding (see Table 12 of ESMF document – training and capacity building).

The PIUs may revise the plan during the project implementation as required and subject to the PCU approval.

³⁰ Supervision consultants will be hired for construction/civil works.

Table 26. Capacity Building Scope

Target Audience	Contents	Responsibility	Schedule
<ul style="list-style-type: none"> • TRGM • BTGM • GKGM • TAGEM • ABDGM 	<ul style="list-style-type: none"> • General environmental and socio-economic awareness • Environmental and social sensitivity of the Subproject areas • E&S screening • Key findings of ESIA (as relevant) • Mitigation measures • ESMP • Social and cultural values of Subproject areas • Grievance mechanism • Gender equality trainings • Conflict management • Research methodologies 	PCU	<ul style="list-style-type: none"> • Prior to the start of the Project activities.
<ul style="list-style-type: none"> • PIUs • PSC • Provincial Organizations (focal points) • AGSOIZ • Contractors 	<ul style="list-style-type: none"> • General environmental and socio-economic awareness • Environmental and social sensitivity of the Subproject area • E&S screening • Mitigation measures • Community issues • Awareness of transmittable diseases, risk of Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH) • Land acquisition process, preparation of resettlement instruments, standards to be applied to ensure compliance with ESS5 • Social and cultural values • Grievance mechanism • Gender equality trainings • Conflict management 	PCU	<ul style="list-style-type: none"> • Prior to the start of the field activities. • To be repeated as needed.
<ul style="list-style-type: none"> • PIUs • PSC • Provincial Organizations (focal points) • AGSOIZ • Contractors 	<ul style="list-style-type: none"> • ESMP • Associated Management Plans (i.e. Waste Management Plan, Pest Management Plan, Hazardous Management Plan, etc. as relevant). 	PCU	<ul style="list-style-type: none"> • Prior to the start of the construction activities. • To be repeated as needed.

Target Audience	Contents	Responsibility	Schedule
	<ul style="list-style-type: none"> • OHS Management Plan • SEP • LMP • Grievance mechanism • Cultural values and social sensitivity • Chance find procedure • Gender equality trainings • Conflict management 		
Potential new greenhouse owner	<ul style="list-style-type: none"> • ESIA and ESMP • PMP requirements • ESMP monitoring and reporting 	PCU	<ul style="list-style-type: none"> • Prior designing new greenhouses and conducting ESIA
Beneficiaries of grant programs	<ul style="list-style-type: none"> • OHS Management Plan • Grievance Mechanism • Chance finds procedure • Gender equality trainings • Conflict management 	PCU/PIUs/Provincial Organizations	<ul style="list-style-type: none"> • Prior to start of Subproject activities • To be repeated as needed
PIUs	<ul style="list-style-type: none"> • ESMP for operation stage • OHS Management Plan • LMP • Gender equality trainings • Conflict management 	PCU	<ul style="list-style-type: none"> • Prior to the start of the Project Operation • To be repeated as needed

Source: ESMF Table 11

8.5. ESMF Supervision, Monitoring, and Reporting Activities

In this section, the reporting requirements for overall ESMF implementation and the specifications for environmental and social supervision and monitoring of its implementation, including the basic environmental and social performance indicators, timeframe, and responsibilities for proposed monitoring activities will be described.

Supervision

Responsibility for day-to-day project management, coordination and supervision will be assigned to PCU and line Directorate-specific PIUs. During project implementation, the Bank will supervise the project's financial management arrangements. The frequency of these visits will be determined in accordance with the project's risk rating, which will be monitored over its lifetime. The supervision missions will also include site visits to monitor physical progress, compared with the financial information.

It is also expected that some procurements of goods and consulting services for design and supervision will be advertised at the international level.

Monitoring

The PCU will be responsible for overall M&E of project outputs and results, working closely with PIUs at each directorate leading sub-component activities, as well as the development and monitoring of annual work plans. A full-time M&E specialist will be appointed for leading the results measurement, with guidance from WB, and for compiling M&E data for consolidation into project progress reports. To ensure coherence and alignment, a M&E technical working group will be established to further refine the overall M&E strategy for the project and monitoring its implementation, including alignment of measurement approaches and strategies for data capture, reporting and evaluation. The M&E working group will be coordinated by the PCU, specialist on M&E. TAGEM will play a key role providing technical support and guidance to TRGM on the approaches to assess technology impacts. For the activities under Sub-component 1.1., the project will establish a “Soil Policy Monitoring System” to understand the impacts of the information generated under this sub-component, guiding policy decisions at the provincial level (through the Soil Protection Board). In addition, M&E capacity building under Component 4 will facilitate understanding of gender dimensions and inequalities in the sector. The project will provide technical assistance to encourage MoAF to introduce the measurement of gender indicators in their M&E system. Indicatively, these will include the development of specific mixed-methods to track gender (surveys, focus groups, specific evaluations), gender-specific evaluations, and use of diagnostics to recognize gender-specific constraints or opportunities and design policy interventions which will address these problems.

The project will establish an integrated Monitoring Information System (MIS), which will consolidate information needed for the assessment of implementation performance (project management tool), but also to monitor achievement of indicator targets. For the activities under Component 3, under each sub-component, the project will establish baselines, as the starting point for monitoring improvements; activities under the sub-components, including online platforms and farm fora will be used to monitor perceptions on the technologies and associated service provision dimensions, complemented with farm-based tools, such as surveys and/or self-assessment tools. This stakeholder-based participatory nature of the monitoring activities will be complemented with a more semi-experimental approach to understand the impacts of the technologies on economic, social and environmental variables.

Reporting

The units that will report, the frequency of reporting and the content of the reports are given in Table 27.

