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Report No: PAD3776

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF US\$45 MILLION

TO THE

REPUBLIC OF HONDURAS

FOR AN

URBAN WATER SUPPLY STRENGTHENING PROJECT (P173125)

JUNE 1, 2020

Water Global Practice  
Latin America and the Caribbean Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2020)

Currency Unit = Honduran Lempira

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HNL 24.8 = US\$1.00

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HNL 1.00 = US\$0.04

## FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

BP	Business Plan
CABEI	Central American Bank for Economic Integration
CBA	Cost Benefit Analysis
CE	Citizen Engagement
COMAS	Municipal Council for Water and Sanitation ( <i>Comisión Municipal de Agua y Saneamiento</i> )
CONASA	National Council for Water and Sanitation ( <i>Consejo Nacional de Agua Potable y Saneamiento</i> )
COVID-19	Coronavirus Disease 2019
CERC	Contingent Emergency Response Component
CPF	Country Partnership Framework
CRR	Cost Recovery Ratio
CS	Service Continuity ( <i>Continuidad del Servicio</i> )
DMA	District Metering Areas
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EIRR	Economic Internal Rate of Return
ENEE	National Electric Energy Company ( <i>Empresa Nacional de Energía Eléctrica</i> )
EPP	Emergency Preparedness Plan
ERSAPS	Water and Sanitation Sector Regulator ( <i>Ente Regulador de los Servicios de Agua Potable y Saneamiento</i> )
E&S	Environment and Social
ESCP	Environment and Social Commitment Plan
ESHS	Environment and Social Health Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FIRR	Financial Internal Rate of Return
FM	Financial Management
FMA	Financial Management Assessment
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHG	Green House Gases
GoH	Government of Honduras
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDA	International Development Association (of the World Bank Group)
IDB	Inter-American Development Bank
IFR	Interim Financial Report
IME	Effective Micrometering Index ( <i>Indice de Micromedición Efectivo</i> )
INVEST-H	Honduras Strategic Investment Office ( <i>Inversiones Estratégicas de Honduras</i> )
IP	Indigenous Peoples
IPF	Investment Project Financing
IPPF	Indigenous Peoples Planning Framework
IPSAS	International Public Sector Accounting Standards
IRR	Internal Rate of Return
ISA	International Standards on Auditing

ISR	Implementation Status and Results Report
KwH	Kilowatt Hour
LAC	Latin America and Caribbean
M&E	Monitoring and Evaluation
MFD	Maximizing Finance for Development
MIS	Monitoring Information System
NPV	Net Present Value
NRW	Non-revenue Water
O&M	Operations and Maintenance
PA	Partnership Agreement
PDO	Project Development Objective
PMU	Project Management Unit
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
RF	Results Framework
RIRP	Rapid Impact and Rehabilitation Plan
RTN	National Tributary Register ( <i>Registro Tributario Nacional</i> )
SANAA	National Autonomous Water and Sewer Service ( <i>Servicio Autónomo Nacional de Acueductos y Alcantarillados</i> )
SCD	Systematic Country Diagnostic
SDG	Sustainable Development Goal
SEP	Stakeholder Engagement Plan
SPC	Shadow Price of Carbon
STEP	Systematic Tracking and Exchanges in Procurement
STEM	Science, Technology, Engineering and Mathematics
TA	Technical Assistance
tCO <sub>2</sub> -eq	Carbon dioxide equivalent measured metric tons
TOR	Terms of Reference
USCL	Local Control and Supervision Unit ( <i>Unidad de Supervision y Control Local</i> )
UWP	Urban Water Provider
WASH	Water, Sanitation and Hygiene
WB	World Bank
WSP	Water and Sanitation Program
WSS	Water Supply and Sanitation
WSSMP	Water and Sanitation Sector Modernization Project
WTP	Water Treatment Plant



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DATASHEET

**BASIC INFORMATION**

Country(ies)	Project Name	
Honduras	Urban Water Supply Strengthening Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P173125	Investment Project Financing	Moderate

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
22-Jun-2020	30-Dec-2025

Bank/IFC Collaboration

No

**Proposed Development Objective(s)**

To improve the quality and efficiency of water supply services delivered by Participating Urban Water Providers and support urban municipalities to respond to water supply and sanitation emergency needs.

**Components**

Component Name	Cost (US\$, millions)
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Component 1. Improving Water Supply Services Provision in Urban Areas	41.50
Component 2. Institutional Strengthening of ERSAPS	1.50
Component 3. Project Management, Communication, Outreach, Monitoring and Evaluation	3.50
Component 4. Contingency Emergency Response (CER) Component	0.00

**Organizations**

Borrower: Republic of Honduras  
 Implementing Agency: Honduran Strategic Investment Office (INVEST-H)

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

**SUMMARY**

<b>Total Project Cost</b>	46.50
<b>Total Financing</b>	46.50
<b>of which IBRD/IDA</b>	45.00
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

International Development Association (IDA)	45.00
IDA Credit	45.00

**Non-World Bank Group Financing**

Counterpart Funding	1.50
Municipalities of Borrowing Country	1.50

**IDA Resources (in US\$, Millions)**

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
<b>Honduras</b>	45.00	0.00	0.00	45.00
National PBA	45.00	0.00	0.00	45.00



<b>Total</b>	<b>45.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>45.00</b>
<b>Expected Disbursements (in US\$, Millions)</b>								
<b>WB Fiscal Year</b>	2020	2021	2022	2023	2024	2025	2026	
<b>Annual</b>	0.00	5.38	8.07	12.32	9.54	6.69	3.00	
<b>Cumulative</b>	0.00	5.38	13.45	25.77	35.31	42.00	45.00	

**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Water

**Contributing Practice Areas**

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

<b>Risk Category</b>	<b>Rating</b>
1. Political and Governance	● Substantial
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Moderate
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	● Moderate
10. Overall	● Substantial





**COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any waivers of Bank policies?

Yes  No

**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

**NOTE:** For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

**Legal Covenants**

Sections and Description

Schedule 2. Section I. A. Institutional Arrangements. 2. The Recipient shall, through the Honduras Strategic



Investment Office (INVEST-H), establish, and thereafter, operate and maintain, throughout project implementation, a Project Management Unit (PMU), with functions, responsibilities, resources and composition acceptable to the Association, including fiduciary functions, staffing (including inter alia, a Project coordinator, a procurement specialist, and a financial management specialist), all as set forth in the Project Operational Manual (POM).

Sections and Description

Schedule 2. Section I. A. Institutional Arrangements. 3. No later than the date four months from the Effective Date, the Recipient, through INVEST-H shall hire an environmental specialist and a social specialist, all in a manner and with terms of reference satisfactory to the Association.

Sections and Description

Schedule 2. Section I. B. Project Operational Manual. 1. The Recipient, through INVEST-H, shall adopt, and thereafter maintain and carry out the Project in accordance with a manual (the POM), which shall set forth, inter alia: (i) a detailed description of Project activities and institutional arrangements for the Project; (ii) the Project administrative, budgeting, accounting, auditing, reporting, financial, procurement and disbursement procedures; (iii) the monitoring indicators for the Project; (iv) the detailed procedures for coordination and collaboration among the relevant Recipient's institutions, and other stakeholders in the carrying out of the Project; (v) the eligibility and expenditure verification criteria for each Affected Municipality to receive payments of Social Tariffs; (vi) the minimum terms and conditions of each Improvement Agreement; and (vii) the Anti-Corruption Guidelines.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 1. The Recipient, through INVEST-H, shall ensure that the Project is carried out in accordance with the Environmental and Social Standards, in a manner acceptable to the Association.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 2. Without limitation upon paragraph 1 above, the Recipient, through INVEST-H, shall ensure that the Project is implemented in accordance with the Environmental and Social Commitment Plan (ESCP), in a manner acceptable to the Association.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 4. The Recipient, through INVEST-H, shall ensure that: (a) all measures necessary are taken to collect, compile, and furnish to the Association through regular reports, with the frequency specified in the ESCP, and promptly in a separate report or reports, if so requested by the Association, information on the status of compliance with the ESCP and the environmental and social instruments referred to therein, all such reports in form and substance acceptable to the Association, setting out, inter alia: (i) the status of implementation of the ESCP; (ii) conditions, if any, which interfere or threaten to interfere with the implementation of the ESCP; and (iii) corrective and preventive measures taken or required to be taken to address such conditions.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 4. The Recipient, through INVEST-H, shall ensure that: (b) the Association is promptly notified of any incident or accident related to or having an impact on the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, in accordance with the ESCP, the environmental and social instruments referenced therein and the



Environmental and Social Standards.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 5. The Recipient, through INVEST-H, shall establish, publicize, maintain and operate an accessible grievance mechanism, to receive and facilitate resolution of concerns and grievances of Project-affected people, and take all measures necessary and appropriate to resolve, or facilitate the resolution of, such concerns and grievances, in a manner acceptable to the Association.

