



Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 04/21/2024 | Report No: ESRSA03445



I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P179313	Investment Project Financing (IPF)	Flood and Drought Management Project	2025
Operation Name	Türkiye Flood and Drought Management Project		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Turkiye	Turkiye	EUROPE AND CENTRAL ASIA	Water
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
Ministry of Treasury and Finance	General Directorate of Water Management, State Hydraulic Works	23-Apr-2024	01-Jul-2024
Estimated Decision Review Date	Total Project Cost		
17-Jan-2024	600,000,000.00		

Proposed Development Objective

The project development objective is to increase flood protection for people living in selected areas of Türkiye and to strengthen the Country's institutional capacity for flood and drought risk management.

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

[Description imported from the PAD Data Sheet in the Portal providing information about the key aspects and components/sub-components of the project]

The proposed project will support the GoT in addressing the multitude of water security related challenges facing the selected locations of Türkiye, while enhancing the livelihood security and resilience of local communities and institutional strength of the related institutions against the risks and impacts of climate-induced flooding and drought. Through the three components, the Project would adopt an integrated approach to achieve these targets. Based on the



existing capacity of DSI and other stakeholders which will be enhanced through the Bank’s previous experience in flood and drought management, this project will (i) improve flood management infrastructure, (ii) improve Early Warning Systems, (iii) enhance capacity and institutional structure, allowing for the coordination and integration of solutions among different government agencies as well as between government and local stakeholders. The project will also deploy integrated green and gray infrastructure solutions as both short-term and long-term responses to mitigate the risks of floods and drought. The proposed Flood and Drought Management Project is aligned with the World Bank Group (WBG) Country Partnership Framework (CPF) for Türkiye for FY18–FY21 , which was extended to cover the FY22–23 period through the Performance and Learning Review . In the CPF, the Bank’s support for Türkiye is built on three focus areas: growth, inclusion, and sustainability. The proposed project is particularly well-aligned with the focus area of sustainability, and more specifically the CPF Objective 8 which is defined as “increased sustainability of infrastructure assets and natural capital” and “increased sustainability and resilience of cities”. The indicator of “Increased resilience of cities through increased number of disaster resilient public buildings and improved disaster preparedness.” is used to monitor this Objective. The project is also aligned with the Resilient and Net Zero Pathway outlined in the Türkiye CCDR. Among the six climate-specific priorities described in the Pathway, the project will contribute to Priority 5: Make growth more resilient and sustainable.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

[Description of key features relevant to the operation’s environmental and social risks and opportunities (e.g., whether the project is nationwide or regional in scope, urban/rural, in an FCV context, presence of Indigenous Peoples or other minorities, involves associated facilities, high-biodiversity settings, etc.) – Max. character limit 10,000]

Türkiye is located between Asia and Europe, a crossroad of the Balkans, Caucasus, Middle East, and the eastern Mediterranean, with a population of 83 million and 783,356 km² area. Türkiye is an upper-middle-income country, with the world’s 19th largest economy with a Gross Domestic Production (GDP) of US\$753.7 billion in 2019, according to the Turkish Statistical Institute (TurkStat). Seventy-five percent of its population lives in urban areas, and there are 81 provinces across the country.

Türkiye’s geographic and socioeconomic conditions make it particularly vulnerable to climate change – assessed as highly vulnerable in nine out of 10 climate dimensions, compared with the OECD median of two out of 10, in the latest Türkiye Country Climate and Development Report (CCDR) in 2022. Climate changes poses significant risks to Türkiye’s water security, with high costs and associated impacts such as extreme flooding and droughts expected to increase in number and intensity. Floods and landslides frequently occur and cause significant localized losses across all parts of the country and economic losses associated with water extremes in Türkiye are significant. The immediate impacts of flooding include the loss of human life, livelihoods, damage to property, destruction of crops, loss of livestock, disruption of services, and deterioration of health conditions owing to waterborne diseases, among others. Similarly, the droughts, which are becoming more prominent by year, create risks to livelihoods, damage to property, destruction of crops, loss of livestock, disruption of services, economic and social hardship and deterioration of health conditions.

In Türkiye, floods are considered the second most disastrous natural hazard after earthquakes, with almost 30 percent of all natural disasters in the country consisting of flood events. Droughts are another key challenge for Türkiye, especially as a large parts of the country already have a semi-arid climate. Since Türkiye is located in the Mediterranean



macroclimate region in the sub-tropical zone, rainfall variations occur from year to year. This causes regional and widespread drought impacts in various intensities.