Table 27. Regular reporting activities

Preparing Unit	Receiving Unit	Name of report	Content of the Report	Frequency
PCU	<ul style="list-style-type: none"> • PSC • World Bank 	Progress Report	Consolidation of PIUs progress reports <ul style="list-style-type: none"> • Analysis of PIU’s progress reports • Audits carried out in the project area • Analysis of grievances • Summary on the stakeholder consultations (date/time, venue, participant list, minutes as an annex, etc.) 	Semi-annual

			<ul style="list-style-type: none"> • Summary and disaggregated data of received grievances • Summary of land acquisition and resettlement related activities • Follow up information from any past issues that are still being resolved • Look ahead to the next period 	
PCU	<ul style="list-style-type: none"> • PSC • World Bank 	Annual Work Plan and Budget	Annual Work Plan and Budget will be prepared in close coordination with PIUs	Annual
PCU	<ul style="list-style-type: none"> • PSC • World Bank 	Mid-term Review	<ul style="list-style-type: none"> • Evaluation of the overall implementation progress focusing on the achievement of project outcomes and impacts. In relation to project impacts, the focus will be particularly on the extend the project is creating conditions for a further scaling-up of technologies and approaches promoted by the project and ensure inclusion (small scale farmers, women, youth) • Identification and solution of any key issues affecting implementation 	Three years after the commence of the Project
PCU	<ul style="list-style-type: none"> • PSC • World Bank 	Implementation Completion and Results Report	<ul style="list-style-type: none"> • Evaluation of the final results, • Assessment of overall performance, and • Capture key lessons 	Six months after the project closes
PIU	PCU	Progress Report	<ul style="list-style-type: none"> • Summary of Contractors' progress reports • Summary of Provincial Organizations' progress reports • Analysis of progress reports • Audits carried out in the project area • Minutes of stakeholder engagements • Summary on the stakeholder consultations (date/time, venue, participant list, minutes as an annex, etc.) • Summary and disaggregated data of received grievances • Summary of land acquisition and resettlement related activities • Follow up information from any past issues that are still being resolved • Look ahead to the next period 	Semi-annual
Provincial Organizations	PIU	Progress Report	<ul style="list-style-type: none"> • Implementation of EHS instruments • Summary on the stakeholder consultations (date/time, venue, participant list, minutes as an annex, etc.) 	Quarterly

			<ul style="list-style-type: none"> • Summary and disaggregated data of received grievances • Follow up information from any past issues that are still being resolved • Look ahead to the next period 	
Supervision Consultant (for construction works)	PIU	Progress Report	<ul style="list-style-type: none"> • Implementation of ESF documents (that are annexed to its bidding document) • Summary and disaggregated data of received grievances • Follow up information from any past issues that are still being resolved • Look ahead to the next period 	Quarterly
Contractor	PIU / Supervision Consultant (for construction works)	Progress Report	<ul style="list-style-type: none"> • Implementation of ESF documents (that are annexed to its bidding document) • Summary and disaggregated data of received grievances • Follow up information from any past issues that are still being resolved • Look ahead to the next period 	Monthly

Source: ESMF Table 13

In addition to regular reporting activities stated above, contractors will report incidents and root cause analysis as stated in LMP and chance find reports.

8.6. Land Acquisition and Resettlement

During the design and implementation of the Subprojects, involuntary resettlement will be avoided in line with ESS5 requirements. If unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

In accordance with Environmental and Social Standard 5 (ESS5), once the Subprojects are defined, PIUs will use Resettlement Framework (RF) to develop Subproject specific Resettlement Plans (RPs) proportionate to potential risks and impacts. No civil works, nor the contracts of the Subprojects that may cause physical and/or economic displacement shall commence until its RP is reviewed and approved by WB, disclosed, consulted upon, redisclosed and implemented. Formal/informal right owners (as defined in RF), and all other eligible PAPs, defined in RF and Subproject specific RPs, will need to be compensated fully prior to any construction or access to land. The compensation and assistance strategies defined separately for each entitled persons are given in detail in Section 4.2 and Table 3 Entitlement Matrix of RF.

Summary of project components, sub-components, locations, and land acquisition requirements are presented in Table 28 below.

Table 28. Summary of project components, sub-components, locations, and land acquisition requirements

Sub-component	Lead GD	Location	Land Acquisition Needs
Component 1: Institutional Capacity Strengthening for Climate Smart Agri-food Policy, Planning, and Investments			
Sub-component 1.1: Narrowing information gaps to enhance soil health and land-use planning/management	TRGM	Nationwide	No need for land acquisition. Although the priority will be given to carrying out the soil survey studies at times when the lands are not cultivated in order to prevent any damage to crops and lands, it may not always be achieved considering the time constraints of Project activities. Any damages to crops, lands or infrastructure will be compensated in accordance with this RF. Construction/refurbishment of building for National Soil Archive will be located within the campus. No risk of coincidence with informal land use is expected.
Sub-component 1.2: MoAF digital blueprint for sectoral information collection and management	BTGM	Nationwide	No need for new land use or land acquisition. Activities cover office works only.
Component 2: Enhancing Animal Health Capacity for Effective Disease Surveillance, Diagnostics and Control			
Sub-component 2.1: Strengthening the capacity of animal health institutes	GKGM	Adana, Elazig, Erzurum, Istanbul, Izmir, Konya and Samsun	No need for land acquisition. Construction/refurbishment works will be located within the campus in Adana, Elazig, Istanbul, Izmir, Konya and Samsun, while will be off campus in Erzurum. The construction area in Erzurum will be chosen among the public lands owned by MoAF. There may be informal land use risks for Erzurum.
Sub-component 2.2: Strengthening and improving veterinary medicine product control of animal infectious and vector-borne diseases and zoonoses	GKGM	[tbd], potentially Ankara	No need for land acquisition. Construction works will take place on public lands owned by MoAF. There may be informal land use risks on selected public lands.