Sections and Description

Schedule 2. Section I. D. Environmental and Social Standards. 6. The Recipient, through INVEST-H, shall ensure that all bidding documents and contracts for civil works under the Project include the obligation of contractors, subcontractors and supervising entities to: (a) comply with the relevant aspects of the ESCP and the environmental and social instruments referred to therein; and (b) adopt and enforce codes of conduct that should be provided to and signed by all workers, detailing measures to address environmental, social, health and safety risks, and the risks of sexual exploitation and abuse, sexual harassment and violence against children, all as applicable to such civil works commissioned or carried out pursuant to said contracts.

Sections and Description

Schedule 2. Section I. E. Contingent Emergency Response. 2. The Recipient shall, throughout the implementation of the Emergency Response Part, maintain the institutional structures and arrangements established in accordance with the CER Manual, with adequate staff and resources satisfactory to the Association.

Sections and Description

Schedule 2. Section I. E. Contingent Emergency Response. 1. In order to ensure the proper implementation of contingent emergency response activities under Part 4 of the Project (“Emergency Response Part”), the Recipient shall: (a) prepare and furnish to the Association for its review and approval, a Contingency Emergency Response Manual (“CER Manual”) which shall set forth detailed implementation arrangements for the Emergency Response Part; afford the Association a reasonable opportunity to review the proposed CER Manual; promptly adopt the CER Manual for the Emergency Response Part as accepted by the Association and integrate it as an annex to the POM.

Sections and Description

Schedule 2. Section I. E. Contingent Emergency Response. 3. The Recipient shall undertake no activities under the Emergency Response Part unless and until the following conditions have been met in respect of said activities: (a) the Recipient has determined that an Eligible Crisis or Emergency has occurred, has furnished to the Association a request to include said activities in the Emergency Response Part in order to respond to said Eligible Crisis or Emergency, and the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (b) the Recipient has ensured the preparation and disclosure of all environmental and social instruments as may be required for said activities in accordance with the CER Manual and the ESCP, the Association has approved all said instruments, and the Recipient has ensured the implementation of any actions which are required to be taken under said instruments.

Sections and Description

Schedule 2. Section I. C. Partnership Agreements. 2. The Recipient shall exercise its rights and carry out its obligations under each Partnership Agreement through INVEST-H in such manner as to protect the interests of the



Recipient and the Association and to accomplish the purposes of the Credit. The Recipient, through INVEST-H, shall ensure that any modifications to any Partnership Agreement are acceptable to the Association prior to any such modifications taking effect. Except as the Association shall otherwise agree, the Recipient shall not assign, amend, abrogate, waive or fail to enforce any Partnership Agreement or any of its provisions.

Sections and Description

Schedule 2. Section I. C. Partnership Agreements. 1. Prior to carrying out any procurement of goods and/or works for the benefit of a Participating UWP under Part 1 of the Project, the Recipient, through INVEST-H, shall enter into an agreement (the Partnership Agreement) with the pertinent Eligible Municipality and the corresponding Participating UWP (which is located under territorial and administrative jurisdiction of said pertinent Eligible Municipality), under terms and conditions acceptable to the Association including, where applicable, the obligation of the pertinent Eligible Municipality to provide counterpart funding for the financing of the abovementioned goods and/or works, all pursuant to criteria set forth in the POM and comply with the Anti-Corruption guidelines and the pertinent provisions of Section I.D of this Schedule 2.

**Conditions**

Type	Description
Effectiveness	<p>Article IV. Effectiveness.</p> <p>4.01.(a) INVEST-H has adopted the Project Operational Manual, in form and substance acceptable to the Association.</p>
Effectiveness	<p>Article IV. Effectiveness.</p> <p>4.01. (b) the PMU has been established in a manner, with resources, terms of reference and staff all acceptable to the Association, and as provided in Section I.A.2 of Schedule 2 to this Agreement.</p>
Disbursement	<p>Schedule 2. Section III. B.1. Withdrawal Conditions.</p> <p>No withdrawal shall be made:</p> <p>(b) for Emergency Expenditures under Category (3), unless and until the Association is satisfied, and has notified the Recipient of its satisfaction, that all of the following conditions have been met in respect of said Emergency Expenditures: (i) the Recipient has determined that an Eligible Emergency has occurred, has furnished to the Association a request to include the proposed activities in the Emergency Response Part in order to respond to said crisis or emergency, and the Association has agreed with such determination, accepted said request and notified the Recipient thereof; (ii) the Recipient has ensured that all environmental and social instruments required for said activities have been prepared and disclosed, and the Recipient has ensured that any actions which are required to be taken under said instruments have been implemented, all in accordance with the provisions of Section I.E. of this Schedule; (iii) the entities in charge of coordinating and implementing the Emergency Response Part have adequate staff and resources, in accordance with the</p>



provisions of Section I.D of this Schedule, for the purposes of said activities; and (iv) the Recipient has adopted the CER Manual in form, substance and manner acceptable to the Association and the provisions of the CER Manual remain -or have been updated in accordance with the provisions of Section I.E. of this Schedule- so as to be appropriate for the inclusion and implementation of the Emergency Response Part.

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## I. STRATEGIC CONTEXT

### A. Country Context

- Over the past 30 years, Honduras has experienced broadly modest, volatile economic growth, insufficient to reduce poverty.** Honduras' real Gross Domestic Product (GDP) grew at an average annual rate of 3.8 percent over the past three decades, exceeding the Latin American and Caribbean (LAC) regional average of 2.6 percent and on par with the Central American average of 3.9 percent.<sup>1</sup> Notwithstanding, real GDP growth slowed to 3.7 percent in 2018 from 4.8 percent in 2017 and to 2.7 in 2019 due to lower agricultural exports and unfavorable domestic and external factors.<sup>2</sup> Output in most sectors decelerated, most notably in agriculture, where lower coffee and palm oil prices, in conjunction with severe droughts and weaker terms of trade, significantly affected production.<sup>3</sup> The country's sensitivity to external shocks, exposure to natural hazards, fiscal instability, limited investment, crime, migration and other challenges to competitiveness, combined with political instability, weak institutions and the thin economic base for generating more and better jobs, have inhibited economic diversification, undermined productivity growth, and slowed progress in raising incomes and reducing poverty and inequality.
- With 9.6 million inhabitants and a per capita annual income of US\$2,541, Honduras is the third poorest country in the Western Hemisphere.** According to official poverty estimates, 48 percent of Hondurans (around 4.3 million people) lived below the national poverty line in 2018, and an estimated 23 percent (around 2 million people) lived below the national extreme poverty line<sup>4</sup>. International headcount estimates for 2018 show that almost 17 percent of the Honduran population lived on less than US\$1.90 per day (the international poverty line), the second highest rate in the LAC region. In addition, a third of the population lives just above the poverty line and is vulnerable to falling back into poverty.<sup>5</sup> With a Gini coefficient of 52.1 in 2018, Honduras has one of the most inequitable income distributions in LAC, with inequality increasing over the last two years from 50.5 to 52.1.<sup>6</sup>
- Honduras' high exposure to extreme climate events and disease outbreaks further threatens the safety and well-being of its population.** In the midst of a national health emergency resulting from an uncontrolled dengue fever epidemic, in March 2020 Honduras also joined the ranks of countries with confirmed and increasing cases of the Coronavirus 2019 Disease (COVID-19). This viral outbreak poses an even greater threat to the health and welfare of the Honduran population, particularly given the ongoing difficulties in addressing recurrent infectious diseases. The global COVID-19 pandemic is expected to flatten the growth of the country's GDP, resulting in significant formal and informal job losses and increasing poverty.
- Approximately 56 percent of the Honduran population lives in urban areas and, based on the current growth rate, this figure is expected to increase to 70 percent by 2050.** In 2018, Honduras posted an urban poverty rate of approximately 38 percent, while extreme urban poverty hovers at 19 percent<sup>7</sup>. Investments in services have not kept pace with ever-increasing urban growth trends. Instead, urban development has largely lacked planning, regulation or controls, subjecting a large portion of the population to critical shortages in housing and public services, including water supply and sanitation (WSS), basic education and health.
- Access to safely managed water, sanitation and hygiene (WASH) services is not only crucial to meet human consumption and food security and nutrition needs, but also to prevent the spread of disease.** Widespread water rationing and intermittent supply resulting from ever-declining precipitation patterns, coupled with aging and

<sup>1</sup> Central Bank of Honduras, World Development Index, and World Bank staff calculations, March 2020.

