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# Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 29-Jul-2024 | Report No: PIDIA00348



## BASIC INFORMATION

### A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Turkiye	EUROPE AND CENTRAL ASIA	P180781	Turkiye Preparedness for Public Health Emergencies Project
Financing Instrument	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
Investment Project Financing (IPF)	08-Jul-2024	07-Oct-2024	Health, Nutrition & Population
Borrower(s)	Implementing Agency		
Republic of Turkiye	Ministry of Health		

#### Proposed Development Objective(s)

The Project Development Objective is to strengthen Türkiye's capacity to (i) produce vaccines, and (ii) detect and initiate a rapid response to public health emergencies

#### Components

Strengthen vaccine production capacity  
Strengthen national and subnational capacities for detection of and response to health emergencies  
Project management and monitoring  
Contingent emergency response

## PROJECT FINANCING DATA (US\$, Millions)

### Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? No

Is this project Private Capital Enabling (PCE)? No

### SUMMARY

Total Operation Cost	250.00
Total Financing	250.00
of which IBRD/IDA	250.00
Financing Gap	0.00



## DETAILS

### World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	250.00
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### Environmental And Social Risk Classification

Substantial

### Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

## B. Introduction and Context

### Country Context

1. **Türkiye is vulnerable to a range of threats that pose risks to human health and macroeconomic stability.** Direct impacts from the COVID-19 pandemic in Türkiye were severe, with over 17 million cumulative confirmed cases and over 100,000 confirmed deaths,<sup>1</sup> higher than other comparable upper-middle income countries. Further excess death and morbidity caused by missed continuity of essential health services and other indirect health impacts were equally high and will continue to have downstream effects. While Türkiye successfully mobilized health resources in some areas, the pandemic underscored the critical need for coordinated action against major public health emergencies (PHEs)<sup>2</sup>. Türkiye pursued an economic strategy that allowed it to withstand some of the financial pressures of the pandemic, however, the direct annual medical cost of COVID-19 in 2020 still resulted in a burden that corresponds to two percent of government health expenditures and 0.08 percent of Gross Domestic Product (GDP).<sup>3</sup>

2. **More recently, the devastating earthquakes in February 2023 also had a considerable impact on the health and well-being of the population.** Over 50,000 casualties and 107,000 injuries were reported, and an additional 3.3 million people were displaced. Healthcare and service delivery capacity were significantly damaged and the ability to carry out

<sup>1</sup> <https://covid19.saglik.gov.tr/> (accessed on May 23, 2024)

<sup>2</sup> Public Health Emergency: Any acute event that may have negative consequences for human health, impacts the lives and well-being of a large number of people or a significant percentage of a population, and requires substantial multisectoral assistance (WHO, Emergency Response Framework). This definition leverages an ‘all-hazards’ approach and covers events occurring irrespective of their origin or sources (e.g. biological, natural, chemical, etc.).

<sup>3</sup> Oksuz, E., Simten Malhan, Mustafa Sait Gonen, Zekayi Kutlubay, Yılmaz Keskindemirci, Fehmi Tabak. 2021. “COVID-19 healthcare cost and length of hospital stay in Türkiye: Retrospective analysis from the first peak of the pandemic.” *Health Economics Review* 11(1): 39.

<https://doi.org/10.1186/s13561-021-00338-8>



critical public health functions, such as surveillance and laboratory testing, was adversely affected. This led to increased exposure to and spread of infectious diseases. For example, changes in environmental conditions as a result of the 2023 earthquakes resulted in the destruction of clean water and sewage systems and significantly increased the risk of infectious disease outbreaks, such as scabies.<sup>4,5</sup>

**3. The impacts of climate change further escalate Türkiye’s susceptibility to PHEs, with rising risk of climate-related natural hazards and downstream impacts of climate as a driver of outbreaks and biological hazards.** Recent national climate projections indicate rising temperatures, increased acute intensive precipitation events, and decreased total precipitation. These factors underlie the country’s growing exposure to natural hazards including flooding, droughts, and wildfires, which make it vulnerable to increasingly severe and potentially overlapping emergencies. These climate impacts are anticipated to lead to a 2.26 percent GDP loss by 2050 and a 7.98 percent loss by 2100.<sup>6</sup>

**4. Gender dynamics also impact the way people are affected by PHEs and disasters, as well as their capacity to withstand and recover from them.** Studies around the world have shown that disasters disproportionately affect women and girls, who are at greater risk of violence and exploitation in the face of uprooted housing and traditional support structures. disrupted access to services, and both structural and social obstacles to accessing food, relief, supplies, and latrines.<sup>7, 8</sup> After the February 6th, 2023, earthquake, several assessments<sup>9</sup> found an increasing number of gender-based violence (GBV) and a pressing need to focus on prevention, risk mitigation, and support services for different forms of violence against women and girls (VAWG) in the response. Turkey lacks a comprehensive national all-hazards health emergency preparedness plan that includes specific protocols for responding to GBV during emergencies. This gap is significant given the increased vulnerability to GBV during and after disasters. Despite international agreements, laws, and policy commitments to combat violence against women and girls, implementation remains weak<sup>10</sup>, particularly in emergencies.

**5. During a PHE or after a disaster, potential outcomes such as infrastructure inadequacies, the absence of training in protocols for prevention and management of cases of GBV and the lack of safe places, especially in the showers and toilet area, exposes women physically and mentally to harassment, sexual abuse, among other kinds of GBV.** For example, during the COVID-19 pandemic, women and girls were increasingly vulnerable to domestic and sexual violence as a result of the combination of lockdown measures, economic and social stress, and reduced public services for GBV survivors due to the increased pressure on public services. The lack of trained health workers knowledgeable in GBV response during emergencies exacerbates the absence of such protocols, leaving health workers unprepared to handle the increased risks women face during public health crises. This shortage limits the effectiveness of immediate and long-term support for survivors.