Based on the preliminary assessment, the project have identified eight subprojects as priority investments for implementation. These include rehabilitation of streams, flood and sediment control works and construction of check dams in Eastern Black Sea Region – in Artvin (4 schemes), Trabzon, Rize, Giresun and Kizilirmak/Corum. The works to be implemented will include construction of levees, permeable check dams, culverts, flood control channels, retaining walls, bridges and other ancillary structures. During the first year of project implementation, DSI will complete the designs and fulfill the land acquisition related requirements as well as develop ESIA/ESMPs for each of eight priority investment schemes. During the first year of project implementation the additional subprojects will be selected together with technical justification to confirm their impacts, as no risk classification have been conducted for these additional subprojects under ESMF. High risk projects will not be eligible for financing under the project.

D.2 Overview of Borrower’s Institutional Capacity for Managing Environmental and Social Risks and Impacts

[Description of Borrower’s capacity (i.e., prior performance under the Safeguard Policies or ESF, experience applying E&S policies of IFIs, Environmental and social unit/staff already in place) and willingness to manage risks and impacts and of provisions planned or required to have capabilities in place, along with the needs for enhanced support to the Borrower – Max. character limit 10,000]

The Project will be implemented by the Directorate General of State Hydraulic Works (DSI) and General Directorate for Water Management (GDWM) under the Ministry of Agriculture and Forestry (MoAF). DSI will be responsible for implementing flood-related components in close coordination with relevant stakeholders. DSI has extensive experience in implementing the World Bank financed projects and is familiar with the Bank's systems and procedures, although most of its previous experience is related to applying the Bank’s Operational Policies (OPs). It is the implementing agency for three ongoing operations, two applying OPs and one applying ESF (P158418: Türkiye Irrigation Modernization Project; P174915: Türkiye Water Circularity and Efficiency Improvement Project, and P172562: Türkiye Resilient Landscape Integration Project). In addition, DSI was also involved in previous World Bank-financed lending operations completed in the 1990s. Within DSI, the flood-related activities will be implemented by the Flood Protection Department which was established in December 2022, that has Environmental and Social expertise, and can draw to other DSI departments as necessary. The Operation and Maintenance Department of DSI will implement project component 2: Drought Management. The Department of International Relations will be responsible for coordinating the project activities within DSI. GDWM will implement some of the activities under project subcomponent 1.2.

The Project will establish one Project Coordination Unit (PCU) chaired by DSI and two Project Implementation Units (PIUs) – one in DSI and the other in GDWM, governed by a project Director General (DG). Given the importance of close coordination with other stakeholders, a Project Steering Committee will be formed at the onset of the Project by DSI and GDWM and the key stakeholder agencies (including SMS, DG Agricultural Reform, and AFAD). The Project Steering Committee will provide advice to the Project PCU and help engage other state and regional agencies with capacity building, data sharing, and inter-agency coordination. Project funds will be allocated separately to DSI and GDWM and procurements will be conducted by each PIU separately. As a part of the Project, an Environmental and Social Management Unit (ESMU) will be established at DSI under sub-component of component 4 of this Project. The ESMU staff will be selected and trained in such a way as to provide DSI with a pool of its own E&S specialists and relevant



expertise, experience, qualifications, skills and competence to manage E&S issues in all projects implemented by DSI. The ESMU will develop an E&S policy and procedure for DSI that will be materially consistent with the World Bank's Environmental and Social Framework (ESF). After becoming operational, the ESMU will be responsible for overseeing implementation of requirements of this Project vis-à-vis ESCP, ESMF, ESIA, ESMP, RPF, RAP, SEP and GRM. In addition, the ESMU will also guide, supervise, monitor and report on the work done by the contractors' E&S specialists. This unit may be subsequently institutionalized to serve as a dedicated and permanent unit at DSI to manage E&S aspects of all development projects in Türkiye that the agency will implement. Thus, the scope of the E&S capacity strengthening of DSI will go beyond the Project and will build an in-house long term and sustainable E&S risks and impacts management system (irrespective of funding sources).