<sup>2</sup> Central Bank of Honduras.

<sup>3</sup> Strong dependence on agriculture has been identified as one of the core structural challenges hindering medium-term growth in Honduras. IMF Debt Sustainability Analysis, Article IV, July 2019.

<sup>4</sup> In Honduras, according to the National Statistics Institute Methodology to Measure Monetary Poverty in Honduras (2018), general poverty is defined as people living on less than US\$5.10 per day and extreme poverty is defined as people living on less US\$2.80 per day.

<sup>5</sup> Honduras Poverty and Equity Brief, World Bank, April 2020.

<sup>6</sup> World Bank, Development Research Group.

<sup>7</sup> National Statistics Institute, Honduras, 2018.



mismanaged distribution systems – many in disrepair – leave residents no recourse but to purchase water from private vendors not subject to price or quality controls. In addition, the financial health of the utilities is being impacted by falling revenues due to declining usage by commercial and industrial users, as well as to mandatory reconnection of disconnected (unpaid) services and other measures put in place to combat the pandemic.<sup>8</sup>

**6. In addition to facing poverty and critical shortages in basic services, Honduras has been severely impacted by extreme weather events.**<sup>9</sup> The country's accelerated urbanization has increased its overall exposure and vulnerability to climate-change related natural catastrophic events. Climate change has also impacted precipitation patterns, which, combined with rising temperatures, are expected to significantly reduce water availability across the country by 2050.<sup>10</sup> On average, Honduras loses 2.6 percent of its national GDP each year to climatic events.<sup>11</sup> To respond to these growing threats, the Government of Honduras (GoH) launched the Strategic Program for Climate Resilience 2018-2022, complementing other programs such as the National Climate Change Strategy 2010. These initiatives emphasize the importance of water security and include strategies to build the capacity of local governments and water service providers. However, Honduras lacks a national water resources master plan, and has only limited ability to regulate river and micro basins. In the absence of effective water basin regulation and enforcement, municipalities are left to rely on unprotected watersheds to address water needs.

**7. Over the past two decades, the Government has pursued a process of decentralizing responsibility for basic services to the municipalities, including responsibility for water management.** The decentralization was launched with the passage of the 1990 Municipal Law (*Ley de Municipalidades*), which conferred local service delivery responsibilities and fiscal autonomy to the country's 298 municipal governments, of which 105 are urban, and established an initial fiscal transfer of 5 percent of the annual national budget to the municipalities. This fiscal transfer has since risen to 11 percent, increasing the ability of the municipalities to provide counterpart financing. The 2010-2038 National Plan and Country Vision and the 2014-2022 National Water and Sanitation Plan (PLANASA) both support the implementation of progressive decentralization processes for water service provision.

## B. Sectoral Context

**8. Honduras requires significant investments to achieve Sustainable Development Goal 6 (SDG 6), universal access to improve the quality and reliability of safe water and sanitation.** It is estimated that US\$314.1 million annually would be required to meet SDG 6, of which US\$157.3 million annually<sup>12</sup> would need to go to water supply infrastructure to achieve universal coverage. Roughly US\$102.6 million of the latter amount would be needed to rehabilitate aging water supply infrastructure alone. This underscores the deteriorating quality of existing infrastructure and the need to prioritize investments in rehabilitation and upgrading. This level of investment far exceeds the Government's average annual expenditure on water infrastructure of US\$31.6 million.

**9. Over 100 medium and small-sized cities in Honduras suffer from inefficient and unreliable water supply services, posing a risk of disease contagion.** While Honduras has increased access to basic water services over the past decades, it faces

<sup>8</sup> Preliminary recent data from *Aguas de Puerto Cortes* and *Aguas de Siguatepeque* reveal that revenues declined after the Government approved COVID-19 social distancing emergency measures. Average monthly revenue collection for *Aguas de Puerto Cortes* dropped from 90 to 67 percent after the COVID-19 emergency was declared.

<sup>9</sup> According to *Germanwatch*, between 1996 and 2015, the country suffered 61 climatic events, the most famous of which was Hurricane Mitch in 1998. In addition, climate change has also impacted precipitation patterns and the overall availability of water in urban centers. Current climate patterns suggest that by 2020, there will be about a 6 percent decrease in annual rainfall in the west and south of the country, and by 2050, a 20 percent decrease in rainfall across most of the country.

<sup>10</sup> *Honduras: Strategic Program for Climate Resilience 2018-2022*, Ministry of Environment (MIAMBIENTE). By 2090, average temperatures are projected to increase by 4°C in most parts of the country. An increase in atmospheric pressure is also projected and is expected to give rise to other climate-change related impacts, including rainfall deficits and annual temperature increases. In addition, precipitation is projected to decline by 20 percent by 2050 and by 30-40 percent by 2090.

<sup>11</sup> *The Central America Urbanization Review: Making Cities Work for Central America*, World Bank 2017.

<sup>12</sup> According to the *2016 Water Supply and Sanitation Monitoring Country Report (MAPAS II)*.



significant challenges in providing better and more reliable services, particularly to small and medium-sized cities.<sup>13</sup> Although piped water coverage in urban areas is high, at around 96 percent, when it comes to *safely managed water* in urban areas, which includes “water that is accessible on premises and available when needed,”<sup>14</sup> availability is very low. A 2017 World Bank survey of mid-sized cities and small towns revealed that, on average, 67 percent of residents had access to water service only three hours per day.<sup>15</sup> Inadequate systems management is largely to blame for the persistent low service quality.<sup>16</sup> Moreover, water is becoming scarcer due to climate change-induced declines in precipitation, combined with unchecked urbanization. This has led to year-round water rationing and highly intermittent service, which is worse during the summer months. Consultations with small town and peri-urban service providers located upstream of water treatment plants (WTPs), carried out as part of a 2016 World Bank technical assistance,<sup>17</sup> revealed an increased prevalence of recurrent dry water intakes throughout the 2014-15 drought, generating broad-based concern that water levels could be insufficient to supply the drinking water system going forward. In 2019, the Government declared a national state of emergency given that rainfall had declined to half of its historic level, suggesting that access to water services has dropped below the three hours per day average. Some urban service providers consulted during preparation of this Project indicated that water is only distributed once every 12 days, with high water losses throughout the system.<sup>18</sup> These weaknesses in water service delivery increase the susceptibility of the population to disease and undermine the critical health services required to deal with communicable disease outbreaks, such as the ongoing COVID-19 pandemic.

**10. Water supply versus sanitation - the need to prioritize.** There is broad consensus among national and municipal authorities and small-town service providers that while there are significant challenges to meet the SDG 6 sanitation targets, improved and reliable access to water supply is their foremost priority. This information was corroborated during consultations carried out with municipal authorities and service providers in February 2020, which revealed that most of the population in small urban areas already has access to some sort of improved sanitation.<sup>19</sup>

**11. The COVID-19 pandemic has made the importance of ensuring access to safely managed water supply acutely apparent.** Preparation of the proposed operation coincided with the rapidly unfolding spread of the COVID-19 pandemic. It is widely recognized that access to safely managed water supply is critical to prevent the spread of disease, including through the provision of water for handwashing to break the cycle of contagion. As part of its effort to fight COVID-19, the GoH, through the Water and Sanitation Sector Regulator (*Ente Regulador de los Servicios de Agua Potable y Saneamiento* -ERSAPS), has ordered: (i) the suspension of service disconnections for non-payment of water bills; (ii) the reconnection of households that were disconnected due to non-payment; and (iii) the adjustment and reformatting of billing systems to enable online payments.

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<sup>13</sup> According to the *2017 Joint Monitoring Program (JMP) Report*, roughly 99 percent of the urban population has access to basic water services, defined by WHO/UNICEF as “drinking water from an improved source, provided that the collection time is not more than 30 minutes for a roundtrip including queuing.”

<sup>14</sup> *2017 Joint Monitoring Program (JMP) Report*.

<sup>15</sup> Water Partnership Program Country Report 2017, *Characterization of WSS Services in Mid-sized Cities and Small Towns*. According to the Water and Sanitation National Plan (PLANASA), municipalities with settlements between 5,000 and 30,000 inhabitants are considered small towns, those with settlements spanning 30,001 to 400,000 residents are considered mid-size cities.

<sup>16</sup> *Environmental Assessment Report*, GEO Honduras 2014; page 64.

<sup>17</sup> *Strategy and Action Program for WSS in Small Towns in Honduras*, WB Water and Sanitation Program (WSP) 2016 (Report No: ACS10444).

<sup>18</sup> A 2014 WB Water Public Expenditure Review revealed that the proportion of metered water connections for deconcentrated water companies was roughly 10 percent. A deconcentrated municipal provider is a self-standing entity separated from the municipal administration’s finances.