<sup>4</sup> “Earthquake report from KLİMİK Association: The risk of infectious diseases is increasing, clean water and toilets must be provided.” Medyascope, February, 16, 2023. <https://medyascope.tv/2023/02/16/klimik-derneginden-deprem-raporu-bulasici-hastalik-riski-artiyor-temiz-su-ve-tuvalet-saglanmali/>.

<sup>5</sup> “The Ministry of Health answered our questions: ‘The reason for the occurrence of scabies in the earthquake region is the change in environmental conditions.’” Medyascope, March 27, 2024. <https://medyascope.tv/2024/03/27/saglik-bakanligi-sorularimizi-yanitladi-deprem-bolgesinde-uyuz-vakalarinin-gorulme-sebebi-cevresel-kosullarin-degismesidir/>.

<sup>6</sup> G20 CLIMATE RISK ATLAS: Impacts, policy, economics: Türkiye. <https://files.cmcc.it/g20climaterisks/Turkey.pdf>.

<sup>7</sup> Erman, Alvina, Sophie Anne De Vries Robbe, Stephan Fabian Thies, Kayenat Kabir, and Mirai Maruo. 2021. Gender Dimensions of Disaster Risk and Resilience: Existing Evidence. Washington, DC: World Bank. <https://hdl.handle.net/10986/35202>.

<sup>8</sup> Gennari, F., Diana Arango, and Nidia Hidalgo. 2015. “Violence Against Women and Girls.” Finance and Enterprise Development Brief. Washington, DC: World Bank. <https://hdl.handle.net/10986/21087>.

<sup>9</sup> [https://eca.unwomen.org/sites/default/files/2023-03/UN%20Women%20Brief%20on%20Earthquake%20in%20Türkiye%20Gendered%20Impacts%20and%20Response\\_0.pdf](https://eca.unwomen.org/sites/default/files/2023-03/UN%20Women%20Brief%20on%20Earthquake%20in%20Türkiye%20Gendered%20Impacts%20and%20Response_0.pdf)

<sup>10</sup> <https://eca.unwomen.org/en/where-we-are/turkey/ending-violence-against-women>



6. **While Türkiye's location at the crossroads of continents traversed by humans, animals, and potentially hazardous cargo – with Istanbul a global air, sea, and land transport hub – makes it particularly vulnerable to outbreaks and pandemics, its location and geopolitics also make it a potential regional leader for global health security.** Türkiye has the capacity to support regional coordination and capacity strengthening agendas, including through mechanisms of knowledge exchange and cross-border action that can improve health security capacities across multiple regions. The country also sits near some of the most active global geopolitical conflicts, many of which involve Fragility, Conflict and Violence (FCV) countries. This provides a unique opportunity for Türkiye to use its health emergency prevention, preparedness, and response (HEPPR) strengthening agenda to support and advance regional progress on health development goals, mitigate the impact of ongoing widespread emergencies, and strengthen the resiliency of neighbouring health systems, even in the face of external crises.

#### Sectoral and Institutional Context

7. **Türkiye's health sector reforms have increased access to affordable health care and improved health outcomes.** In 2003, Türkiye launched a major national healthcare reform program, the Health Transformation Program (HTP),<sup>11</sup> to address key system inadequacies in financial efficiency of health services. The results show that it has been effective in improving health outcomes and increasing both the utilization of health services and health coverage. Türkiye's progress in several areas has outpaced that of other comparable upper middle-income countries. The newly established primary health care network of family medicine clinics has demonstrated positive impacts on access to and quality of services, with annual per capita visits increasing from 1.1 in 2002 to 3.9 in 2022. Reforms in the Social Security and Universal Health Insurance Law<sup>12</sup> also resulted in significant improvements in the range of health services provided and overall health coverage of the population. By 2023, 89 percent of the population was covered by the Universal Health Program.<sup>13</sup>

8. **To sustain progress, support to respond to health emergencies is critical.** International assessments of global health security capacity indicate that Türkiye's absolute and relative capacity to prevent, detect, and respond to PHEs needs to be strengthened to fully address all potential health hazards. In 2021, the Global Health Security Index<sup>14</sup> (Table 1) indicated that Türkiye falls below the regional average score for detecting and responding to potential outbreaks and for providing an enabling environment to manage risks and vulnerability. Türkiye's lower than average detection score indicates gaps in; lab capacities to detect and prioritize diseases, capacity to transport specimens to testing facilities, real time surveillance and reporting, case-based investigation, epidemiology workforce, and access to surveillance data. Similarly, the lower- than- average response score reflects shortages in; emergency preparation and operation, response planning, risk communication, and access to communication infrastructure. Other global assessment frameworks have identified specific gaps in core capacities – the 2022 scores from the State Parties Self-Assessment Annual Reporting (SPAR), which measures progress towards, and capacity for, implementation of the International Health Regulations, demonstrate that Türkiye scored lower than other European countries in several areas, including: zoonotic disease threats, risk communication and community engagement (RCCE), health security policy and legal instruments, health emergency management and planning, and laboratory biosecurity and biosafety. These assessments also note challenges in cross-cutting areas including One Health (OH) coordination, particularly for information sharing across human, animal, and environmental health sectors; linking public health agents with security authorities; and cross border collaboration with neighbouring countries on emerging public health and animal health issues.