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Substantial

A.1 Environmental Risk Rating

Substantial

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

The Environmental risk rating is determined as Substantial at the Appraisal stage. The overall environmental impacts will be positive as a result of putting in place no-regret flood risk management measures, including civil works, structural and non-structural measures and other investments aimed at improving flood risk management in the selected basins while enhancing the well-being of populations living in impact-prone areas. The scale of the proposed flood management structures under Component 1 (e.g. small dams, check dams, levees, retaining walls, embankments, dry and wet polders, etc.) is expected to be medium to large. The expected key impacts of these types of flood control investments include: (i) impacts on aquatic habitats due to river training works such as levees and retaining walls and consequent release of sediment plumes, and (ii) floodplain habitats due to flood embankment construction affecting riparian vegetation, fertile agricultural lands through land clearance. Additionally, the construction of flood control management structures is likely to require considerable amount of borrow and aggregate material, resulting in resource efficiency considerations. Since the construction activities of the flood management structures will take place near or within water bodies, water pollution will be of concern. In addition to these, the routine construction-related impacts are expected to be related to air and noise emissions, waste management, soil management including management and possible utilization of dredged material, occupational health and safety risks, traffic safety, structural safety of the flood protection structures depending on the size, and habitat disturbance due to construction. Such impacts are not expected to produce significant or irreversible adverse effects on human health and/or the environment nor result in significant adverse cumulative or transboundary impacts. These risks and impacts are expected to be temporary and predictable, medium to large in magnitude, which can be mitigated through international good management practices. The works planned under Components 2 and 3 are relevant to systems, river basin plans and capacity establishment which are soft components that do not include civil works and thus, do not pose any adverse environmental and social impacts. The project and the subproject specific design and locations are not fully known, however, eight sub-projects have already been identified as ready for implementation in the Eastern Black Sea and Kizilirmak River basins. In this respect, the potential environmental and social risks and impacts will be mostly relevant to Component 1 activities which are to be addressed through the project's Environmental and Social Management Framework (ESMF), which has been prepared. Activities that could



potentially adversely affect critical and sensitive habitats as well as cultural heritage will not be eligible for financing and are in the ESMF's exclusion list. The project (component 3) will also support the preparation of feasibility studies for existing technical documents to ensure integrated flood management with basin approach including greening of key investments, where the ESF provisions will be included within the scope of the Terms of Reference (ToRs). The ToRs for the studies will include environmental and social considerations to ensure adequate risk-mitigation measures are incorporated in the planning documents at an early stage. Thus, the substantial risk rating is determined based on: (i) the sub-projects will not be located in any critical areas and if so, those will be ineligible for financing, (ii) the environmental risks and impacts are mostly temporary, reversible, spatially limited and mostly medium in magnitude, (iii) mitigation measures can be designed and implemented as standard practice, (iv) Borrower's experience and resources in effectively managing these risks, which will be further strengthened by the project.

A.2 Social Risk Rating

Substantial

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

The Social Risk Rating is Substantial. The Project will finance physical investments such as small-scale dams and check dams, levees, retaining walls, embankments, polders etc. as well as rehabilitation of supplementary structures, nature-based solutions such as wetlands, which will help improve flood protection measures and flood management practices while enhancing the well-being of populations living in impact-prone areas. The social impacts are expected to be mostly positive. Whilst adverse impacts are expected to be mostly temporary, predictable and/or reversible there will be impacts to land and livelihoods. Activities under Component-1 may have land-based livelihood impacts due to temporary or permanent loss of land. Sub-projects are expected to cause economic displacement and loss of land-based livelihoods among other social impacts (labor management, dust, noise, traffic etc.) during the construction phase. Potential community health and safety risks will be associated with the construction and operation phases of sub-projects. These may include noise, air emissions, odor; traffic and temporary road closures; management of construction waste; risk of increased SEA/SH incidents due to labor influx; increased transmission risks of COVID-19 from incoming workers; water-borne diseases based on improper design, construction or operation. Physical displacement is not expected, although some temporary loss of income (on agricultural land) may occur during the civil works implementation.

[Summary of key factors contributing to risk rating. This attribute is only for the internal version of the download document and not a part of the disclosable version – Max. character limit 8,000]

B. Environment and Social Standards (ESS) that Apply to the Activities Being Considered

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts

Relevant

[Explanation - Max. character limit 10,000]

The overall long-term environmental and social impacts of the project will be positive through improving the flood protection measures and flood management practices, and through enhancing well-being of population living in risk prone areas. Improved flood risk protection will increase population health and well-being through prevention or reduction of possibilities for water pollution and increase of water use efficiency leading to reduction of the energy