Sub-component	Lead GD	Location	Land Acquisition Needs
Component 3: Investments for Enhanced Productivity, Resource-Efficiency, and Climate Resilience			
Sub-component 3.1: Strengthening climate resilience, productivity, and resource-use efficiency in horticultural production	TRGM	To be chosen among 14 sites that feasibility studies have been conducted	The area where the AGSOIZ will be constructed is not yet determined. If it is a previously acquired land (acquired in the past 5 years), an ex-post social audit will be carried out. If a new land is to be used, land expropriation will be required, and a RP will be prepared accordingly.
Sub-component 3.2: Promoting the adoption of CSA technologies / practices across relevant crops	TRGM	Provinces in Thrace, Aegean, Central Anatolia, South and Southeast regions (large agricultural production areas)	No need for new land use or land acquisition. Activities will cover supporting the adoption of CSA technologies/practices on the existing farmlands.
Sub-component 3.3: Reducing cattle production pressures on water pollution and GHG emissions	TRGM	Aegean Region, particularly in Küçük Menderes Basin, potentially in two of the following districts: Odemis, Tire, Kiraz and Torbali. - Gediz Basin, potentially in two of the following districts: Salihli, Saruhanlı, Ahmetli and Turgutlu. Other basins with similar problems could potentially be considered for project activities during implementation.	The area where the biogas facility will be constructed is not yet determined. If it is a previously acquired land (acquired in the past 5 years), an ex-post social audit will be carried out. If a new land is to be used, land expropriation will be required, and a RP will be prepared accordingly.
Sub-component 3.4: Research and innovations to support CSA	TAGEM	A wide range of provinces depending on the focus of the dissemination activities.	No need for land acquisition. Small scale civil works for refurbishing of existing R&D facilities will not require new land use or land acquisition.
Component 4: Project Management, Monitoring, and Evaluation			
Component 4: Project Management, Monitoring, and Evaluation	ABDGM	N/A	N/A

Source: RF Table 1

Resettlement Process

There will be several parties that will take place in the preparation, implementation and monitoring of RF activities. PIUs will be mainly responsible for the implementation of all land acquisition and resettlement activities of the sub-components.

Senior social expert to be assigned at PCU and the social experts assigned at PIUs will work closely with GDs and Provincial Organizations, and monitor land acquisition activities to ensure that land acquisition activities are executed in line with all relevant national legislation and ESS5. Other key responsibilities of social experts will be ensuring that necessary mitigation measures/actions are implemented for the implementation of RF, all eligible persons are compensated in a timely way and appropriately, that proper approaches and tools are being used to conduct site activities in compliance with RF, RP and Ex-post Social Audits as well as other Project requirements, coordinating stakeholder engagement activities as specified in Project's Stakeholder Engagement Plan (SEP), coordinating interface and reporting to/from World Bank in relation to implementation of RP, measuring and reporting RP performance of the Project as defined under related Project plans, procedures and requirements, providing support for coordination of RP related programs as deemed necessary.

Overall resettlement process and the implementation responsibilities of relevant parties are summarized below;

i. Capacity Support Trainings

Prior to the start of the activities of the proposed Project, as also outlined in the ESCP and ESMF, PCU experts will provide training for PIUs and Provincial Organizations' staff to ensure proper preparation and implementation of resettlement instruments. The trainings will cover land acquisition planning and measures to fill the gaps between national law and WB standards in the resettlement process, data collection for census and socio-economic surveys, baseline analysis, monitoring requirements, etc. Initial training will be given no later than 90 days after formation of the PCU and PIUs and before start of Project activities. Refresher trainings will be also given if needed during the implementation.

ii. Resettlement Screening

The resettlement process will begin with the design of each investment and site selection. During the design and site selection of the investment the Subproject area will be selected in a way that minimizes privately owned land acquisition and the economic and social impacts on the affected people. After the final design of investment and site selection PIU will make the social screening (by using the screening form given in Annex 2 of RF) and sent to PCU for review and approval. PCU will review the social screening and sent to WB for review and no objection.

ESS5 also applies if land was already acquired in anticipation of or in preparation for a project and the land is directly linked to the WB project. If land acquisition procedures have already been completed at the time the RF is approved and if the screening process indicates land take activities carried out in the past 5 years, a retroactive audit report (Please see Annex 3 of RF document for Template of Ex-Post Social Audit Reporting) will be conducted by PIU to ensure that land acquisition was completed in accordance with the objectives and principles of ESS5 and sent to PCU for review. PCU will review and make necessary revisions before submitting to the WB for approval. Should an Ex-Post Social Audit Report reveal that a Subproject is noncompliant with ESS5, the respective PIU will then take complementary actions to ensure that all land acquisition works are scaled up and gaps are bridged, mitigating or compensating for impacts generated by the given Subproject(s). The PIUs will prepare

remedy documentation and send to PCU for approve. PCU will review remedy documentation and sent to WB for review and no objection.

The PIUs may prefer to conduct the Ex-Post Social Audits in their own capacity or may decide to contract the assignment. In case of the latter, the ToRs for these audits will be presented for approval to the World Bank in advance. The audit may include review of relevant documents, field visits, interviews, and consultations held with affected persons and other key stakeholders.

If there is a dispute over the land, the construction activities cannot commence until the dispute is over and full compensation is made to the PAP in line with ESS5 requirements and these are documented and reported to the Bank.

iii. Preparation of Resettlement Instruments and Land Acquisition Process

For land acquisition requirements of the Subprojects, the PIUs will identify the exact scale of land acquisition for Subproject components and then census, asset inventory and socio-economic survey studies will be conducted by Provincial Organizations of MoAF under supervision of relevant PIUs. Full census method will be applied during the data collection process. Based on this census and socio-economic baseline data, PIU will prepare a Resettlement Plan (as outlined in Annex 4 of RF document) and sent to PCU for review. After review and revisions of PCU, RP will be sent to World Bank for review and no objection. The final version of the RPs will be disclosed by PCU.