<sup>19</sup> According to a 2013 study by the Water and Sanitation Regulator (*Ente Regulador de los Servicios de Agua Potable y Saneamiento* - ERSAPS), 34 of the 53 small urban areas surveyed provided sewer network coverage throughout the central areas of their towns. The *2014 Assessment Report on WSS in Small Towns* indicates that these 34 small urban areas dispose their wastewater in stabilization ponds. The rest of the population relies on decentralized sanitation, mostly latrines and pour-flush latrines, that when full, households seal and replace by digging another one. As detailed in the *2017 Joint Monitoring Program (JMP) Report*, open defecation in urban areas stood at less than 2 percent in 2017. Improved excreta disposal services were mentioned as second or third in order of priority behind water supply and rainwater drainage by municipal authorities. Also according to the JMP, Honduras has 95.4 percent access to urban basic sanitation, distributed as follows: (i) 66.4 percent of the population connected to a sewer network; (ii) 19.4 percent to a septic tank; (iii) 9.4 percent to a latrine; (iv) 2.7 percent has access to limited or unimproved sanitation; and (v) 1.9 percent practices open defecation.





In addition, some water service providers are trucking in emergency water supplies, particularly to peri-urban areas, as well as furnishing protective equipment for their staff. The GoH is also working with the World Bank and other development partners to set up emergency measures to secure access to, and continuity of, water supply services. These emergency response efforts are expected to cause temporary liquidity issues for the service providers, adding larger financial requirements for the sector in the short- to medium-term.

**12. Physical and commercial losses resulting from aging infrastructure and insufficient investments in rehabilitation over the last 50 years impose significant challenges to water supply provision in urban areas and financial burdens on households.** Inadequate maintenance and rehabilitation have resulted in substantial physical and commercial losses in the distribution system, and lack of financial efficiency. The wells and treatment facilities that make up the production systems are also operating below design capacity due to lack of maintenance and rehabilitation. Urban utilities are generally not equipped with macro meters throughout the production system and few have micrometers installed in household connections as the basis for billing. Hence, all production and consumption data are considered unreliable. This renders information on non-revenue water (NRW) poor and untrustworthy. Furthermore, widespread use of large, unmetered and mostly underground household water storage tanks lacking automatic shut-off valves result in overflows and water wastage. Use of these aging tanks together with the lack of pressure zones management contribute to the intermittency of water services, leading residents to seek other sources of water, primarily from private vendors, with unregulated quality and prices. The unregulated prices disproportionately affect low-income families, while unregulated quality may increase the potential for disease outbreaks.

**13. The installation of household micrometers and gradual adoption of volumetric tariffs have been shown to reduce water losses and wastage, contributing to more equitable distribution of services.** While the merits of volumetric tariffs are widely recognized by providers in Honduras, few have made progress on this front. The municipalities of *Danlí*, *Jesus de Otoro*, and *Puerto Cortés* provide three successful examples worth highlighting. All three independently embarked on ambitious micro-metering programs accompanied by robust communications campaigns to build community buy-in to widespread volumetric tariffs as a means of promoting equity and more rational water use. In these cases, the installment of household meters and gradual roll-out of a tariff system based on usage allowed residents to better understand the value of water and led to reduced water wastage. Consequently, enough water is now available in their networks to equitably serve households throughout their communities. This, in turn, has boosted the overall commercial and operational efficiency and financial performance of the service providers. These examples served as a model for similar programs that were successfully initiated by the *Aguas de Comayagua* and *Aguas de Siguatepeque* urban water service providers (UWPs)<sup>20</sup> under the WB-financed Water and Sanitation Sector Modernization Project (WSSMP, P103881).

**14. Country experience indicates that the majority of UWPs are only likely to achieve financial sustainability over a longer period of time.** Of Honduras' 105 medium and small cities, an estimated 70 do not have their water supply managed by UWPs. All service providers not incorporated as UWPs<sup>21</sup> reported cost recovery levels below operational costs. In contrast, a survey of 10 medium and small city UWPs (representing one-third of organized UWPs) carried out by ERSAPS in 2018 found that nine had reached financial sustainability, of which six had been operating for over four years<sup>22</sup>. The *2014 Honduras World Bank Water Public Expenditure Review* also indicates that the overall performance of organized service providers exceeds that of both the national utility, National Autonomous Water and Sewer Service (*Servicio Autónomo Nacional de Acueductos y Alcantarillados*, SANAA), and direct municipal provision.

**15. There are significant gender gaps in both labor force participation and decision-making throughout the UWPs.** Although the inclusion of female staff is widely considered critical to promoting economic opportunities and voice for Honduras' growing female workforce, data collected from a 2018 survey of UWPs show that female labor force participation in WSS utilities in

<sup>20</sup> For purposes of this Project, the term "UWP" refers to: deconcentrated and mixed (public and private) capital providers.

<sup>21</sup> Service providers not incorporated as UWPs were consulted as part of a survey for the *Water Partnership Program Country Report: Characterization of WSS Services in Mid-sized Cities and Small Towns*, World Bank 2018.

<sup>22</sup> 2018 ERSAPS Annual Urban Indicators Report.



Honduras (18 percent) lags significantly behind both male (82 percent), and female (32 percent) participation in utilities throughout the LAC region.<sup>23</sup> Women in Honduras are especially underrepresented in technical, engineer and management positions (only 3 percent hold a leadership position, far below the 23 percent reported at the global level).<sup>24</sup> Women employed in utilities often work in administrative, human resources or commercial areas, rather than technical ones. Apart from challenges in attracting women to the water sector, barriers persist in terms of recruitment, retention and promotion. First, women face barriers in hiring processes, derived from implicit gender bias in the hiring panel, discriminatory language in job descriptions and lack of incentives. Second, retention is hampered by lack of gender-sensitive policies, work-life balance, unsuitable facilities, discriminatory workplaces, sexual harassment and wage gaps. Finally, lack of access to training options and unequal opportunities for career progression undermine women's professional career development and promotion.

### C. Institutional Context

16. **The 2003 Drinking Water and Sanitation Sector Framework Law (the Framework Law) redefined WSS provision in Honduras.** Recognizing that the prevailing institutional setup led to poor service levels, the Framework Law mandated the decentralization of the SANAA and called for the transfer of its assets to municipalities by 2013. Municipalities were required to set up a ring-fenced service provider, defined as either a deconcentrated or mixed capital management model,<sup>25</sup> and UWPs were required to install metered household connections and calculate payment based on actual consumption.<sup>26</sup> The Law also established, among other central institutions, the ERSAPS. The Framework Law requires that citizens be involved in the entire service management cycle through several different mechanisms: (i) UWP boards of directors; (ii) the Municipal Councils for Water and Sanitation (*Comisión Municipal de Agua y Saneamiento*, COMAS), which oversee local policy and planning issues; and (iii) the Local Supervision and Control Units (*Unidad de Supervisión y Control Local*, USCLs), which monitor the quality of water services and compliance with sector regulations.

17. **Substantial progress has been made in strengthening water sector governance since the launch of the Framework Law.** In 2005 the Government developed a Strategic Plan for the Modernization of the Water and Sanitation Sector, which set forth a policy and action plan to support the decentralization of WSS services. The Water and Sanitation Sector Modernization Project (WSSMP, P103881), implemented between 2008 and 2016, then supported the Government in implementation of the Framework Law, with a focus on: (i) establishing and strengthening UWPs in nine mid-sized cities<sup>27</sup>; (ii) establishing the national water institutions ERSAPS, CONASA and SANAA; and (iii) improving services by reducing NRW, decreasing water losses and improving the quality of the distribution system.

18. **Despite progress, many municipalities have yet to create and/or operationalize their UWPs, which undermines their capacity to deliver water supply services efficiently and reliably.** In the absence of adequate management and planning, the impacts of investments in water systems have been limited and their sustainability tenuous. The establishment of strong UWPs capable of taking investment decisions based on strategic business needs is pivotal to ensuring the efficiency and reliability of services. To date, roughly 70 municipalities have not complied with the Framework Law requirement to create and/or operationalize an UWP. Further, at preparation of this Project, only four UWPs were identified as having installed micrometers in at least 10 percent of their household connections, and only two UWPs reported using this information for billing. Most of

<sup>23</sup> Combined IBNET data and World Bank HR Utility Survey data. Some regional data: Ecuador 49 percent; Mexico 35 percent; Uruguay 33 percent; Dominican Republic 12 percent.

<sup>24</sup> *Women in Water Utilities: Breaking Barriers*, WB. Global averages: 22.8 percent for female engineers and 23.3 percent for female managers.