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demand for collection and conveyance. The potential investments under Component 1 are flood risk reducing and improving flood risk management physical structures such as construction of small-scale dams and check dams, levees, retaining walls, embankments, polders etc.; as well as rehabilitation of supplementary structures such as bridges, culverts; piloting nature-based solutions such as wetlands; and implementation of innovative techniques for flood management. Such activities may pose adverse environmental and social risks and impacts such as: (i) the impact on aquatic habitats due to river training works such as levees and retaining walls disturbing the river bed and releasing sediment plums, and floodplain habitats due to flood embankments affecting riparian vegetation, fertile agricultural lands etc., (ii) impacts relevant to land use change, and (iii) procurement and use of borrow and aggregate material and relevant resource efficiency measures, (iv) water pollution due to working near and within water bodies as well as typical construction related impacts such as (i) generation of air, noise and exhaust emissions, (ii) generation of construction and solid waste management, (iii) soil management, (iv) habitat disturbance, (v) labor and working conditions, (vi) OHS hazards and risks such as accidents and injuries, (vii) community health and safety and traffic safety, (viii) structural safety of the flood protection structures depending on the size, (ix) economic and livelihood impacts due to potential land acquisition and expropriation process required due to movement of heavy vehicles. Physical displacement is not expected. The project will consider and assess the distance and location of the sub-projects to the residential areas in order to keep the impact on the livelihoods of the communities limited and to avoid potential physical displacement and minimize land acquisition. While some of the specific priority investment sub-projects have been identified, the relevant designs have not been completed. Consequently, the potential environmental and social risks and impacts are preliminary identified, addressed and managed within the scope of the project level Environmental and Social Management Framework (ESMF), Resettlement Framework (RF) and Labor Management Procedures (LMP) which have been prepared, and consulted upon. In addition, a Stakeholder Engagement Plan, including a grievance mechanism (GM) has been developed to guide project design and implementation, particularly regarding the involvement of community members and stakeholders in project design and receiving regular feedback from project beneficiaries. The additional Environmental and Social (E&S) instruments (ESIAs, ESMPs, etc.), to the satisfaction of the Bank, will be prepared, disclosed, consulted, adopted and implemented throughout the lifetime of the project - for each specific subproject/scheme. The ESMF establishes requirements and procedures for the identification, assessment and management of the (E&S) risks of the sub-projects, an exclusion list, screening criteria, and development of environmental and social assessments, as well as roles and responsibilities for management of E&S risks. The sub-projects with a high-risk rating, and those adversely affecting the critical and sensitive habitats, cultural heritage and may lead to any type of exclusion of any group amongst the communities will not be eligible for financing; the exclusion list in the ESMF is prepared to screen those sub-projects out. The ESMF is based on the applicable requirements of the Turkish national laws and regulations, the Environmental and Social Standards (ESSs) of the WB's ESF and applicable World Bank Group's Environmental Health and Safety (WBG's EHS) Guidelines, and Good International Industrial Practices (GIIP). Sub-project-specific environmental and social assessment (ESA/ESIA) documents (i.e. Environmental and Social Impact Assessment report, Environmental and Social Management Plan [ESMP], ESMP Checklist) will be identified and prepared based on the E&S screening procedure under the ESMF. The site-specific instruments will be required, which may include ESIA reports; ESMPs would be prepared once the exact subproject technical details are known, and would be cleared by the Bank, disclosed and consulted upon before the completion of respective bidding document packages for each sub-project. Under its components 2 and 3, the project will also support preparation of feasibility studies, designs and review of existing technical documents to ensure integrated flood and drought management at the river basin scale, considering the impacts of climate change. The ToRs for the studies will include environmental and social consideration to ensure adequate risk-mitigation measures are incorporated in the planning documents at an early stage. The impacts and



risks that shall be addressed in the technical assistance sub-components will include, but not be limited to: water pollution, soil management, terrain and land use, biodiversity areas and elements (including wildlife, fish, birds, vegetation), land use, connectivity between river floodplain and rivers, local wetlands, improvement of aquatic habitats etc.

ESS10 - Stakeholder Engagement and Information Disclosure

Relevant

[Explanation - Max. character limit 10,000]

Among the potential direct key stakeholders of the project are local communities, seasonal workers, women’s groups, muhtars and community leaders, relevant regional directorates of DSI, AFAD, State Meteorological Services and other public authorities. Civil society organizations working on natural resources, ecology and nature protection are also considered as stakeholders along with other interested parties. Detailed baseline/stakeholder mapping will be included in the SEP to identify whether the projects could potentially impact vulnerable groups, including but not limited to seasonal/migrant workers and refugees. Stakeholder engagement will be crucial from design to project completion and will require the involvement of various departments within DSI, and other potential partners including AFAD, State Meteorological Services and other public authorities as well as local/municipal/regional level organizations. DSI has prepared an SEP with consultation activities at key ministerial, government agencies, NGOs and community level. The Stakeholder Engagement Plan (SEP) which has been prepared, identifies stakeholders and lays down different modalities which would be employed for engagement with them. The SEP provides for a consultative process throughout the project life cycle, including prior to the commencement of project activities. DSI will make efforts to hold public consultation meetings (or use other available channels) prior to the project activities to inform key stakeholders about the project, its impacts and implementation schedule and its grievance mechanism (GM) in order to avoid any negative feedback or misunderstanding from the impacted communities. DSI has a three level GM in place which allows for the identification and resolution of all grievances generated by DSI activities. In DSI’s current GM, the grievances can be addressed at three levels: (i) DSI Branch Directorate level, (ii) Regional Directorate level, and (iii) DSI General Directorate level. The existing system will be adopted to collect project specific data and will be disclosed during consultations for the use of all stakeholders through project implementation. Community involvement will be sought through timely consultations and DSI’s GM will be utilized to resolve concerns as they arise. Both the consultation process and GM will consider the different needs and concerns of all stakeholders including any vulnerable groups that maybe affected by the project. It will be ensured that the GM to be established for the Project will have necessary and applicable channels to receive SEA/SH grievances through a survivor centric approach. The SEP will include measures for DSI to develop project-specific procedures to manage SEA/SH grievances. DSI will raise awareness of the grievance mechanism among subproject stakeholders who may be affected by or interested in the project. In addition, in Türkiye the Presidency’s Directorate of Communications (CIMER) is used as an official state tool which serves to receive requests, complaints, compliments, denouncements and inquires for information from the public. CIMER is an electronic platform for the use of right of petition (Law No 3071; Official Gazette No. 18571 dated 10.11.1984) and right to information act (Law No 4982; Official Gazette No. 25269 dated 24.10.2003). This platform will also be used to receive citizens’ feedback and grievances on the project. The SEP will be disclosed on DSI’s official website and consulted upon prior project appraisal. The SEP process requires consultation and dissemination of project-related information (including E&S risks and impacts) with all identified and potential stakeholders/beneficiaries of the Project, where and when necessary. In case, stakeholders (internal or external) who may be considered vulnerable (in terms of gender, disability, age, etc.) are identified during project implementation, the SEP will be updated, and other ESA documents may define the tools and methods to engage