On the other hand, MoAF will also start the procedures required by national legislation for expropriation and/or easement rights. For Sub-components 2.1 (Erzurum), 2.2, 3.1 and 3.3 the Subproject is not yet determined. If the Subproject areas belong to MoAF (or Governorate for Sub-component 3.1 and Metropolitan Municipality of Izmir for Sub-component 3.3), an ex-post social audit may be conducted if the land take activities are carried out in the past 5 years. If the MoAF (or Governorate for Sub-component 3.1 and the Municipality for Sub-component 3.3) cannot propose its own lands to be used, then new land acquisition will be required, and a RP will be prepared accordingly. MoAF will be in coordination with the Metropolitan Municipality and the Governorate for the expropriation of any new land required to be used. Although the national expropriation processes will be implemented by the Municipality or the Governorate, MoAF will have overall responsibility for implementation of the resettlement plans and facilitating the coordination with the Governorate and the Municipality. MoAF will be in close coordination with the responsible institution to ensure that the expropriation processes are implemented in accordance with the Project commitments and WB standards.

iv. Implementation

The consultations with PAPs will be conducted by Provincial Organizations with assistance of PIUs. Both the committee formed in accordance to Law no 2942 and the staff of Provincial Organizations will take part in negotiations to ensure that the requirements of ESS5 are satisfied. All expropriation costs, compensations and allowances related to the Project will be covered from the budgets of the implementing General Directorates. General Directorates will also establish a Resettlement Action Plan (RAP) fund to meet the livelihood restoration and assistance costs apart from expropriation costs.

RP progress reports (outline is given in Annex 5 of RF Document) will be prepared by PIUs (in coordination with Provincial Organizations) and reviewed and approved by PCU and sent to World Bank for no objection.

v. Closure

For the Subprojects with significant adverse resettlement risks and impacts (according to the results of the screening), Resettlement Completion Audit will be conducted which provides a final indication that the restoration of livelihoods is sustainable, and no other intervention is required. This audit report will be submitted to WB and WB will provide no objection to closing out the RP process. For the Subprojects with significant adverse resettlement risks and impacts, a Resettlement Completion Reports (outline is given in Annex 6 of RF Document) will be prepared by the independent consultant(s) which will be assigned by MoAF.

The summary of the resettlement process is presented in Table 29 below.

Table 29. Resettlement Process and Responsible Parties

Activity	GD	Provincial Organizations	PIU	PCU	Independent Consultant	WB
Preparation						
Final design of each investment and site selection	Prepare	–	–	–	–	–
Social screening	–	–	Conduct	Review & Approve	–	Review & Give no-objection
Ex-post Social Audit (where project activities have commenced prior to or linked to the World Bank financed project)	–	–	Conduct	Review & Approve	–	Review & Give no-objection
Personnel for land acquisition	Form committee according to Law No: 2942	–	–	Social expert	–	–
Census and social baseline study; notification of cut-off date	–	Conduct	Monitor & Review & Approve	Review & Approve	–	Review & Give no-objection
Valuation of assets subject to land acquisition	–	–	Conduct	Review & Approve	–	Review & Give no-objection
Draft RP	–	–	Prepare	Review & Approve	–	Review & Give no-objection
Disclosure of draft RP	–	–	–	Conduct	–	–
Disclosure of the final RP	–	–	–	Conduct	–	–
Operating GM	–	–	Conduct	Conduct	–	–
Implementation						
Consultations with PAPs and other stakeholders on land requirements of the Project	–	Conduct	Assist	Monitor	–	–
Negotiations for identification of compensation mechanisms	Conduct	–	–	Assist	–	–
Implementation of compensation mechanisms	Conduct	–	–	–	–	–
RP Progress Reports	–	Assist	Prepare	Review & Approve	–	Review & Approve

Activity	GD	Provincial Organizations	PIU	PCU	Independent Consultant	WB
Closure						
Resettlement Completion Report (for Subprojects with significant adverse resettlement risks and impacts)	–	Assist	Assist	Review & Approve	Prepare	Review & Approve
Disclosure of RP Completion Report(s)	–	–	–	Conduct		–

Source: RF Table 4

vi. Monitoring and Evaluation (M&E)

Monitoring of RF/RP implementation will be the responsibility of relevant PIU and the senior social expert in PCU will review and supervise the monitoring activities. Semi-annual monitoring reports will be prepared by PIUs based on the monitoring indicators defined below and will be submitted to WB. For the Subprojects with significant adverse resettlement risks and impacts; RPs will be considered complete when the adverse impacts of land acquisition are dealt with in a manner consistent with the national legislation and international standards. MoAF will assign an independent consultant for the preparation of Resettlement Completion Report to assess whether the provisions of the international standards and relevant plan have been met. The responsible parties in the monitoring and evaluation process is given in Table 30.

Table 30. Responsible Parties in the Monitoring and Evaluation Process

Responsible Party	Roles in the M&E Process	Frequency
PCU	<ul style="list-style-type: none"> Review M&E reports prepared by PIU Provide advice on corrective actions and measures to be taken to improve RP implementation 	Semi-annually
	<ul style="list-style-type: none"> Review RP Completion Audit Report and submit it to the World Bank 	Upon the completion of the resettlement
PIUs	<ul style="list-style-type: none"> Prepare M&E reports and submit to PCU (Annex 5 of RF) Follow the land acquisition process in order to compensate the losses of all PAPs Ensure that all landowners' (formal and informal) livelihoods are compensated timely and appropriately Ensure that all PAPs, especially vulnerable ones, can easily express their concerns that may arise in the RP implementation process and respond to them in time. Monitor the engagement activities regarding land acquisition to be carried out with relevant stakeholders in accordance with the SEP Ensure that the grievance mechanism is transparent and accessible to all PAPs Closely monitor the compliance of all planned RP applications with the program and the budget. Plan in detail the subsequent measures to be taken in consultation with the relevant parties of the RP Implementation. 	Semi-annually
Provincial Organization	<ul style="list-style-type: none"> Prepare monthly reports to the PIU about the compliance of RP implementation activities with the plan 	Semi-annually

Responsible Party	Roles in the M&E Process	Frequency
	<ul style="list-style-type: none"> Provides all relevant materials, documents and data collected from implementation of RP(s) to PIU and independent consultants Take actions in the implementation when necessary, informing the PIU about the corrections 	
Independent Consultant	<ul style="list-style-type: none"> Prepare and submit RP Completion Report at the end of the resettlement activities of Subprojects with significant adverse resettlement impacts and risks 	Upon the completion of the resettlement

Source: RF Table 5

Indicators to be monitored and reported on a quarterly basis are given as minimum in Table 31 below. RPs will utilize these but may also add Subproject specific indicators.