<sup>11</sup> "Sağlıkta Dönüşüm Programı" (Health Transformation Program). <https://www.saglik.gov.tr/TR,11415/saglikta-donusum-programi.html>.

<sup>12</sup> Sosyal Sigortalar ve Genel Sağlık Sigortası Kanunu (Social Security and General Insurance Law). <https://www.mevzuat.gov.tr/mevzuatmetin/1.5.5510.pdf>.

<sup>13</sup> Sosyal Güvenlik Kurumu (Social Security Institution). <https://www.sgk.gov.tr/Istatistik/Index/6863b1e8-c384-4f46-90c6-511dac2376d2/>

<sup>14</sup> <https://ghsindex.org/>.



**Table 1: Global Health Security Index scores by capacity,<sup>15</sup> Türkiye and Europe (average), 2021**

	Overall	Prevent	Detect	Respond	Health	Norms	Risk
<b>Türkiye</b>	50	51.1	41.4	36.6	53.9	59.7	57.2
<b>Europe</b>	n. a	49.7	58.3	47.3	42.8	55.4	71.7

Source: Global Health Security Index.

9. **Climate change and hazards have implications on human health in Türkiye.** The risk is not hypothetical; climate change hazards have been observed with greater frequency and intensity over the last two decades, resulting in increased acute and protracted PHEs caused by natural hazards and an associated rise in vulnerability to outbreaks of climate-sensitive diseases, including water- and vector-borne diseases. Extreme temperatures leading to heat waves increases morbidity and mortality in the country.<sup>16,17,18,19</sup> Climate change would result in food insecurity and water scarcity in the country, further increasing individuals' comorbidities.<sup>20</sup> Further, changes in climatic conditions increase the risk of introduction and spread of communicable diseases. This is likely to be exacerbated by limited health system capacity to address such surges in acute need.<sup>21</sup>

10. **Coordinated, systems-based strategies using learning from recent emergencies are needed to further build an emergency-ready and resilient health system, ensure delivery of public health functions, and mobilize additional resources for pandemic preparedness and response (PPR).** Much of Türkiye's preparedness capacities are delivered through a centralized approach but are often not well integrated across the healthcare and public health systems. While some planning for specific hazards and PHEs exists, many strategies are substantially outdated, do not incorporate best practices and experiences, and are insufficiently multisectoral to cover the wide range of essential functions beyond the health sector needed to address PHEs. For instance, the most recent pandemic preparedness plan was created in 2019 to address influenza and needs to be updated based on new data and evidence from COVID-19 and expanded to all priority pathogens and nonbiological hazards. It also needs to incorporate considerations for the private sector and to factor in all levels of the health system, including the health facility and community levels. Such planning is also necessary in relevant non-health sectors – for example, agriculture and environment sectors – to ensure aligned and effective coordination mechanisms. Testing these plans, through a systematic, institutionalized performance improvement approach that regularly assesses performance against simulated and actual detected events, is critical to ensuring national readiness for and resiliency against PHEs.

<sup>15</sup> The Global Health Security Index is organized by index categories which correspond to core capacities of global health security, including: (i) prevention of the emergence or release of pathogens; (ii) detection and reporting for epidemics of potential international concern; (iii) rapid response to and mitigation of epidemic spread; (iv) sufficient and robust health system; (v) compliance with international norms; and (vi) risk environment.

<sup>16</sup> Can, G., Ümit Şahin, Uğurcan Sayılı, Marjolaine Dubé Beril Kara, Hazal Cansu Acar, Barış İnan, Özden Aksu Sayman, Germain Lebel, Ray Bustinza, Hüseyin Küçükali, Umur Güven, and Pierre Gosselin. 2019. "Excess Mortality in Istanbul during Extreme Heat Waves between 2013 and 2017." *International Journal of Environmental Research and Public Health* 16 (22): 4348. <https://doi.org/10.3390/ijerph16224348>.

<sup>17</sup> Ozturk, Y., Hakki Baltacı, and Bülent Oktay Akkoyunlu. 2023. "The Impacts of Heat Waves on Hospital Admissions and Mortality in the Fethiye Province of Turkey." *Portuguese Journal of Public Health* 41 (2): 94–101. <https://doi.org/10.1159/000530747>.

<sup>18</sup> Oray, N. C., Deniz Oray, Ersin Aksay, Ridvan Atilla, and Basak Bayram. 2018. "The impact of a heat wave on mortality in the emergency department." *Medicine (Baltimore)* 97 (52): e13815. doi: [10.1097/MD.00000000000013815](https://doi.org/10.1097/MD.00000000000013815).

<sup>19</sup> Şeker, M., İsmail Koyuncu, and İzzet Öztürk (eds). 2020. *The Report on Climate Change and Public Health in Turkey*. TÜBA Report No: 38. Ankara: Turkish Academy of Sciences Publications.

<https://www.tuba.gov.tr/files/yayinlar/raporlar/Climate%20Change%20and%20Public%20Health%20in%20Türkiye.pdf>.

<sup>20</sup> World Bank Group. 2022. *Turkey Country Climate and Development Report*. Washington, DC: World Bank Group.