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with and include measures to avoid adverse impacts to these groups and provide benefits, where possible. As with other E&S requirements, the progress of engagement activities and any documents or tools produced under the SEP will be disclosed publicly and regularly reported to the Bank via project progress reports.

ESS2 - Labor and Working Conditions

Relevant

[Explanation - Max. character limit 10,000]

This standard is relevant. Project workers will include (i) direct workers (PIU staff including the civil servants of the DSI and consultants, experts, trainers, etc. engaged by PIU); (ii) contracted workers (employees of firms carrying out studies and assessments, and contractor’s workers); and (iii) primary supply workers for any materials supply for the civil works and equipment required for investments. Community workers are not anticipated to be engaged in project activities. The PIU employees (from DSI) are in the category of civil servants. The Civil Servant Law applies to all civil servants including other public officers, and other personnel who are employed as contractual personnel, temporary staff and workers. Türkiye is a party to many International Labor Organization (ILO) conventions, which align with ESS2 requirements. National Labor Law includes provisions on non-discrimination, freedom of association, minimum employment age, child and forced labor, OHS, and dispute resolution. Risks related to child/forced labor are not foreseen. Project impacts related to labor and working conditions may include OHS issues and labor influx induced impacts during civil works and worker grievances. The OHS risks associated with the project civil works include, emissions of dust, noise, and vehicle exhausts, generation of construction and solid waste, traffic-related risks, and risks of accidents and injuries when working at heights, working with heavy and electrical machinery and equipment, and working in areas with unbarricaded/uncovered holes, working in, under or at the water, etc. Despite the overall alignment with good international standards, labor risks under construction projects stem from insufficient or lax enforcement of Occupational Health and Safety (OHS) measures; over-time work and related non-payment; and unequal treatment between men and women. Traffic and road safety issues are also among the potential risks. An LMP has been prepared to address these risks. Site-specific Labor Management Plans will be prepared during project implementation in line with the project LMP by the contractor. Construction workers will be accommodated in workers’ camps, which will meet the requirements of labor and OHS legislation of Turkey, and in line with the Bank guidance on standards. The LMP contains the policies and procedures for all categories of workers, identifies the main labor requirements and associated risks and help DSI to determine the resources necessary to address project labor issues. The LMP also describes the establishment and implementation of a workers’ Grievance Mechanism and other tools such as the Code of Conduct and requirements for addressing SEA/SH risks. The construction contractors shall be subject to national OHS legislation and the OHS provisions of ESS2 and ESS4, WBG Environmental, Health and Safety Guidelines (ESHGs) and Good International Industry Practice (GIIP). The ESMF also assesses specific OHS risks associated with proposed subprojects and identifies appropriate risk management and mitigation measures, following the applicable requirements of the national policies, ESS2 and WBG’s EHS Guidelines. Those will be further elaborated in the site-specific ESA documents. Furthermore, all projects with civil works will require contractor OHS Management Plans, commensurate with the risks and impacts. DSI’s GM will also adopt and improve itself to handle labor complaints and suggestions (including inquiries for information or whistle-blower complaints). For each sub-project, the Contractors will be required to establish, maintain and monitor GMs for contracted workers.