Table 31. Monitoring indicators

Issue	Indicators
General impacts	<ul style="list-style-type: none"> Size of the affected areas by ownership (public, private), impact and project activity. Number of affected assets by ownership (public, private), impact and project activity. Positive/negative perceptions of PAPs regarding the impacts on the community infrastructure, property and services
Eligibility	<ul style="list-style-type: none"> Number of households and individuals physically or economically displaced by each project component Number of PAPs that have been provided with livelihood support or other compensation Number and type of assistances provided to vulnerable groups of PAPs
Valuation & Compensation	<ul style="list-style-type: none"> Expropriation costs for each asset according to Law no. 2942. Compensation costs allowances and supports for each asset according ESS5 Other resettlement costs by each eligible affected person. Completed number of compensation payments Number of open court cases Amount and percentage of payments made as a result of court proceedings and payments made as a result of negotiations,
Community participation	<ul style="list-style-type: none"> Number of consultations by methods Number of participants in consultations Distribution of number of participants in consultations by gender and vulnerability status Number of vulnerable PAPs consulted Number of information disclosures and consultations specifically tailored for vulnerable groups (including gender)
Reconciliation	<ul style="list-style-type: none"> Number of land acquisitions or easements done by Article 8 of Law no. 2942. Number of land acquisitions or easements done by Article 10 of Law no. 2942.
Grievance	<ul style="list-style-type: none"> Number of grievances by category Number of grievances reported by vulnerable PAPs % of solved grievances resolved within the stipulated timeframe

Source: RF Table 6

8.7. Stakeholder Engagement

Subproject specific Stakeholder Engagement Plans (SEPs) will be prepared in line with the principles and processes defined in the SEP taking into account the features of the Subprojects/activities at the

implementation stage. The MoAF will be responsible to develop Subproject specific SEPs proportionate to the nature and scale of the project, as well as its potential risks and impacts.

While, for the activities of TRGM and GKGM, social specialists hired under the PIUs will prepare the Subproject specific SEPs, PCU will prepare SEPs for BTGM, TAGEM and ABDGM in line with the principles provided in the SEP. The Subproject specific SEPs prepared by the PIUs will be sent to PCU for review and approval. Then PCU will share the Subproject specific SEPs with the World Bank for their review and no objection for all substantial risk Subprojects and for the first three Subprojects which are categorized as moderate and low risk.

The PCU and PIU staff will be responsible to provide support and work in close collaboration with the E&S specialists of the PCU and the PIUs, when needed throughout the project implementation. Besides, the staff of Provincial Organizations, Supervision Consultants and Contractors will also be responsible for the implementation of SEP. The responsibilities of the key actors in SEP Implementation are given in Table 32. The PIUs that do not have specified specialist in their team, will be supported by the relevant specialist of the PCU.

Table 32. Responsibilities of the key actors in SEP Implementation

Key Actors	Responsibilities
Project Coordinator (PCU)	<ul style="list-style-type: none"> • Coordinate between the PIUs and the World Bank • Ensure timely and comprehensive implementation of the project activities
Communication and Stakeholder Engagement Specialist (PCU)	<ul style="list-style-type: none"> • Work in close collaboration with the specialists hired under the PCU and PIUs, • Incorporate all stakeholder engagement activities into the overall environmental and social management systems, • Develop an internal system to communicate progress and results of stakeholder engagement to the senior management and staff members • Expedite and monitor the PIU team for proper implementation of processes related to grievance mechanism and stakeholder engagement issues • Coordinate the parties for proper implementation of processes regarding the grievance mechanism and stakeholder engagement issues • Provide consultation on specific stakeholder engagement activities • Coordinate communication and outreach throughout the project implementation • Coordinate interface and reporting to/from the World Bank on the implementation of SEP and the site specific SEPs • Consolidate reporting on overall SEP activities and project progress sent by PIUs
Social Specialist (PIU)	<ul style="list-style-type: none"> • Work in close collaboration with the specialists hired under the PCU and PIUs, • Prepare site specific SEPs in consultation and cooperation with the relevant PIUs • Update the SEPs periodically and in case of changes in Subproject • Plan implementation of the SEP • Ensure that the stakeholder engagement is understood by PIU members and all other responsible parties involved in the subproject • Supervise the stakeholder engagement activities with identified stakeholders • Organize/manage stakeholder consultation meetings and other events related to public disclosure of information • Support other PIU staff who may interact with stakeholders • Implement social monitoring • Monitor and report about the social issues specified in the relevant documents are implemented throughout the Subproject.

Key Actors	Responsibilities
	<ul style="list-style-type: none"> • Support the Supervision Consultants and the contractors/subcontractors regarding SEP implementation
Environmental Specialist (PIU)	<ul style="list-style-type: none"> • Work in close collaboration with the specialists hired under the PCU and PIUs • Monitor the progress of the project • Ensure the successful delivery of all defined documents • Consolidate reporting on overall stakeholder engagement activities and project progress • Implement environmental monitoring • Monitor and report (in close collaboration with the social specialist) about the environmental issues specified in the relevant documents are implemented throughout the Project life.
Procurement Specialist (PIU)	<ul style="list-style-type: none"> • Provide consultancy in tenders to be held within the scope of the Project. • Ensure that SEP, GM and the other E&S documents are included in tender documents • Prepare English and Turkish copies of the tender documents
Monitoring and Evaluation Specialist (PIU)	<ul style="list-style-type: none"> • Coordinate monitoring and evaluation studies • Prepare monitoring reports to be submitted to PCU in a timely manner
Focal Points (PIU)	<ul style="list-style-type: none"> • Work in close collaboration with the specialists hired under the PCU and PIUs • Act as the focal point for the GM in the PIU • Keep records and follow-up grievances relevant to the Project • Manage and coordinate of the resolution process of project related grievances • Inspect grievance records to reveal non-compliance issues or recurring issues regarding the stakeholder engagement and other Project activities • Coordinate and monitoring GM focal points at contractor level • Monitor the grievance records of contractors and the resolution process of the grievances and reporting them to the PIU in monthly progress reports • Receive, record, coordinate and resolve Project related grievances from all different GM levels • Inform the PIU and the management about the resolution process • Prepare compiled GM reports for the Project • Contact the PIU in order to respond to grievances/find solutions
Provincial Organizations	<ul style="list-style-type: none"> • Implement SEPs • Report and monitor SEPs
Supervision Consultant	<ul style="list-style-type: none"> • Monitoring the contractors' recording and resolution of grievances, and reporting these to PIU in their monthly progress reports • Contact with PIU GM Focal Point for the follow up of the grievances
Contractors	<ul style="list-style-type: none"> • Inform PIU of any issues related to their engagement with stakeholders • Inform local communities of any environmental monitoring (e.g. noise, vibration, water quality monitoring etc.) • Develop and implement a Worker's GM for the workforce including subcontractors, prior to the start of works in compliance with principles stated in the LMP of this proposed Project.