<https://openknowledge.worldbank.org/server/api/core/bitstreams/80bdfcf8-73b1-42b3-b107-1629f64a1f0c/content>

<sup>21</sup> [G20 CLIMATE RISK ATLAS: Impacts, policy, economics: Türkiye.](#)



11. **Substantial advances in national adoption of digital health systems by the healthcare and public health workforce and related institutions can facilitate further improvements in enabling delivery of PPR capacities.** Under the HTP, exclusive importance was given to the development and use of health information systems that would facilitate operations, decisions, and policy making. Further strengthening of these capacities was prioritized during COVID-19. Consequently, as of July 2023, all public health providers – primary, secondary, and tertiary care institutions – and 98 percent of private hospitals share individual-level clinical data with the e-Nabiz (e-pulse) platform of the Ministry of Health (MoH).<sup>22</sup> Other functions have been incorporated to facilitate service delivery during emergencies. The platform can also be adapted for further expansion of health services, including hospital information management, immunization tracking, supply chain and logistics management, and key public health functions, such as digital surveillance reporting and laboratory informational management, remote care arrangements, and online disease management to facilitate early diagnosis of chronic diseases. The current public health surveillance and notification portal – the Infectious Disease Surveillance and Early Warning System – is integrated with most of the other information platforms, including e-Nabiz, via electronic case reporting. While the country’s mature health information systems provide a strong foundation for digitally integrated public health data, Türkiye continues to upgrade, improve, and integrate the surveillance and notification systems based on lessons learned and expanded public health needs.

12. **Existing national capacity for vaccine production and research needs further expansion to prevent emergence and spread of infectious diseases.** Local and regional manufacturing capacity for vaccines and medical countermeasures<sup>23</sup> is a critical need for countries that may have limited access to global supplies of novel or emerging technologies during an international health emergency. Türkiye has a long history of vaccine development and production for domestic and international usage. The national medical regulatory authority recently achieved maturity level 3, which validates the strong stability and functioning of the regulatory system for medical products as assessed by the World Health Organization (WHO)<sup>24</sup>. This existing manufacturing infrastructure facilitated rapid, coordinated research and development efforts for COVID-19 medical countermeasures and led to the development of Türkiye’s own domestic inactivated vaccine candidate. But these achievements were still constrained by gaps, including limited capacity for newer vaccine technologies and slow scaling up of production that forced reliance on international purchasing to initiate an early and aggressive national vaccination program. Maintaining and expanding the capacity built during the COVID-19 pandemic will facilitate rapid local and regional access to supply before, during, and after PHEs.

13. **Expanding vaccine production is one of the key cornerstones of the national strategy for pandemic preparedness.** In 2020, with support from the Health Systems Strengthening and Support Project (HSSSP, P152799), the government initiated the development of the new Vaccine Production Center (VPC) in Ankara city to strengthen the country capacity to respond to surge demand for vaccines in case of outbreaks. However, as part of the restructuring in May 2023, funding for equipping the Ankara VPC was reallocated to support earthquake-related activities. As such, no VPC equipment or goods were procured under the HSSSP and these will be financed under the new project, instead. Completing the establishment of the VPC will make Türkiye one of the regional leaders in vaccine production and empower it to meet the needs of countries in the region without relying on external support—as was received from international emergency sharing mechanisms like the COVID-19 Vaccines Global Access (COVAX ) platform established during the pandemic.

14. **Türkiye has made significant progress in strengthening its early warning and surveillance systems, and consistently scores high in global assessments for surveillance capacities.** Currently, several surveillance modalities are incorporated in the system, including indicator-based and event-based systems, though the population and geographical

<sup>22</sup> “e-Nabiz (Türkiye’s personal health record system). <https://enabiz.gov.tr/>.

<sup>23</sup> Medical countermeasures include biologic products, medicines, devices, and medical supplies used to prevent, prepare for, respond to, and mitigate health threats. These may include drugs and therapeutics, diagnostics and tests, ventilators, and personal protective equipment (PPE).

<sup>24</sup> “WHO Global Benchmarking Tools (GBT) for evaluation of national regulatory systems.” <https://www.who.int/tools/global-benchmarking-tools>.



coverage of each of these differs. The country has extensive laboratory networks, with reference laboratories at the national level that are capacitated to detect several emerging or high-impact pathogens, including those which cause Crimean-Congo Haemorrhagic Fever, Tularaemia, and polio. As of 2021, there were 84 public health laboratories in Türkiye, 19 of them reference laboratories.<sup>25</sup> The Turkish laboratory network for polio also serves the needs of other countries in the region. Türkiye is also an active member of WHO's Global Antimicrobial Resistance (and Use Surveillance System (GLASS), the first global collaborative effort to standardize Antimicrobial Resistance (AMR) information gathering and sharing, and to strengthen knowledge through surveillance and research.

**15. Despite the broad range of existing surveillance system components, actual performance against COVID-19 and other PHEs indicates that these systems still require targeted strengthening.** The overall performance of the surveillance system can be further improved through the introduction of new technologies and components as well as the comprehensive adoption of a OH approach and prioritization based on the pathogen risk. Different modalities and components of the surveillance system – for example, events-based surveillance, especially in communities and other non-traditional health sector sources – and laboratory network are not equally well developed at the national and subnational levels and are not fully integrated to effectively respond to surge demands. More granular identification of surveillance system performance gaps will require assessments to define the approach for targeted expansion and operationalization. Additionally, the current system does not sufficiently leverage public-private partnerships and lacks sufficient interoperability and integration of information systems both between sectors and within the health system. A next-generation Infectious Disease Surveillance and Early Warning System platform is needed to improve notification and response functions, incorporate new data integration needs such as information from other ministries, and adopt new standards and data integration models to support the expanding role of digital surveillance tools in public health.