<sup>25</sup> The Country's Commercial Code Chapter VIII provides legal status to the mixed capital companies (*Sociedad Anónima de Capital Variable*, in Spanish). The contractual relationship that this type of company has with municipalities are established through a water service lease. The shares for this type of company are always distributed among private and public persons/entities. To be officially created as a deconcentrated municipal service provider, the UWP must have a general manager and be administratively as well as financially separate from the municipal government (evidenced through an RTN – *Registro Tributario Nacional* - tax ID number), among other criteria outlined in the Framework Law.

<sup>26</sup> The Water User By-Law requires installation of one micrometer per connection by the water service provider.

<sup>27</sup> Nine mid-sized cities benefitted under the WSSMP: *Danlí, Comayagua, Siguatepeque, Puerto Cortes, La Lima, Villanueva* (comprised of three municipalities) and *Choloma*. The WSSMP largely centered on mid-sized cities and supported the establishment and operationalization of nine UWPs servicing Honduras' most important mid-sized cities by substantially increasing the coverage, efficiency and reliability of their water services.



the 70 municipalities continue to use the 1994 cadaster for billing purposes, which undermines the financial capacity of the UWPs to make necessary investments in maintenance and expansion of service. This continues to burden the poor with the cost of purchasing water from tankers, at prices up to 250 percent more than the price paid by domestic users connected to a UWP water network. Increased availability of water in the distribution network is expected to reduce dependency on these costlier coping mechanisms. The proposed Project will focus on establishing the local institutional foundation to gradually improve access to and reliability of water supply services through UWPs, in line with the Framework Law.

#### D. Relevance to Higher Level Objectives

19. **The proposed Project will support Government efforts to set the water sector on track to meet the SDGs related to access, quality, sustainability and resilience of water services to climate change-exacerbated risks, primarily in urban areas.** The Project focuses on empowering decentralized UWPs to improve the efficiency, reliability and sustainability of services in participating municipalities, contributing at the same time to the World Bank's twin goals of promoting shared prosperity and reducing poverty. The Project is also aligned with the Government's *National Water Supply and Sanitation Plan 2014-2022* and with Honduras' Nationally Determined Contribution to the United Nations Framework Convention on Climate Change (UNFCCC), which identifies climate change adaptation as a priority and water as a main area of focus. Further, the Project supports the *Strategy Program for Climate Resilience 2018-2022*, which includes strategies to build local government capacity to manage water resources and conserve water for human consumption. In so doing, the Project will increase the resilience of the participating municipalities' water supply systems to climate risks, especially droughts. This operation – together with the FY19 Tegucigalpa Water Supply Strengthening Project (P170469), which aims at improving the efficiency and reliability of the capital's water services, and the Water Security in the Dry Corridor of Honduras Project (P169910) to be also considered by the World Bank's Board of Executive Directors on June 22, 2020, which aims at increasing water availability for water supply and irrigation in one of the country's most water scarce and poor regions – forms part of the Government's ambitious program to achieve the SDGs.

20. **The proposed Project is also well-aligned with the World Bank Group's FY2016–20 Country Partnership Framework (CPF) for Honduras<sup>28</sup> discussed by the Board of Executive Directors on December 15, 2015 and the Performance and Learning Review of the CPF for the period FY16-FY20 considered on July 9, 2019.** It would specifically support Pillar 2: Bolstering Conditions for Growth, by directly contributing to *Objective 1: Improve Reliability of Key Infrastructure* through investments in the rehabilitation of water supply systems of beneficiary municipalities; and *Objective 2: Strengthen the Regulatory Framework and Institutional Capacity* through, *inter alia*, the creation and operationalization of UWPs to increase the efficiency and reliability of water supply services. The Project would also contribute to Pillar 3: Reducing Vulnerability, by boosting the system's resilience to disasters and climate change. More specifically, the Project intends to address the climate change-exacerbated risks of ever-decreasing precipitation levels leading to prolonged droughts. Finally, the proposed Project also addresses an issue identified in the 2016 Systematic Country Diagnostic (SCD) for Honduras: the lack of access to potable water as a key factor limiting inclusion and the equal distribution of wealth.

21. **The Project is aligned with the Government's response to COVID-19.** It is included in the list of priority projects under Executive Decree 030-2020, issued on April 9, 2020, aimed at mitigating the impacts of the pandemic. The proposed investments and technical assistance activities are expected to contribute to reducing the risks of disease transmission by promoting the provision of safe and reliable water supply services to households and supporting handwashing, community outreach, and communications campaigns aimed at increasing hygiene practices. The Project will likewise provide short-term emergency relief by subsidizing the cost of social tariffs paid by poorer urban households. Finally, the Project will contribute to job creation throughout implementation, stimulating the economy with labor-intensive interventions during construction.

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<sup>28</sup> Report No. 98367.



## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### PDO Statement

22. The Project Development Objective (PDO) is to improve the quality and efficiency of water supply services delivered by Participating Urban Water Providers and support urban municipalities to respond to water supply and sanitation emergency needs.

#### PDO Level Indicators

23. Achievement of the PDO will be measured via the following key results indicators:

- Participating UWPs that increase micro metering as a basis for billing by 10 percent (percentage)
- Participating UWPs that reduce NRW by 5 percentage points (percentage)
- Participating UWPs that reach operating cost recovery ratio greater than one (percentage)
- Participating UWPs that increase hours of water service provision above 21 hours per week (percentage)
- Participating UWPs that meet national water quality standards (percentage)
- Participating urban municipalities that have implemented water supply and hygiene activities prioritized in the emergency intervention plans approved by the Municipal Corporation, as part of the efforts to address COVID-19 (percentage)

### B. Project Components

24. **The proposed Project is structured as an Investment Project Financing (IPF) to be implemented over 5 years,<sup>29</sup> financed by an IDA Credit in the amount of US\$45 million.** Participating municipalities are expected to contribute a combined amount of US\$1.5 million<sup>30</sup> to finance infrastructure rehabilitation investments. The Project will follow a demand-based approach requiring UWPs and/or municipalities to apply to participate. Selection will be based upon compliance with pre-defined eligibility criteria, to be detailed in the Project Operational Manual (POM).

25. **The Project builds on advances made under its predecessor project (WSSMP, P103881) in supporting efforts to decentralize and improve the quality of water services to households, while also supporting municipalities in responding to water supply and sanitation emergency needs.** The Project takes a four-pronged approach: (i) supporting municipalities that aim to create ring-fenced municipal service providers; (ii) supporting the operationalization of those that have created ring-fenced municipal service providers; (iii) strengthening ring-fenced municipal service providers that have been operating; and (iv) supporting ring-fenced service providers incorporated as mixed capital companies to attract private sector capital. The creation and/or operationalization of the UWPs will contemplate the principles of the *Utility of the Future Framework*, which provides guidance aimed at enhancing utility performance.<sup>31</sup> The Project also includes resources to support affected urban municipalities to implement short term priority interventions focused on water supply and hygiene in response to the COVID-19 pandemic.

26. **Component 1. Improving Water Supply Services Provision in Urban Areas (US\$40 million IDA, US\$1.5 million counterpart funds).** This component will support the operationalization of water systems as contemplated in the Framework Law, using a demand-based approach, and based on municipality/UWP compliance with eligibility criteria. Detailed eligibility

<sup>29</sup> The 5-year implementation period assumes that project effectiveness could take up to six months.

<sup>30</sup> The counterpart funding is an indicative amount based on the experience of the WSSMP, and on consultations with different stakeholders, including municipalities and service providers.

<sup>31</sup> The *Utility of the Future Framework*, created by the WB's Water Global Practice, provides a three-pronged approach to enhancing water utilities' performance: (i) strengthening the operational efficiency of the utility; (ii) improving the governing environment; and (iii) improving access to funding.



criteria are included in Annex 2. It will also support the design and implementation of communications campaigns aimed at promoting more rational use of water supply, as well as adequate education in hygiene and sanitation practices to stem the outbreak of pandemic and waterborne diseases. Technical assistance will include the design or upgrading of the UWPs' Rapid Impact and Rehabilitation Plans (RIRPs) and Business Plans (BPs), while investments will contribute to the rehabilitation and upgrading of urban water systems prioritized in the RIRPs and BPs. Both the plans and investments will aim at improving the operational and financial management of the service providers, enhancing energy efficiency, optimizing existing water supply systems, improving water quality testing capacities and increasing water continuity. More reliable water supply services—resulting from more efficiently operating and financially sustainable service providers is expected to render beneficiary communities more resilient to climate change-related droughts and diseases and may reduce the need for new water abstraction. Component 1 will finance goods, works, services, and technical assistance (TA).