Source: SEP Table 3

Capacity Support Trainings

Prior to the start of the activities of the proposed Project, as also outlined in the ESCP and ESMF, PCU experts will provide training to the specialists hired/assigned under the PIUs and staff of Provincial

Organizations to ensure proper preparation and implementation of site specific SEPs. The trainings will cover the principles stated in this SEP such as stakeholder identification, mapping, citizen engagement, GM, etc. Initial training will be given no later than 90 days after establishment of the PCU and PIUs and before start of Project activities. Refresher trainings will be also given if needed during the implementation.

Monitoring and Reporting

Stakeholder engagement activities will be monitored periodically and reported in project progress reports biannually.

Documentations of the stakeholder engagement activities will be kept in the archive of the MoAF. Information about the consultation activities will be reported to the Bank within the Project Progress reports and will include,

- Number, type of consultations
- Number of participants, type of stakeholders engaged
- Critical issues discussed, raised during the consultations,
- Number of grievances received (disaggregated data: gender, province, category of grievance, status of the grievances [closed, pending, resolved, etc.], etc.)

8.8. Citizen Engagement Strategy

The project will develop and implement a Citizen Engagement (CE) strategy to solicit unrestricted feedback actively and regularly through multiple channels from citizens and project beneficiaries on project activities as well as the CE process itself. Overall, throughout implementation, the project will consult with providers and users of CSA technologies/practices to inform sub-components' activities. Citizen engagement mechanisms will be developed and implemented throughout the project components. Under Component 1, (i) focus groups will pro-actively engage with farmers to develop and validate user-friendly applications in a participatory manner; (ii) a decision support tool to guide land planning processes at the provincial level will be designed, anchored on solid data and stakeholder engagement. Under Component 2 (iii) the demand assessment of laboratory infrastructure, to ensure sustainability, will include feedback from farmers and other value chain stakeholders. Under Component 3, (iv) participatory decision-making and monitoring for matching grant systems for digital CSA technologies will be ensured. Farmers and farmers' associations will be invited to regular roundtables to provide feedback to the design, accessibility, and application processes of the matching grant systems (particularly including women and youth) and to prioritize the technologies that will help to address key problems. Other relevant value chain stakeholders, including buyers, processors, service and technology providers will also be consulted. The planned web-based platform providing a one-stop shop for smart and precision agriculture solutions will also facilitate engagement between farmers and service providers and enable continuous opportunities for structured engagement with farmers through different COVID restrictions. The platform will also be used for sharing information and data, posting results of the surveys, focus groups and working groups, perceptions on the benefits of the technologies, and communicate results of grant program adjustments, etc. Under Component 4, (v) a beneficiary feedback survey will be implemented annually. Finally, (vi) the annual information campaigns for beneficiary engagement in the matching-grant programs will serve as mechanisms to inform potential beneficiaries of the requirements for participation and specification of the matching- grant program, including measures taken, as results of beneficiary feedback, to enhance the effectiveness of the matching grant programs; and (vii) capacity building for government officials on citizen engagement and respond to beneficiaries' needs, training them to support the citizen engagement activities.

Under Implementation of SEP and Evaluation of Stakeholder Feedback, the project will also include citizen engagement activities, such as feedback on services received (or not).

Within the scope of Intermediate Results Indicators by Components, PCU has an end target rated 75% regarding Share of project beneficiaries with rating 'Satisfied' or above with Citizen Engagement process.

8.9. Grievance Mechanism (GM)

Any grievances that may occur during the project will be addressed at four levels. The GM at the first level will be undertaken by the ABDGM. Secondly, contractors will establish their own GM for undertaking grievances for sub-contractors and workers. As the third level the MoAF's GM (TİMER) will be effectively adapted for the Project. Finally, the Presidential Communication Center (CİMER) will constitute the fourth level of the GM of this project. Details of these different level GMs and the communication channels are given in Section 6.1 of SEP.

In accordance with the international requirements, a Grievance Mechanism (GM) will be established by ABDGM in order to receive, resolve and follow the concerns and complaints of the stakeholders. The GM will be accessible for the stakeholders and respond to all feedbacks (including grievances, complaints, requests, opinions, suggestions) at the earliest convenience. Beneficiaries of grants will also be able to submit their feedbacks/grievances to District and Provincial Directorates of MoAF. The personnel in these directorates will be informed and trained about the GM and will direct the stakeholders to submit their feedbacks/complaints through the correct channels. For this reason, ABDGM will send poster, brochures, etc. to District and Provincial Directorates of MoAF to enable them directing the stakeholders (especially beneficiaries of grant) to the GM and these communication tools will be posted in public places.

All complaints whether received from national or Project level GMs will be recorded on the same online system. The system management in which the recorded complaints are divided according to their types and related parties will be under the responsibility of the PCU. The unit or implementing agency to take part in the solution will be approved by ABDGM. A regular recording system provides Monitoring and Evaluation (M&E) order convenience.

Personnel responsible for recording the complaints will be assigned in PIUs. A video seminar on stakeholder engagement and GM will be prepared and sent to GDs central and local staff in order to train the respective staff who will be assigned to a position for GM implementation, M&E, etc. Other stakeholder institutions and organizations will also be informed about this mechanism with an official letter. The grievance form and details on the contact information for the GM will be shared and available on the ABDGM website.