ESS3 - Resource Efficiency and Pollution Prevention and Management

Relevant

[Explanation - Max. character limit 10,000]

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This standard is relevant. The project activities will be overall positive regarding ESS3 considerations and help to reduce and effectively manage flood risks and thus limit relevant losses and damages to assets and contribute to reduction of water pollution. The project will also support water use efficiency and thus reduce energy demand for collection and conveyance of water, with relevant storage infrastructure planned under the design of the project. Meanwhile, the proposed flood control structures require considerable amount of aggregate and borrow material. The project will ensure that the raw materials needed for the project activities will be utilized based on resource efficiency principles, using the already dredged material (currently unknown if the material will be found suitable) or/and be obtained from permitted and licensed sites and resources in line with national regulatory requirements. The project activities will occur near water bodies and hence water pollution risks and impacts, and relevant mitigation measures will need to be implemented, as identified in the ESMF. The civil works within the scope of the project activities will also entail the use of energy, water, and materials such as sand, cement, timber, etc. The potential risks and impacts of sub-project activities include noise, dust and exhaust emissions and the generation of construction wastes and solid wastes, as well as some quantities of e-waste related to flood monitoring stations and sensors. The ESMF of the project addresses resource efficiency and pollution prevention and management measures consistent with applicable national regulations, ESS3, WBG’s EHS Guidelines, and GIIP, following the ESF’s mitigation hierarchy to ensure sustainable use of resources and minimizing adverse impacts on human health and the environment. Risk and impact management and mitigation measures will be further elaborated in detail in site-specific instruments.

ESS4 - Community Health and Safety

Relevant

[Explanation - Max. character limit 10,000]

This standard is relevant. The potential risks and impacts on community health and safety (CHS) are associated with the proposed civil works and relevant to emissions of dust, noise, odor, and vehicle exhausts; and traffic and road safety risks due to increased traffic volume and movements of heavy-duty vehicles; risks of accidents and injuries posed by uncovered or unbarricaded trenches and exposed electric cables; temporary road blockades and closures and potential disruptions to local communities and increasing pressure on public services due to potential influx of construction workers and presence of workers camps and risk of increased SEA/SH incidents due to labor influx. Community’s potential exposure to waste (including hazardous waste), stagnant water, wastewater, particulate matters, and construction workers may lead to increased risks of health issues (increased transmission risks of COVID-19 from incoming workers, etc.), including water-borne and vector-borne diseases (resulting from poor site management), and communicable diseases relating to labor influx (i.e., COVID-19 virus, HIV/AIDS, and STDs), other similar communicable diseases, etc.). The project activities will take place in semi-urban and rural settlements and the project may require outside workforce to be accommodated and work on the project activities. Similarly, due to nature of activities, the additional contractor’s management plans – like Traffic Management Plan, Waste Management Plan etc., may be required. The SEA/SH risk is currently assessed as Moderate, but the exact size of the labor workforce and the SEA/SH risks posed to the local populations will be further assessed in site-specific assessments. The project will implement SEA/SH mitigation measures, including: An SEA/SH action plan as part of the project site-specific ESMPs (including a mapping of site-specific service providers); a Code of Conduct for workers (draft has been provided in the LMP), a mechanism to report SEA/SH grievances, and training and awareness sessions for project workers and affected communities. The ESMF provides for assessment of the risks and impacts to the health and safety of the communities, including groups that might be vulnerable. The sub-project-specific ESIA and ESMPs will also detail management and mitigation measures to ensure community health and safety during

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construction, as well as monitoring and reporting requirements. Competent professionals shall review and approve the project structures' design and construction since those will take place in high-risk locations prone to floods and the rehabilitated and new structures shall be established to improve flood control. The design and construction of new structures will be in accordance with national requirements, the WBG EHS Guidelines, and GIIP, and take into consideration safety risks to third parties and affected communities and support those with disabilities to ensure universal access. As the project also includes construction of check dams, dam safety measures in accordance with ESS4 will also be followed and incorporated in respective designs. At this stage of project development, those check dams are reported as small dams however the dam safety aspects will be considered and properly addressed by ESMF. Depending on the classification of the structures in line with the ESF requirements, the project may need reviews by an independent panel of experts for the investigation, design, and construction of the dams and the start of operations. If there will be any dam structures above 15 meters height, or dams between 5 and 15 meters and impounding more than 3 million m³, to be financed within the scope of the project then those will be classified as a large dams and the environmental risk rating will be revised to High and all applicable ESF provisions will apply, including re-classification of the Project risk, updating ESMF and preparation of other relevant instruments. If the dams within the scope of the project does not fall under any categories defined in the ESF, dam safety measures designed by qualified engineers in accordance with GIIP will be adopted and implemented. At minimum, Good International Industrial Practices (GIIP) will be adopted and implemented for the design, construction, supervision and operation of the facilities.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Relevant

[Explanation - Max. character limit 10,000]