**16. OH needs to be integrated across HEPPR capacities, including effective coordination and communication mechanisms between human, animal, and environmental health sectors, to enhance the effectiveness of early warning capabilities.** Adoption of the OH approach is at a nascent stage in Türkiye. The country has developed the Zoonotic Diseases Action Plan and surveillance programs for priority zoonotic diseases. The National Action Plan on AMR has also been drafted and costed, and several campaigns have been launched, which have contributed to the gradual reduction in national antibiotic consumption. However, integrating this approach for strengthening HEPPR can be further advanced and systemized by improving coordination, information sharing, and joint capacity building, and by learning from good practices relating to the multisectoral responses and strategies dealing with other high-risk hazards including earthquakes and air pollution.

**17. Türkiye's laboratory system and diagnostic capacity remains constrained by fragmented laboratory infrastructure, limited workforce capacity, and inadequate enabling capacities that hinder early and accurate identification of infectious diseases.** Rapid scale-up of laboratory system capacity for COVID-19 insufficiently addressed existing inefficiencies, and prioritized planning for the development of a comprehensive and integrated national laboratory network system has not yet been defined. Meanwhile, most peripheral laboratories do not have sufficient capacity for molecular diagnostics of food- and waterborne diseases, bioinformatic analysis of bacteria and fungi, and other advanced diagnostic techniques for improved pathogen detection. Laboratory staff capacity in biocontainment and biohazards management is weak, risking the spread of infectious pathogens and endangering the health workforce. Weaknesses in specimen transport, especially at periphery continue to challenge timely and accurate pathogen detection. Laboratory information is not well integrated with other key health information platforms to allow for comprehensive access to critical public health data. The resulting gap for diagnostic validation or case confirmation for events-of-concern limits surveillance capacity and demands linkages and standardized interoperability for improving routine information

<sup>25</sup> Public Health Laboratories (Ministry of Health, General Directorate of Public Health). <https://hsgm.saglik.gov.tr/tr/halk-sagligi-laboratuvarlari.html>.





management for laboratories. Additionally, the laboratory stock management and inventory system is insufficiently capable to facilitate access to, and efficient utilization of reagents, tests, and other consumables in routine and emergency contexts.

18. **Recent prioritized investments in advances to expand the scope and coverage of the surveillance system provide a strong foundation for scaling up implementation to complement and boost existing capacities.** Since 2020, efforts have been made to build genomic surveillance capacity and invest in sequencing equipment, computing infrastructure, personnel training, data management, and data sharing for SARS-CoV-2, the coronavirus strain. To consolidate and expand the progress made thus far, in 2023, Türkiye developed a five-year national genomic surveillance strategy that outlines the aim to establish an integrated and sustainable genomic surveillance network to address all areas of infectious disease and wider public health needs. The strategy aims to build upon existing capacities, address weaknesses, and capitalize on opportunities to utilize genomic approaches for preparedness across a range of pathogens.<sup>26</sup> Progress in other innovations, such as wastewater surveillance, have also been explored to add further coverage and capacity for early warning in detecting potential trends and presence of pathogens in human and animal populations.

### C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

19. **The Project Development Objective is to strengthen Türkiye's capacity to (i) produce vaccines, and (ii) detect and initiate a rapid response to public health emergencies.**

Key Results

20. **To track the achievement of the PDO, two key indicators will be utilized:**

- PDO 1: Vaccine production center produces at least one vaccine which (i) receives authorization from Türkiye's National Regulatory Authority (NRA), the Turkish Medicines and Medical Devices Agency (TMMDA) and (ii) is subsequently submitted to WHO for Pre-Qualification (PQ).
- PDO 2: Percent of events of public health concern<sup>27</sup> with all rapid response actions completed within seven days.

### D. Project Description

21. **Component 1: Strengthen vaccine production capacity.** This component will focus on preventing infectious diseases by enabling access to vaccines through local and regional vaccine manufacturing and production, which proved

<sup>26</sup> <https://www.who.int/europe/news/item/03-10-2022-developing-and-implementing-a-national-genomic-surveillance-strategy---t-rkiye-s-experience>

<sup>27</sup> Event of public health concern is defined as an event that poses immediate threat to human health and requires public health action such as disease control measures.

Early response action completion is the latest date on which any of these seven 7-1-7 early response actions are completed (i.e. all actions must be completed): (1) initiate investigation or deploy investigation/response team; (2) conduct epidemiologic analysis of burden, severity and risk factors, and perform initial risk assessment; (3) obtain laboratory confirmation of the outbreak etiology; (4) initiate appropriate case management and infection prevention and control (IPC) measures in health facilities; (5) initiate appropriate public health countermeasures in affected communities; (6) initiate appropriate risk communication or community engagement activities; and (7) establish a coordination mechanism.

<https://717alliance.org/digital-toolkit/#step-1-collect-timeliness-data-and-calculate-7-1-7-performance>



critical during COVID-19. It will continue efforts initiated in 2020 for the equipment of the Ankara VPC. Specifically, it will finance procurement of medical and technical equipment required for the operation of the VPC. All new medical and technical equipment will comply with energy-efficiency standards that go beyond standard practice and result in a substantial reduction in greenhouse gas (GHG) emissions. This subcomponent will also support technical assistance (TA) to define and prioritize the research agenda for vaccine manufacturing technologies – with particular consideration of climate-sensitive diseases and the impact of climate on changing infectious disease risks – to align manufacturing regulations to international standards, and to support the completion of the WHO pre-qualification certification process, as well as to procure and establish physical components required for design, supply, and installation needs to meet pre-qualification requirements and to train and support capacity building of VPC staff.