**27. The Project will use Honduras' Municipal Development Index to determine the percentage of counterpart financing to be provided by each participating municipality and to promote pro-poor access.** The index, as defined by the Ministry of Interior, categorizes Honduras's 298 municipalities according to a poverty scale ranging from A (municipalities with the lowest poverty levels) to D (highest poverty levels). Categories A and B municipalities are expected to contribute 10 percent in counterpart funding for goods and works contracts; categories C and D municipalities will not be required to contribute counterpart funds. Support under subcomponent 1.5 will not be subject to counterpart financing requirements regardless of municipal category. All applications from eligible UWPs will be accepted on a first-come, first-served basis, subject to the specific criteria described in the POM. The implementing agency, *Inversiones Estratégicas de Honduras* — INVEST-H, will be responsible for ensuring that all TA, goods and works are provided as outlined in the respective Partnership Agreements (PAs) to be entered into with the municipalities.

**28. Subcomponent 1.1. Establishment of the New UWPs.** This subcomponent will finance in-country travel, training and consulting services to (i) support eligible municipalities to establish new UWPs as deconcentrated or mixed capital service providers, in compliance with applicable sector rules and regulations; and (ii) support the preparation of the new UWPs' RIRPs, including strategies to control NRW, as necessary.

**29. Subcomponent 1.2. Operationalization of the Developing UWPs and Rehabilitation of their Services in Accordance with their RIRPs.** This subcomponent will support each developing UWP in, *inter alia*, (i) developing policies, procedures, manuals, systems and other commercial, operational and administrative tools to support implementation of its management model; (ii) developing and/or updating and implementing the RIRP to quickly increase household water availability, as needed;<sup>32</sup> (iii) improving water quality testing capacities of their WTP laboratories; (iv) developing a micro metering strategy and a cadaster; (v) preparing and implementing social outreach and communication campaigns, including promotion of rational water use and better hygiene practices; (vi) developing five year BPs for developing UWPs that will include a financial plan and a plan for tariff adjustments, and (vii) implementing priority activities included in approved business plans by the pertinent Municipal Corporation.<sup>33</sup>

**30. Subcomponent 1.3. Strengthening the Efficiency and Reliability of Water Services Provided by Consolidated UWPs.** This subcomponent will support the implementation of activities prioritized in the 5-year BPs of Consolidated UWPs as approved by the respective Municipal Corporation. It will finance TA to update the BPs, including strategies to control NRW, as needed, for UWPs older than five years. Activities prioritized in this subcomponent will focus on, *inter alia*: (i) developing and implementing a micro metering strategy and cadaster; (ii) preparing and implementing social outreach and communication plans, including promotion of rational water use and better hygiene practices; (iii) reducing NRW losses; (iv) improving energy efficiency by rehabilitating and upgrading water systems (e.g., optimization of pumping);<sup>34</sup> (v) improving water quality testing capacities of

<sup>32</sup> The RIRP for water services would include rehabilitation, replacement and upgrade of structures, pumps, electrical panels, defective pipes and valves, WTP testing labs, and installation of any device or minor structure guaranteeing the operation of the system and improved water quality.

<sup>33</sup> All documents endorsed by the Municipal Corporation are to be certified by the Municipal Secretary in the official minutes of the meeting.

<sup>34</sup> Including rehabilitation, replacement and upgrade of structures, pumps, electrical panels, defective pipes and valves, WTP testing labs, and



WTP laboratories; and (vi) supporting interested UWPs in the development of watershed management plans for prioritized micro-watersheds, assessments on sanitation alternatives, as well as the carrying out of studies and provision of training for climate adaptation strategies.

31. **The activities envisaged in subcomponents 1.2 and 1.3 will help reduce water shortages and increase water availability to other users of the system, thereby increasing the water supply system's resilience to climate change-induced droughts.** These activities are also expected to reduce the need for additional water sources and further increase residents' resilience to climate change. Investments in NRW reduction and energy efficiency will increase water pressure in the network, resulting in less water abstraction and leading to reductions in net greenhouse gas (GHG) emissions, thereby contributing to the mitigation of climate change impacts.

32. **Subcomponent 1.4. Enhancing the Creditworthiness of Mixed Capital UWPs to Attract Private Capital.** This subcomponent will finance TA, in-country travel, training and consulting services to assist the UWPs in, *inter alia*, (i) upgrading their BPs to align them with private sector practices; (ii) upgrading and fully integrating their financial and accounting systems; (iii) strengthening processes to prepare financial statements in compliance with International Financial Reporting Standards (IFRS); (iv) strengthening their capacity for financial analysis and planning; (v) improving their performance to achieve cost recovery ratios and EBITDA<sup>35</sup> margins to attract commercial financing; and (vi) improving their corporate governance rules.

33. **Subcomponent 1.5. Supporting the Municipal COVID-19 Emergency Response.** This subcomponent will support short-term priority activities defined by urban municipalities in response to the COVID-19 outbreak, prioritizing vulnerable groups, unserved, and underserved populations, and healthcare centers and schools. To this end, it will finance goods and services related to water supply and hygiene, as well as social tariff subsidies for low-income consumers. Such support will focus on, *inter alia*: (i) ensuring the provision of adequate water supply through the distribution of water bottles, sachets, small water tankers, and water storage tanks; (ii) preparing and implementing social outreach and communication campaigns to promote social distancing, handwashing and other hygiene practices; (iii) setting up a temporary COVID-19 emergency relief facility to subsidize the social tariffs paid by poor urban households to municipal service providers; (iv) developing, in the medium term, disease mitigation interventions such as the adoption of electronic payment systems to reduce disease transmission at payment sites; (v) providing water treatment chemicals and laboratory chemicals/reagents; (vi) ensuring adequate supply of fuel and spare parts necessary for ongoing operation and maintenance (O&M) of the water supply system; and (vii) providing protective equipment and disinfectant supplies for utility staff.

34. **Component 2. Institutional Strengthening of ERSAPS (US\$1.5 million IDA).** This component will enhance ERSAPS' institutional capacity to implement incremental activities associated with Component 1 for Participating UWPs. It will focus on: (i) assisting UWPs in selecting a management model that reflects their institutional capacity; (ii) certifying the management model and overseeing the operationalization of UWPs; (iii) establishing a volumetric tariff structure in consultation with the COMAS and USCLs, as applicable; (iv) negotiating, publishing and following up UWPs performance under the applicable Improvement Agreements; and (v) supporting mechanisms to promote the transparency and accountability of UWPs, such as incremental activities resulting from Component 1 (i.e. collection and analysis of data, monitoring of UWP services, management of unresolved complaints, enforcement of regulations and fees related to the conversion of UWPs, etc.). Support to be provided by ERSAPS is expected to improve water supply services, and in turn, make participating urban areas more resilient to climate change-related droughts. This component will finance consulting services, in-country travel, training, workshops and goods.

35. **Component 3. Project Management, Communication, Outreach, Monitoring and Evaluation (US\$3.5 million IDA)** This component will support project implementation through, *inter alia*: (i) monitoring and evaluation of project results, using ERSAPS' information system; (ii) undertaking procurement and financial management activities; (iii) implementing the

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installation of any device or minor structure guaranteeing the operation of the system and improved water quality.

<sup>35</sup> Earnings before interest, tax, depreciation and amortization.



Environmental and Social Standards; (iv) undertaking annual audits for the Project and UWPs; (v) developing, financing and overseeing gender strategies for UWPs to ensure women's participation in water-related decision-making<sup>36</sup>; (vi) coordinating with central institutions responsible for promoting water supply delivery and climate change initiatives to improve resilience of the water systems; (vii) carrying out national and local communication and outreach activities to explain project benefits to beneficiaries; (viii) establishing clear rules of prioritization to manage the demand from potential project participants; (ix) exploring alternative financial mechanisms to support the water sector's capacity to cope with emergencies; (x) establishing citizen engagement measures and additional tools, training and guidance to support COMAS and the Local Control and Supervision Units (USCL) in each eligible municipality in monitoring the UWPs' performance and compliance with sector regulations; and (xi) supporting grievance redress mechanisms for project activities as a whole.

**36. Component 4. Contingency Emergency Response (CER) Component (US\$0 million).** Reflecting the strategic approach taken in Honduras across the World Bank's portfolio, this component will provide immediate response to eligible emergencies. As such, in the event of such an eligible emergency, as defined in the CER operational manual prepared, accepted by the World Bank, and adopted by the GoH, this component will finance emergency activities and expenditures through the reallocation of funds from the Project should an eligible emergency be declared.

### C. Project Beneficiaries

**37. Since this is a demand-driven Project, the precise number of Participating UWPs will not be known until early implementation.** At design stage, it was estimated that roughly 15 UWPs will benefit from improved operational, commercial and financial efficiency of services, and up to 360,000 households will benefit from improved water supply. The Project is expected to directly contribute to doubling the hours of service continuity, reducing the burden that the poorly functioning water systems presently place on urban residents, improving the efficiency with which the services are provided, and increasing the quality of water provided to households.