This standard is relevant. Potential land-based impacts of the sub projects are foreseen as follows; (i) loss of land used for agriculture purposes, (ii) loss of other assets on land and (iii) loss of crops and tress, (iv) loss of land-based livelihoods and (v) limited access to or restrictions on land. Subprojects under Component 1 (small-scale check dams, levees, retaining walls, embankments, polders etc.) are likely to have temporary and permanent land acquisition. However, through the selection criteria set for the subprojects to be financed under this component, the project will consider and assess the distance and location of the sub-projects to the residential areas in order to keep the impact on the livelihoods of the communities limited and to avoid potential physical displacement and minimize land acquisition. DSI will make efforts to utilize public lands and existing roads for investments that require land take. In cases where public lands are not available, land acquisition will be kept to a minimum during project design. Where land acquisition is inevitable, DSI will ensure all land-based losses are compensated in compliance with ESS5. The Resettlement Framework (RF) has been prepared analyzing entitlements for economic and physical displacement and setting out the conditions for the preparation and implementation of sub-project specific Resettlement Plans (RPs). Once design is complete, and sub projects are defined, DSI will prepare specific RPs for subprojects that will require land acquisition. In cases where DSI needs to utilize lands acquired within the last five years, an Ex-Post Social Audit will be required to determine if the acquisition was carried out in compliance with ESS5.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources

Relevant

[Explanation - Max. character limit 10,000]

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ESS6 is relevant. The project activities may take place in rural and peri-urban areas and thus there might be adverse impacts on biodiversity elements due to soil removal and compacting, clearance of vegetation and habitat loss, movement of heavy vehicles (resulting in generation of dust and noise) etc. as well as degradation of the aquatic habitats, as the project structures will be within and adjacent to water bodies such as rivers. The potential impacts on the aquatic habitat elements are habitat disturbance due to sediment and plume generation in water, water pollution, river-bed disturbance, noise etc. In the ESMF, there are the specific criteria for site selection that will avoid overlapping of the sub-project locations with sensitive habitats including Key Biodiversity Areas, Important Areas, nationally protected areas, critical habitats, and the sub-projects having adverse impacts on such sensitive habitats will be screened out through the Exclusion list. The ESMF also provides guidance on the impact identification and respective mitigation measures in accordance with ESS6 requirements, adopting mitigation hierarchy and precautionary approach. The environmental and social assessment documents (ESIAs/ESMPs) for each subproject will include analysis of flora & fauna elements, habitats and identification of any potential impacts on biodiversity in the sub-project impact area. In addition, the ToRs for the feasibility studies, under components 2 and 3, will include provisions for identification and avoidance of critical habitats and other relevant ESF considerations.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is not relevant since there are no groups or communities in Türkiye who meet the definition of this standard.

ESS8 - Cultural Heritage Relevant

[Explanation - Max. character limit 10,000]

ESS8 is relevant. The project level ESMF contains exclusion criteria to avoid any investments that could adversely affect cultural heritage sites, intangible/tangible cultural heritage and leading to loss of temporary and/or permanent access in accordance with ESS8, and those sub-projects will be ineligible for financing. In consideration of the chance finds, the ESMF provides guidance on Chance Finds Procedures which outline the measures to be undertaken if any cultural areas/elements are encountered during project civil works. The procedures will be included in the site-specific environmental and social assessment documents. Furthermore, within the scope of the studies to be carried out for the preparation of subproject specific ESIAs/ESMPs existing tangible and intangible cultural heritage and mitigation measures to preserve will be identified.

ESS9 - Financial Intermediaries Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is not relevant since the project will not involve any financial intermediaries.

B.2 Legal Operational Policies that Apply

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OP 7.50 Operations on International Waterways

No

OP 7.60 Operations in Disputed Areas

No

B.3 Other Salient Features

Use of Borrower Framework

No

[Explanation including areas where “Use of Borrower Framework” is being considered - Max. character limit 10,000]

The use of Borrower’s Framework is not considered. The project will finance development of the Client's ESMS.

Use of Common Approach

No

[Explanation including list of possible financing partners – Max. character limit 4,000]

N/A

B.4 Summary of Assessment of Environmental and Social Risks and Impacts

[Description provided will not be disclosed but will flow as a one time flow to the Appraisal Stage PID and PAD – Max. character limit 10,000]

The Project’s Environmental and Social risk rating is considered as Substantial. The environmental risk rating may be reviewed during implementation phase and could be revised to High if there will be any large dams to be financed within the scope of the project.