**22. Component 2: Strengthen national and subnational capacities for detection of and response to health emergencies.** This component will finance the development and expansion of critical core capacities across health and public health systems at all levels to strengthen emergency readiness for a wide range of potential threats. The primary anticipated threats are outbreaks, climate shocks, and humanitarian emergencies, including earthquakes. Activities will target systems, workforce training, and institutional capacities, and will incorporate enabling and cross-cutting capabilities and approaches including integrated and digital solutions to facilitate improvements of core PPR capacities. A OH approach across animal, human, climate change, and environmental sectors is also critical to addressing the broad range of potential threats. To the extent possible, OH principles will be adopted throughout project subcomponents and selected activities. The OH approach will focus on strengthening enabling activities such as: (i) OH governance and coordination; (ii) OH related capacity building; (iii) infectious disease related info-sharing and system interoperability. This entails (i) establishing a functioning OH coordination mechanisms at national and selected provinces, (ii) developing and implementation of OH annual work plans, (iii) developing and disseminating of annual OH reports, (iv) exploring Info-sharing mechanisms, and (v) conducting dissemination activities such as national OH conference This component will be delivered through a combination of TA, capacity building, and provision of critical goods and equipment.

**23. Subcomponent 2.1: Early warning and surveillance.** This subcomponent will support strengthening the surveillance system and public health intelligence at all levels to improve early and accurate detection of potential hazards. Multisectoral coordination for OH will be incorporated, where possible and appropriate, including activities in EWS, data sharing and information exchange, and joint workforce capacity building. Climate change is a primary impetus and focus of this activity. The subcomponent will therefore incorporate climate and meteorological indicators in early warning and surveillance systems, and prioritize relevant interventions for climate-sensitive diseases, including vector-borne and waterborne diseases. This subcomponent will also apply a strategy of active systems-based performance assessment and improvement that optimizes timeliness, sensitivity, and cost efficiency to counter realized threats. Activities will reinforce bidirectional information flow and a feedback loop by supporting reporting, analysis, and communication of surveillance data to inform public health action. Specifically, this subcomponent will support the following activities.

- a. **Prioritization and planning for greater impact.** Two hazard/risk assessments at national and local levels will be conducted at the commencement and mid-project to identify and prioritize biological hazards (particularly climate-sensitive pathogens) and to keep the lists updated to incorporate risk assessments of non-biological hazards done by other government departments and to reflect the evolving health and environmental conditions. Additionally, a mapping as well as a gaps assessment of national and subnational surveillance systems across public and private sectors will be conducted to inform preparedness and response planning.
- b. **System performance, expansion, and improvement to increase surveillance and EWS performance in detecting potential threats.** This includes: (i) improving routine events-based surveillance (EBS) and introducing new forms of community-based surveillance (CBS); (ii) enhancing vector surveillance; (iii) supporting adoption of advanced data science and analytics techniques such as risk mapping and modelling environmental sampling, statistical



anomaly detection; (iv) implementing national genomic surveillance strategy; (v) developing prioritized strategies for other disease surveillance expansions, such as wastewater surveillance; and (vi) implementing and expanding systematic multisectoral performance improvement program through regular supervision and assessments against benchmarks, such as the 7-1-7 timeliness framework.<sup>28</sup> Climate change is a primary impetus and focus of the first three activities, which will use meteorologic data to better understand the impacts of climate change on infectious diseases and to address the additional burden of disease as well as the changing transmission dynamics due to climate change.

- c. **Workforce skills.** Support will be provided for training of trainers and cascaded training of frontline provincial health workforce in core capacities, including applied field epidemiology, OH, climate emergencies, and disease surveillance.
- d. **Critical hardware.** Peripheral health facilities and workforce will be equipped with communications tools – for example, mobile and network connectivity – to facilitate real-time reporting of potential public health threats.
- e. **Information systems and data.** A new integrated health information system (HIS) framework with upgraded capacities including mobile, and web-based functions will be developed, and surveillance system workflows will be updated to capture data from unsystematised non-health sources, such as school screening programs, and integration of meteorological data into the EWS and surveillance systems.

24. **Subcomponent 2.2: Laboratory and diagnostics systems.** This subcomponent will support strengthening of laboratory systems and diagnostics capacities to detect and monitor infectious and environmental hazards, especially at periphery. The laboratory system will similarly be assessed through active performance improvement, with a specific focus on facilitating timely, accurate diagnostic validation, including:

- a. **Improved planning.** Specifically, the following will be developed: (i) mapping and gaps assessment of national and subnational laboratory systems and diagnostics capacities including staffing across public and private sectors; and (ii) updated laboratory and diagnostics emergency preparedness and response plans at all levels for priority pathogens, including those affected by climate change, and national bio-risk management protocols, in alignment with international biosecurity guidance.
- b. **System performance and improvement.** This includes alignment of specimen referral and transport system workflows at peripheral level to improve availability and timeliness of diagnostic confirmation across the tiered laboratory system, including support to referral network structure – for example, route optimisation, coverage, sample delivery protocols – and specimen packaging.
- c. **Workforce skills.** This includes capacity building and training of regional and peripheral laboratory staff for biocontainment and bio-risk management to mitigate potential spread of pathogens, advanced microbiology and molecular diagnostic strategies such as syndromic panels, modular testing, climate emergencies, and TA and knowledge transfer in vector surveillance.
- d. **Critical hardware.** This includes equipping laboratory facilities with necessary personal protective equipment (PPE), reagents, equipment, network connectivity, and other items needed to enable adoption of new diagnostics capabilities.
- e. **Information systems and data.** This will involve strengthening of the MoH laboratory information management system (*Laboratuvar Bilgi Yönetim Sistemi*, LBYS) that captures all laboratory and diagnostic data to facilitate interoperability with other sectoral information systems and data flow between laboratory levels and upgrading stock management system to enable better preparedness planning.