**38. The Project is further geared to:** (i) support priority water supply and hygiene activities defined by urban municipalities; and (ii) provide emergency relief in response to the COVID-19 outbreak by subsidizing the cost of social tariffs paid by poorer urban households, which will serve to soften the economic impacts of the virus on the population. In parallel, through subcomponent 1.3, the Project seeks to create labor intensive network rehabilitation employment opportunities, contributing to post COVID-19 economic recovery.<sup>37</sup> ERSAPS will receive technical assistance and financial support to participate in the Project, exercising its regulatory duties including the enforcement of "Improvement Agreements" signed with participating UWPs.

### D. Results Chain

**39. Attainment of the PDO hinges on the achievement of six key results described in paragraph 23.** Increased volumetric billing by UWPs requires the development and implementation of metering strategies, cadaster updates, communications campaigns and installation of household micrometers. Reduced NRW depends on the implementation of rehabilitation, upgrading and O&M activities prioritized in the RIRPs and 5-year BPs (to reduce physical losses) and increased volumetric billing/collections (to reduce commercial losses). Improved operating cost recovery ratios will depend on the increased collections, NRW reductions and energy savings interventions under the Project. Increased hours of water service provision hinges on implementation of NRW reduction activities and more rational water use resulting from consumption-based billing which are expected to increase water availability in systems. Increased compliance with national water quality standards will require investments to improve participating UWP WTP lab testing capacities. Institutional strengthening of participating UWPs, including in strategic planning, and of ERSAPS to help them choose and operationalize their management models and monitor their performance, will also be key to attainment of these key results. Finally, implementation of COVID-19 emergency

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<sup>37</sup> Based on data provided in the *WB 2020 Crisis in LAC: Infrastructure Investment, Employment and the Expectations of Stimulus Report*, roughly 58 jobs are generated per every US\$1 million/year invested in water network rehabilitation in Honduras.



intervention priorities will require that affected municipalities prepare and implement emergency plans, including water supply, hygiene activities, and/or temporary social tariff subsidies for low-income consumers. Annex 3 details the Project's Theory of Change.

#### **E. Rationale for Bank Involvement and Role of Partners**

**40. The Bank is well-placed to partner with the GoH to support its effort to provide better and more reliable water supply services to eligible urban municipalities.** The Bank has accumulated extensive global experience in supporting interventions to enhance the quality and efficiency of water service provision, in both urban and rural areas. The Bank is also able to quickly leverage global experience in dealing with emergency situations including disease contagion, as necessary. Further, the Bank has been actively involved in the Honduran WSS sector by supporting the implementation of the Framework Law and institutional reforms, financing infrastructure investments through the WSSMP, and providing broad-based TA and knowledge sharing.

**41. There are many donors and Non-Governmental Organizations present in Honduras, most focusing on pilot interventions in the water sector and financing of isolated water system components such as tanks and pumping stations.** In addition, the Inter-American Development Bank (IDB) is financing a Policy-Based Loan to strengthen the institutional framework of the WSS sector to support service delivery in large urban areas such as Tegucigalpa; the Central American Bank for Economic Integration (CABEI) has ongoing sanitation initiatives in several small towns, and the Japan International Cooperation Agency (JICA) is undertaking a series of studies and designs of rapid-impact infrastructure projects focused on sanitation. Donor coordination will be pursued through the existing Donor Round Table, which plays a leading role in coordinating government, civil society, and donor representatives in Honduras to define and implement strategies to meet sectoral goals.

**42. The proposed Project seeks to operationalize the maximizing finance for development (MFD) approach.** Activities associated with preparation of the BPs and development of the tariff reform and subsidy reduction proposals for each UWP are in line with the MFD approach by creating enabling conditions for private investment in the UWPs. Furthermore, UWPs participating in subcomponents 1.3 and 1.4 are expected to increase their financial sustainability by increasing their cash generation capacity and creditworthiness (through efficiency gains, reduced water losses, and increased tariff revenues), which would, in turn, increase their capacity to access commercial financing and attract private sector partners. In addition, UWPs participating in subcomponent 1.4 are expected to partner with the private sector to increase service coverage; the preparation of long-term strategic plans will be included in the BP of those utilities. It bears mentioning that the COVID-19 outbreak and related emergency responses, which are expected to generate larger expenditures and decreased revenues, will likely impact the timing of UWPs reaching their financial sustainability.

#### **F. Lessons Learned and Reflected in the Project Design**

**43. The application of robust eligibility criteria is critical to securing the participation and commitment of municipalities/UWPs and providing effective incentives for reforms.** Experience from the Water and Sanitation Sector Modernization Project (WSSMP, P103881) showed that in the absence of stringent criteria that tied project funding to the adoption of volumetric tariffs, merely requiring the installation of micrometers could not ensure that they would be used for billing or for reducing NRW, and would have no impact on the utilities' operational and financial performance. Based on this experience, the proposed Project imposes stringent eligibility criteria on the: (i) Municipal Corporations to pass resolutions certifying their commitment to move toward volumetric tariffs within the Project's implementation timeframe; and (ii) Partnership Agreements, which will commit participating municipalities and UWPs to install a predetermined number of micrometers and move towards volumetric tariffs during Project implementation.

**44. Eligibility based on minimum population size is necessary to promote the operational and financial sustainability of participating services providers.** Global experience demonstrates the importance of having a critical mass of consumers to distribute the cost of services, reduce unit costs, and increase willingness-to-pay. For the utility, this translates into increased





collections to promote operational and financial sustainability. This lesson is further confirmed by the WSSMP experience, which included the participation of very small urban municipalities that were unable to achieve economies of scale or generate the resources necessary to fully cover the O&M costs of their new systems, forcing them to seek financial support from their local governments. In contrast, participating municipalities with more than 5,000 inhabitants reached cost recovery targets. Building on this experience, the proposed operation assigns a minimum eligibility requirement of 5,000 inhabitants for municipalities to participate.

**45. Infrastructure investments need to be accompanied by institutional capacity building to lay the foundation for efficient and sustainable water services going forward.** The dual focus of the WSSMP on: (i) strengthening the technical and managerial capacities of service providers (for both short-term priority investment planning and medium-term business strategies), while also; (ii) supporting priority investments under the Rapid Impact and Rehabilitation Plans, was crucial for supporting early gains and improving the service delivery of the nine new UWPs beyond project closing. The proposed Project will follow the same dual approach. Emphasis will be given to strengthening the institutional capacities of participating UWPs, including strategic planning for future investments in infrastructure and TA aimed at meeting performance benchmarks and improving the operational and financial efficiency of participating providers.

**46. Wide-ranging reform requires firm commitment at the municipal level and the participation of key stakeholders.** The WSSMP's success in setting up nine ring-fenced providers—two of which went on to become leading mixed capital corporations—underscores the importance of ensuring the participation of both leaders (mayors, municipal board directors, etc.) familiar with the economic context of municipalities and the importance of efficient utilities; and civil society in promoting project success. Both the central government and the municipalities acknowledge the urgency of addressing ever-deteriorating service levels, particularly in urban areas, and are familiar with advances under the WSSMP. The demand-based approach, which combines stringent eligibility criteria and performance benchmarks seeks to support municipalities and UWPs committed to increasing the quality and efficiency of water supply services. Project design also calls for the participation of Municipal Corporations and the strengthening and participation of the COMAS and USCLs, which will ensure that civil society is involved and committed early on, as required by the Framework Law. Project support for ERSAPS and the USCLs will also promote consumer understanding and buy-in to the new service provision models, including volumetric tariffs.

**47. Based on the Bank's global and country-specific experience, successful adoption of a volumetric tariff requires extensive social outreach campaigns, gradual introduction of metered billing, and visible improvements in services to promote early and ongoing willingness to pay among end-users.** Project design calls for early and ongoing implementation of robust communication campaigns (including house-to-house visits) to inform urban households of the importance of rational water consumption and the benefits of volumetric tariffs in terms of improved and more equitable services. As borne out by earlier examples in Honduras, such outreach campaigns, together with the phased rollout of water billing (beginning with mock monthly invoices showing household consumption and associated costs) is expected to increase consumer understanding of the value of water and willingness to pay and reduce overall consumption. The latter has been shown to increase water availability, consumer satisfaction, and the overall commercial, operational and financial performance of participating service providers.