Workers' Grievance Mechanism

The project grievance mechanism will also be open and accessible to the employees of headquarters, local offices and contractor companies. A Workers' Grievance Mechanism (WGM) will be established both by the PCU and the contractors who will perform construction work within the scope of the project (i.e. Sub-component 2.1, Sub-component 2.2 and Sub-component 3.1b). The WGMs will be monitored by the Supervision Consultants and will be monthly reported to the PIU through their progress reports. The process will also be monitored by the PIUs and the GM Focal Point in MoAF. The Contractors may seek advice and support from the Supervision Consultant to address grievances submitted in language other than Turkish.

WGM will be introduced to Project workers (direct and contracted) in the workplace through the staff induction trainings and other means of communication tools and engagement methods.

The PCU will assign one of the social experts for the overall supervision of the GM including recording complaints, conveying them to relevant units for resolution, and following the timely provision and the quality of the resolutions. The suggestion/complaint boxes in the workplaces will be opened weekly and shared with the PCU. The GM focal points of the GDs, provincial directorates/organizations and the contractors.

Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH)

Although the risk from project activities and in Turkish context is low, grievance mechanism for workers shall include handling disclosures of sexual exploitation and abuse (SEA) and sexual harassment (SH). A SEA/SH referral pathway will be established and updated in line with existing procedures of the country. The GM that will be in place for the project workers will also be used for addressing SEA/SH-related issues and will have in place mechanisms for confidential reporting with safe and ethical documenting of SEA/SH issues. Further, the GM will also have in place processes to immediately notify both the PCU and the World Bank of any SEA/SH complaints, with the consent of the survivor.

8.10. Labor Management Procedures

Labor Management Procedures (LMP) developed for the project describes the requirements with regard to labor and working conditions applicable during the pre-construction, construction and operation phases of the project. It aims to promote fair and equitable labor practices for the fair treatment, non-discrimination and equal opportunity of workers in all Subprojects and aims to protect project workers' rights and ensure the management and control of activities that may pose labor-related risks.

The LMP describes the requirements and expectations in terms of compliance, reporting, roles and responsibilities, monitoring and training with respect to labor and working conditions. This procedure will be adopted by MoAF and will apply to all project workers. It describes how MoAF will comply with the requirements of World Bank Environmental and Social Standard 2 (ESS2), "Labor and Working Conditions", and with Turkish labor, employment and occupational health and safety laws.

The LMP assesses potential labor risks and impacts and describes how they will be mitigated and managed. MoAF will use commercially reasonable efforts to require project contractors, or other intermediaries procuring labor, to apply this labor management procedure. The LMP is a 'living' document and will be updated further as and when more information becomes available.

Responsible Staff

Project Coordinating Unit (PCU): PCU will be the main coordinating body and will be staffed to carry the technical capacity that will technically support other management units of the project. PCU will;

- Undertake the overall implementation of the LMP,
- Engage and manage contractors/subcontractors in accordance with the LMP and the applicable procurement document,
- Monitor that contractors/subcontractor are meeting obligations towards contracted workers as included in the Contractor's LM Plan (LM Plan), ESMP and bidding document; and ensure that they are in line with ESS2 and national labor and OHS laws,
- Maintain records of recruitment and employment process of direct workers,

- Monitor employment process of contracted workers to ensure it is carried out in accordance with this labor management procedure and national labor law,
- Monitor the potential risks of child labor, forced labor and serious safety issues in relation to primary supply workers,
- Monitor training of relevant project workers,
- Ensure that the GM for project workers is established and operated effectively and all workers are informed of it,
- Monitor and report on the Worker's GM,
- Monitor implementation of the workers Code of Conduct,
- Monitor that OHS standards are met at all workplaces (including Contractors'/subcontractors) in line with national occupational health and safety legislation, ESS2 requirements, Occupational Health and Safety Plan, and WHO and WB guidelines on COVID-19 prevention,
- Monitor training of the project workers on OHS, SEA/SH prevention and any other required trainings,
- Establish and implement a procedure for documenting specific incidents such as project related occupational injuries, illnesses, and lost time accidents. Maintains such records and requires all third parties and primary suppliers to maintain them. Such records will form an input into the regular review of OHS performance and working conditions,
- In instances of severe, fatal, and mass accidents, inform the law enforcement bodies, Labor Inspectorate and PIUs,

Project Implementation Units (PIU): The PIUs at the Central Organization of MoAF, under the GDs of TRGM, BTGM, GKGM and TAGEM will be responsible for the execution of project activities under their respective sub-components in coordination with the related Provincial Organizations. They will be responsible for the implementation of the LMP within the scope of the sub-components they are responsible for. The focal point of the PIU will;

- oversee the LMP activities under their respective sub-components,
- ensure that contractors prepare their Contractor's LM Plan is in line with this LMP and Contractor's ESMP before the commencement of any works on site,
- monitor implementation of the LM Plans,
- inform PCU in instances of work accidents, and
- prepare reports about LMP activities under its respective sub-components and submit to PCU.

Contractor firms will be responsible for preparing and implementing Subproject specific LM Plans and OHS Plans. They will be responsible for contracting and managing their labor force with respect to the terms and conditions in the LM Plan. They will be responsible for the following in addition to the legislative requirements:

- Employ or appoint qualified social, labor, and occupational health and safety experts to implement project specific labor management procedure, occupational health, and safety plans, and to manage sub-contractors' performance,
- Prepare and adopt LM Plan and OHS plan which will apply to contracted and subcontracted workers. These procedures and plans will be submitted to respective PIUs and then to PCU for review and approval before the contractors mobilize for the preconstruction phase,
- Supervise its subcontractors' compliance with the LM Plans and OHS plans,
- Maintain records of recruitment and employment process of contracted workers,