<sup>28</sup> 7-1-7 is a framework that promotes early and effective action against public health threats. It uses clear performance standards and timeliness metrics for detection, notification, and response to realised events that can be used to actively inform decision-making in real time and longer-term performance enhancement strategies. <https://717alliance.org/>



25. **Subcomponent 2.3 National planning and emergency response coordination for emergency-ready health systems.** This subcomponent will strengthen national preparedness planning for health emergencies and enhance the resilience and response capacity of the health system against health emergencies. It will facilitate delivery of critical public health functions across the workforce of all allied health professions, reinforce governance of key capacities for emergency coordination, and test these capacities through a learning curriculum of simulated and practical exercises. The primary anticipated threats are outbreaks, climate shocks, and humanitarian emergencies, including earthquakes. Climate change, which is fueling emergence and spread of infectious diseases in the country, including zoonotic diseases, waterborne diseases, and vector borne diseases, is one of the primary impetuses and focal areas of the component.

- a. **National preparedness and response planning.** This activity will focus on: (i) reviewing and updating the 2019 Ministry of Health National Influenza Preparedness Plan to a national all-hazards health emergency preparedness plan that covers all levels of the health system and the community level. It will build on lessons learned from COVID-19 and other recent health emergencies, particularly the importance of developing surge workforce strategies for all allied health professions and collaborating with the private sector to provide surge capacity; and (ii) updating and developing national and subnational (facility) plans to strengthen operational readiness. This includes protocols for all-hazards emergency response operations, decision trees and workflows, roles and responsibilities, and hazard-specific planning, ensuring that these plans include explicit protocols to respond to GBV during emergencies and address immediate physical and safety needs of women such as separate toilets, and sanitation activities. Climate change will be incorporated as a critical driver of the primary hazard focal areas for these preparedness and response plans, which will cover infectious disease outbreaks such as climate sensitive diseases, natural hazards like earthquakes, and humanitarian emergencies.
- b. **Workforce skills and system performance improvement.** This activity will support: (i) strengthening surge capacity of the allied health professions and health research workforce, including training and equipping of multidisciplinary response teams and front-line health care workers to respond to and mitigate the impact from priority threats; and (ii) implementing regular, systematic delivery of multisectoral, multi-ministerial simulation exercises, tabletop exercises, and drills involving all levels of the health system to address a variety of biological and nonbiological health emergency threats, with at least one exercise per quarter at the national and subnational levels. To address the critical shortage of health workers trained and certified in new GBV protocols, the project will develop and implement training programs for men and women. These programs will focus on identifying and referring GBV survivors to health, justice, and protection services during emergencies. Additionally, the training will emphasize sensitivity to survivors' specific circumstances and gender roles, reducing the risk of further exclusion and increased vulnerability<sup>29</sup>.
- c. **Critical hardware support.** This subcomponent will also equip and establish the Ankara Simulation-Based Training Center (Ankara SEUM) to conduct practical exercises at scale for health emergencies and act as a regional leader for strengthening operational HEPPR capacities.  
**Coordination and governance to** establish a multisectoral coordination and collaboration platform or body for: (i) addressing data and information needs relevant to health emergencies, including necessary development of enabling public health legislation or regulations, and upgrading the national health statistics system to act as an information sharing platform across ministries; and (ii) dealing with OH and zoonotic threats by promoting information sharing, strategic alignment, and mutual coordinated action across animal, human, and environmental health and other relevant sectors.

26. **Component 3: Project Management and Monitoring.** This component will support routine project management, including coordination of technical activities in all components, fiduciary functions, audits of project financial statements, environmental and social (E&S) compliance, and regular monitoring of and reporting on implementation. It will finance

<sup>29</sup> [https://eca.unwomen.org/sites/default/files/2023-03/UN%20Women%20Brief%20on%20Earthquake%20in%20Turkiye%20Gendered%20impacts%20and%20response\\_0.pdf](https://eca.unwomen.org/sites/default/files/2023-03/UN%20Women%20Brief%20on%20Earthquake%20in%20Turkiye%20Gendered%20impacts%20and%20response_0.pdf)



project operating costs, including translation, interpretation, equipment supporting costs, and staffing costs of the Project Management Support Unit (PMSU).

27. **Component 4: Contingent Emergency Response (no funds allocated).** The objective of this Contingency Emergency Response Component (CERC) is to improve the government’s response capacity in the event of an emergency. An eligible emergency is an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or manmade crises or disasters. At the request of the government, the World Bank will reallocate uncommitted funds from other components into this component. The mechanism for declaration of emergency would be in accordance with the current legislation in the Republic of Türkiye. This component would support rapid response to a request for urgent assistance in respect of an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or manmade crises or disasters. In such a case, funds would be reallocated from other components to finance goods and consulting services. The specific activities to be financed by the funds reallocated to CERC are event and demand driven. However, this component cannot be used to finance salaries or any expenditures that could trigger any of the World Bank’s safeguard policies. To facilitate activation of the CERC in the event of an eligible crisis or emergency, a CERC Manual and draft Emergency Action Plan will be prepared and will be adopted prior to disbursement. The contents of this CERC Manual represent the framework by which the CERC will be activated and by which the approved activities will be coordinated and implemented in accordance with World Bank’s and national policies and procedures as agreed with the World Bank. The Project Operations Manual (POM) will include considerations for climate risks on both mitigation and adaptation to ensure the Project is aligned with the goals of the Paris Agreement.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