Component 1 aims to mitigate the flood risk in selected basins through improvement and expansion of the existing flood control infrastructure and early warning systems in selected parts of Türkiye Component 2 will support DSI in drought preparation and management and help to reduce the vulnerability of population to drought in selected basins. The structural measures under this component include increase of storages, rehabilitation of ongoing schemes, modernization of irrigation systems from open channel to pressurized pipes to minimize water losses, reuse of treated wastewater for irrigation, and comprehensive water use monitoring. Non-structural measures would also be implemented such as hydrologic studies, monitoring, irrigation planning, awareness raising, and irrigation water source status analysis. This Component will support DSI’s efforts for drought management through (i) installations of soil moisture sensors and air humidity sensors, and other off-farm near-real time data providers in drought-prone areas to comprehensively assess plant water needs to optimize irrigational water uses, and (ii) development of remote-sensing-supported drought monitor map and Water Accounting platform, inspired by the recent study tour to the US for drought management, to help farmers to improve efficiencies in water uses, diversify crop selections, and optimize reservoir operations in coordination with DG Agricultural Reform and GDWM. Components 3 and 4 are the soft components covering capacity building, institutional strengthening and project management, which do not include civil works and thus, do not pose any direct adverse environmental and social impacts.

The potential environmental and social risks and impacts will be mostly relevant to Components 1 and 2 and be comprised of impacts on aquatic and terrestrial habitats due to construction of flood management structures, river bed alteration,

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water pollution, land clearance and impacts on floodplain habitats and vegetation, use of borrow and aggregate material as well as typical construction risks and impacts such as air and noise emissions, waste management, soil management, labor and working conditions, occupational health and safety risks, community health and safety (including traffic safety), risk of increased SEA/SH incidents due to labor influx; increased transmission risks of COVID-19 from incoming workers; structural safety of the flood protection structures depending on the size, habitat disturbance due to construction and economic displacement due to the required land acquisition for construction activities. Physical displacement is not expected. The project will consider and assess the distance and location of the sub-projects to the residential areas in order to keep the impact on the livelihoods of the communities limited and to avoid potential physical displacement and minimize land acquisition. The potential risks and impacts listed are expected to be temporary and predictable, medium to large in magnitude, which are expected to be mitigated through good engineering and industry practices.

Based on the preliminary assessment, the project has identified eight subprojects as priority investments for implementation. These include rehabilitation of streams, flood and sediment control works and construction of check dams in Eastern Black Sea Region – in Artvin (4 schemes), Trabzon, Rize, Giresun and Kizilirmak/Corum. The works to be implemented will include construction of levees, permeable check dams, culverts, flood control channels, retaining walls, bridges and other ancillary structures. During the first year of project implementation, DSI will complete the designs and fulfill the land acquisition related requirements as well as develop ESIA/ESMPs for each of eight priority investment schemes. During the first year of project implementation the additional subprojects will be selected together with technical justification to confirm their impacts, as no risk classification have been conducted for these additional subprojects under ESMF.

Potential environmental and social risks and impacts are addressed and managed within the scope of the project scale Environmental and Social Management Framework (ESMF), Resettlement Framework (RF) and Labor Management Procedures (LMP) which have been prepared , as well as by strengthening DSI's capacity to address these risks and impacts. In addition, a Stakeholder Engagement Plan (SEP), citizen engagement strategy and grievance mechanism (GM) have been developed to guide project design and implementation, particularly with regards to the ensure involvement of community members and stakeholders to project design and receiving regular feedback from project beneficiaries. It would be ensured that the GM to be established for the Project will have necessary and applicable channels to receive SEA/SH grievances through a survivor centric approach. To be able to ensure this capacity of the GM, DSI will be supported by the Bank through trainings and guidance to be provided and the SEP will include measures for DSI to develop project-specific procedures to manage SEA/SH grievances. In the ESMF, procedures for sub-project level environmental and social risk screening, relevant mitigation and monitoring measures, development of environmental and social assessments, as well as roles and responsibilities are laid out. The sub-projects that will adversely affect the critical and sensitive habitats, as well as cultural heritage and may lead to any type of exclusion of any group amongst the communities will not be eligible for financing; the exclusion list included in the ESMF will screen those out. The project will also support preparation of feasibility studies, designs and review of existing technical documents to ensure integrated flood and drought management at the river-basin scale . In the Terms of Reference (ToR) of such studies, the ESF requirements will be included to address the environmental and social issues at an early stage.

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C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by implementation?

[Description of expectations in terms of documents to be prepared to assess and manage the project’s environmental and social risks and by when (i.e., prior to Effectiveness, or during implementation), highlighted features of ESA documents, other project documents where environmental and social measures are to be included, and the related due diligence process planned to be carried out by the World Bank, including sources of information for the due diligence - Max. character limit 10,000]

The Environmental and Social Management Framework (ESMF), Stakeholder Engagement Plan (SEP), Labor Management Procedures (LMP) and Resettlement Framework (RF) have been drafted. Based on criteria and in compliance with ESMF, detailed site-specific ESIA, ESMPs, RPs and LMPs will be prepared for each specific sub-project during the project implementation.

III. CONTACT POINT

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