- Monitor employment process of sub-contracted workers to ensure it is carried out in accordance with this labor management procedure and national labor law,
- Clearly communicate job description and employment conditions to contracted workers,
- Develop, and implement workers' grievance mechanism and address the grievance received from the contracted and sub-contracted workers,
- Have a system for regular review and reporting on labor, and OHS performance,
- Deliver regular work induction trainings including but not limited to OHS, HSE, social induction, SEA/SH prevention training to employees,
- Ensure that all contractors and sub-contractor workers understand and sign the Code of Conduct prior to the commencement of works,
- Establish and implement a procedure for documenting specific incidents such as project related occupational injuries, illnesses, and lost time accidents. Maintain such records and require all third parties and primary suppliers to maintain them. Such records will form an input into the regular review of OHS performance and working conditions,
- In instances of severe, fatal, and mass accidents, inform the law enforcement bodies, Labor Inspectorate and respective PIU,
- For COVID-19:
 - o Implement training of workers on the latest WHO advice and recommendations on the COVID-19 infection prevention,
 - o Raise awareness and ensure that all workers participate in trainings in mitigating the spread of COVID-19,
 - o Carry out health checks of workers to prevent COVID-19,
 - o Monitor, supervise, and report on health and safety issues relating to COVID-19 (COVID-19 focal point), and
 - o Ensure that workers are provided with PPE to prevent COVID-19 (face covers, gloves, sanitizers) and that hand washing facilities are available.

Code of Conduct

The contractors will adopt and implement the Code of Conduct (CoC), which reflects the company's mission, core values and overall working culture and will be included in the WB standard bidding documents. The Code of Conduct will also include measures to address SEA/SH issues.

Contracts with contractors shall contain a provision on the obligation to comply with the current Labor and OHS Law and with the LMP. After contractors are hired for infrastructure projects, contractors will prepare Labor Management Plans for their activities in compliance with this Labor Management Procedures. This will be reviewed and cleared by MoAF before any civil works begin. The Contractor Labor Management Plans will include the Code of Conduct included in the Annex 1 of LMP document. The Contractor is responsible for raising awareness on and training all workers on the principles in the procedures and the code of conduct and the grievance mechanism. In case the contractors engage subcontractors, contractors shall be under obligation to build in such a provision in the sub-contracts.

Contractors will need to maintain good relations with local communities through adhering to the Code of Conduct (CoC). The CoC commits all persons engaged by the contractor, including sub-contractors and suppliers, to acceptable standards of behavior. The CoC must include sanctions for non-compliance, including non-compliance with specific policies related to gender-based violence, sexual exploitation and sexual harassment (e.g., termination). The CoC should be written in plain language and signed by each worker.

Occupational Health and Safety

An Occupational Health and Safety (OHS) Plan will be prepared by contractors and sub-contractors in accordance with OHS legislation during the execution of the construction operations. Contents of OHS Plan to be prepared during the construction phase is included in Annex 2 of LMP document.

Audits will be made on the site through regular visits of OHS teams of PIUs and third-party auditors. All project workers will be trained and informed about potential OHS risks before the start of works. A worker who does not take the required training will not be allowed to work at the Project.

Incident Reporting

According to Article 14 “Registration and notification of work accidents and occupational diseases” of Law no. 6331, the employer reports the occupational accidents to the Social Security Institution within three workdays after the accident, and the occupational diseases reported to her/him by the health service providers or the workplace doctor, within three workdays from the date of learning. However, within the scope of the Project, the contractor will inform the relevant PIU immediately after OHS related incidents and the PIU will inform PCU and PCU will inform the World Bank about the incident 48 hours after the occurrence.

The contractor will submit root cause analysis to PIU in 30 calendar days after the accident happened or the disease is diagnosed. Afterwards, PIU will submit the incident report to PCU in no more than 2 days, and PCU will submit incident report to the World Bank within 35 calendar days of the event.

All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of an expert in occupational health and safety through a root cause analysis.

The contractor will also include the summary of accidents and diseases in its monthly reports throughout the Project according to the codes indicated in Section 9.1 of LMP.

In cases when significant adverse effects happened or likely to happen on the environment, affected communities, and public which might include strikes or other labor protests, project-caused injuries to community members or property damage, the contractor will inform the relevant PIU immediately after the OHS related incident and the PIU will inform PCU and PCU will inform the World Bank about the incident in 48 hours after the incident.

PCU will also send an incident investigation report together with the corrective action plan in 30 business days to the World Bank.

Contractor Management

Most of the activities of the Project will be contracted. The contracts will include provisions related to labor and OHS as provided in the World Bank Standard Procurement Documents and national legislation.

For contractor selections below criteria will be considered:

- previous works completed,
- qualification of contractor’s human resources,
- compliance in health and safety issues,
- precautions taken on child labor and forced labor employment.

According to the selection criteria, the ones who comply the best will be selected as contractors.

During the implementation phase of the services, Provincial Organizations (in case of agricultural activities), Supervision Contractors (in case of construction activities) or PIUs (in case of Sub-component 1.2) will organize planned and unplanned visits to contractors' offices and/or place where work is being performed. In these visits the progress achieved, health and safety-related issues and child and forced labor employment status will be observed. If any dispute is determined the supplier will be notified to prevent the dispute in no more than 20 calendar days. If the dispute still exists after 20 calendar days, the agreement with the supplier will be terminated immediately.

9. ANNEXES

Annex 1. Detailed Cost Tables

Annex 2. Terms of References (ToR) of External Individual Specialists

Annex 3. AWPB Draft Template

Annex 4. Progress Report Draft Template

Annex 5. Relevant Provincial/Regional Units/Stakeholders

Annex 6. Pre-feasibility Report Template (Draft)

Annex 7. Exclusion List

Annex 8. Draft Subproject Agreement

Annex 9. Draft Sub-financing Agreement

Annex 10. Financial Management Manual

Annex 11. Template of IFRs

Annex 12. Procurement Plans (The PP is a living document and can be adjusted during project implementation, adjustments to the PP are submitted for no-objection of the World Bank).

Annex 13. Process Flow Tables as per the Procurement Methods

Annex 14. CoI Declaration

Annex 15. M&E Plan

Annex 16. The Anticipated Risk Categorization of the sub-components and the National EIA Requirements