28. **The environmental risk rating for the Project after mitigation is rated Substantial.** This is firstly due to the potential risks related to the construction and operation of biosafety level-three VPC in Ankara, including impacts of the implementation of large-scale construction works, and biological safety of storing, experimenting, researching, and production of vaccines. While the Project will not support the construction of the VPC, it will procure equipment and laboratory supplies for the VPC. Thus, VPC has been classified as an Associated Facility to the Project and subject to the Environmental and Social Standards (ESS) due diligence, considering construction and operation phases. The other groups of risks will relate to: (i) minor refurbishment and operation of laboratories to be strengthened and equipped under the Project, and the Ankara SEUM; (ii) TA to identify vaccine manufacturing technologies that, in the future, will inform and guide the vaccine production processes at VPC; and (iii) operational health and safety and personal protection during the refurbishment, construction, and operation of VPC and other research and training facilities to be refurbished and equipped under the project. The risks and impacts of the Ankara VPC construction and operation are analyzed and addressed under the Ankara VPC draft ESIA and Environmental and Social Management Plan (ESMP), developed within the scope of the recently closed HSSSP (P152799). The ESIA was disclosed and consulted from May 2 to May 20, 2024, and final version furnished to the Bank on June 21, 2024, including consultation feedback; the final version will be disclosed



by the Bank in early July 2024. The environmental risks associated with minor refurbishment and equipping of laboratory facilities will be addressed by incorporating relevant provisions of the WBG Environmental, Health and Safety (EHS) Guidelines and references to WHO Laboratory Manual into the POM and respective technical specifications. The terms of reference for the TA determining vaccine production technologies will envisage tasks on analyzing, assessing, and managing potential E&S risks associated with proposed technologies.

29. **The social risk for the Project after mitigation is Moderate.** The moderate risk classification is based on the nature and scale of the project investments, which do not include major infrastructure (or new construction of laboratories and VPCs), land acquisition with resettlement and livelihoods impacts, or activities which pose risks to human health. The Project's social risks and impacts can be mitigated through implementation of Good International Industry Practices (GIIPs) in the health sector. Hence, adverse risks and impacts are residual due to poor implementation of the required measures, such as unintended spread of infectious diseases due to improper Infection Prevention Control (IPC) and disease containment. Also, the construction of the Biosafety Level-3 VPC, which is considered an Associated Facility, may result in some labour and working condition risks and impacts. Activities may also involve minor refurbishment works for the establishment of the Ankara SEUM, which is already a designated area managed by public authorities and, hence, considered as public land with no prior use by private individuals for livelihood activities. There is also a minor risk related to the exclusion of certain beneficiaries or stakeholders from project benefits due to inadequate consultation in designing the planned interventions. Most project activities are in the form of TA and will be implemented at the central level. There will be no labour influx or major civil works. No testing on humans as part of surveillance and vaccine development will take place.

30. **The draft Ankara VPC ESIA and ESMP include measures to prevent infections and diseases, manage labor and working conditions risks and impacts, and provide for assignment of relevant staff to manage these risks.** The MoH has prepared a Stakeholder Engagement Plan (SEP) to ensure that all relevant stakeholders are engaged with in a structured and planned manner. A Labor Management Procedure (LMP) is also prepared to set out policies to manage relevant labor risks of the Project. The relevant environmental and social (E&S) requirements are reflected in the Environmental and Social Commitment Plan (ESCP). The ESCP, LMP, and SEP documents have been finalized as drafts and were disclosed on May 2, 2024. The documents will be finalized incorporating consultation feedback by the end of Appraisal.

## E. Implementation

### Institutional and Implementation Arrangements

31. **The Project will be implemented by the MoH as the key implementing agency, with support from the existing PMSU of the ongoing projects.** The MoH, which has the overarching responsibility for Türkiye's health sector and related policy oversight, will have fiduciary responsibility for the Project through its PMSU as an implementing entity responsible to ensure the technical implementation of all Project components with the relevant GDs, namely the GDs of Public Health, Public Hospitals, and Health Information Systems. The MoH has a proven track record as a committed and reliable partner. It has successfully implemented previous World Bank-financed projects, which contributed significantly to health sector reforms and strengthening the health system of Türkiye.

32. **Details on Project institutional and implementation arrangements will be set out in a POM.** The draft POM will be submitted to the Bank for review and No Objection as a condition of effectiveness of the Loan Agreement. Similarly, the CERC Manual and draft Emergency Action Plan will be submitted to the Bank for review and No Objection prior to



disbursement of emergency expenditures under the CERC. The CERC Manual will outline detailed implementation arrangements related to the eligible crisis or emergency, including: (i) mechanism for activating the CERC; (ii) coordination and implementation arrangements; (iii) procurement, financial management, and disbursement functions; (iv) compliance with Environmental and Social Framework; (v) monitoring and evaluation; and (vi) closing of the CERC.

33. **The PMSU and relevant GDs that are authorized by the MoH, will be responsible for overall fiduciary functions of the Project, including financial management (FM) and procurement.** The PMSU is well established and includes core staff who are responsible for administrative and fiduciary management, and several technical staff who will coordinate activities under the Project. Additional technical staff will be hired by PMSU and relevant GDs to assist with project activities as needed. All procurement under the Project will be undertaken by the PMSU/MoH through the relevant GDs.

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