**48. In addition to the country specific lessons, the proposed Project is informed by a suite of tools, including a comprehensive framework developed by the World Bank's Water and other Global Practices (GPs) that is contributing to sustainable urban utilities.** These tools include: (i) the *Effective Results-Based Financing Strategies Guide*; (ii) the *Aligning Institutions and Incentives for Sustainable Water Supply and Sanitation Services* report; and (iii) the *Utility of the Future Framework*. The Bank is promoting the use of the *Utility of the Future Framework* as a best practice approach to understand the drivers and incentives of institutional reforms and improve water utilities' performance and efficiency, while increasing their ability to access finance. The framework also focuses on strengthening resilience and inclusion, which are likewise being supported under the Project.



### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

49. **The Project will be implemented by the Honduras Strategic Investment Office (INVEST-H).** INVEST-H, under the General Coordinator of the Presidency of the Republic of Honduras, is a government agency that supports strategic projects for the country's socioeconomic development. INVEST-H will establish, operate and maintain the PMU with functions, responsibilities, resources and composition acceptable to the Bank. The PMU will coordinate with the municipalities, the UWPs, ERSAPS, and other local organizations, which may include the Honduras Water Utilities Association and Honduras Municipalities Association. The PMU will oversee all technical, administrative, and fiduciary aspects of the proposed Project; ensure compliance with Bank environmental and social (E&S) policies; and be responsible for monitoring and evaluation (M&E) of the Project. The institutional arrangements build on the successful experience of INVEST-H with the Bank in the implementation of the COMRURAL Project (P101209), the *Corredor Seco* Food Security Project (P148737) and the Pilot Program for Climate Resilience (P157795), as well as its experience with other multilaterals and bilateral donors, including the Inter-American Development Bank (IDB), CABI, and the Millennium Challenge Corporation.

50. **INVEST-H will designate a Project Coordinator to head the PMU.** The Coordinator will have responsibility for the day-to-day management of the Project and will report directly to the Executive Director of INVEST-H. In addition to the Coordinator, the PMU will comprise the following key staff: (i) a procurement specialist; and (ii) a financial management specialist, all of which will need to be established prior to effectiveness. The PMU will also include professional staff with qualifications and experience acceptable to the Bank as needed, including: (i) an engineer with experience in water utility management; (ii) two procurement officers; (iii) an environmental specialist; (iv) a social development specialist; (v) a communications specialist with experience in behavior change, including sanitation and hygiene practices and rational water use; and (vi) technical (including in emergency response management), administrative and support personnel, all financed under Component 3, to be described in the POM.

51. **INVEST-H, through the PMU, will also be responsible for selecting participating municipalities and UWPs based on eligibility criteria defined in the POM.** This role will require, *inter alia*: (i) promoting to municipalities/UWPs the benefits of participating in the Project, particularly to categories C and D municipalities; (ii) reviewing applications, on a first-come first-served basis, ensuring that at least 50 percent are accepted from C and D municipalities; (iii) coordinating and handholding of weaker municipalities (particularly C and D) and UWPs in operation for less than 5 years; and (iv) disclosing results of applications in terms of eligibility criteria. The POM will define the criteria so allocations among the Component 1 subcomponents ensure that at least 50 percent of participating UWPs are from C and D municipalities.

52. **INVEST-H, through the PMU, will enter into the following agreements:**

- (i) **Tripartite Partnership Agreements (PAs) with the UWPs and municipalities with regard to subcomponents 1.1 through 1.4** describing the commitments of each participating municipality and UWP. Each PA will define time-bound phases, to be reflected in the RIRPs and BPs that must be completed before the parties sign PAs for the subsequent phases.
- (ii) **Inter-institutional Agreement with each municipality with regard to subcomponent 1.5.** To this end, INVEST-H will receive electronic applications from the respective municipalities that will include the associated Inter-institutional Agreement, endorsed by the Municipal Corporation.

53. **With regard to Component 2,** the details regarding the respective roles and responsibilities of INVEST-H and ERSAPS will be covered in the POM.

#### B. Results Monitoring and Evaluation Arrangements

54. **INVEST-H will be responsible for the overall M&E of project activities,** including planning, managing, and entering M&E data into the Project's management information system (MIS) in coordination with ERSAPS, which has the legal mandate to



monitor the UWPs. INVEST-H has previous experience in managing M&E systems in similar projects, including COMRURAL (P168385) and PROSASUR (P148737), which it handled successfully with WB support. ERSAPS regularly discloses all UWP monitoring information on its webpage (<http://www.ersaps.hn/rpp.php>).

55. **The MIS for the proposed Project includes:** (i) a financial management module able to provide financial information by component, disbursement category and source of financing; and (ii) a control panel to monitor Results Framework indicators as well as implementation of project operational plans. This information system is already in operation at INVEST-H. The MIS will produce data to inform: (i) baseline reports; (ii) semi-annual and annual progress reports; (iii) mid-term review; and (iv) inputs for the Project's final evaluation. The semi-annual reports will reflect progress against the performance indicators defined in the Results Framework.

### C. Sustainability

56. **The Project articulates and supports the Government's vision and goals aimed at increasing the quality and efficiency of water service provision in mid-sized cities and small towns.** The proposed design: (i) responds to ongoing Government efforts to meet SDGs related to access, quality, and sustainability of water services; (ii) integrates a robust participatory approach; and (iii) invests in institutional strengthening; while (iv) supporting technically and environmentally sound investments. Together, these interventions are expected to promote the sustainability of interventions beyond Project closing.

57. **Social Sustainability.** The adoption of a participatory project cycle in all work stages is expected to result in locally acceptable and sustainable solutions and to promote a sense of ownership of the investments. Social sustainability will depend on a transparent process, and on demonstrating that service delivery can meet customer expectations and needs. Sustainability will be reinforced through education and communications programs to promote knowledge and behavioral changes targeted to individual responsibility for rational water use and payment for services.

58. **Institutional Sustainability.** Advancements made to date in implementing the Framework Law, coupled with the prominence of water security in the Government's agenda, signal ongoing commitment to the water sector reform process and to establishing sustainable water utilities. The proposed Project seeks to consolidate progress made under the WSSMP, including by supporting UWPs that have reached cost recovery ratios above one to gradually transition to volumetric tariffs, as recommended by ERSAPS, thereby promoting the long-term financial and operational sustainability of their services. To this end, the respective Municipal Corporation Resolutions will be required to certify the commitment of participating municipalities and UWPs to adopt volumetric tariffs. The Project will provide capacity building and tailored technical assistance to ERSAPS to enable it to fulfill its oversight and regulatory functions. Furthermore, implementation of regulatory fees paid by the UWPs will increase ERSAPS's cash flow, contributing to long-term sustainability of the water regulator. The systems and procedures to be implemented under this Project will also enable ERSAPS to expand its oversight and regulatory functions to additional water utilities.

59. **Technical Sustainability.** Infrastructure upgrading and replacement of aging systems with more energy-efficient components will take into account the local context, when considering technology options including the local capacity for O&M, life-cycle costs and operational capacity constraints. These investments, coupled with TA for institutional strengthening and planning capacity, will optimize the performance of UWPs and free up financial resources that can be allocated to maintenance, rehabilitation and expansion going forward.

60. **Financial Sustainability.** Financial sustainability will be supported through a range of capacity building activities at the service provider level, focused on strengthening the commercial systems, technical skills, and customer relations of the UWPs, to enable them to provide affordable and quality water services that satisfy customer expectations. It is expected that customer willingness to pay for these services will generate sufficient revenues to sustain the UWPs' operations over time. As part of this process, the Project will introduce modern practices of applying consumption-based, cost-reflective tariffs that consider O&M costs and include a reserve for asset replacement, and fees for environmental services, as applicable. Support at the central



level will revolve around creating an enabling environment through improved financial regulation and institutional mechanisms to support service delivery in urban areas.

61. **Environmental Sustainability:** The Project will support environmental sustainability by tackling losses due to aging infrastructure and poor operations and maintenance, as well as problems resulting from irrational consumption practices. Project design also contemplates on-demand support to UWPs interested in: (i) developing watershed management plans for prioritized micro-watersheds; (ii) undertaking assessments on sanitation alternatives; and/or (iii) training and consulting services on running a climate-resilient utility. On-demand TA aimed at supporting the formulation of environmental fees is also expected to increase the long-term sustainability of activities envisaged in the micro-watershed plans.

#### IV. PROJECT APPRAISAL SUMMARY

##### A. Technical, Economic and Financial Analysis

62. **Technical analysis.** The Project builds on the successful demand-based approach introduced by the WSSMP. The exact sub-projects will be defined during project implementation, and will largely finance rehabilitation and upgrading works, equipment, and TA to improve water supply services and hygiene practices in participating municipalities and UWPs. The scope of works will be spelled out by the UWPs as part of their RIRPs and BPs, which will be supported by both ERSAPS and specialists financed by the Project. Project design also includes institutional strengthening of participating UWPs to meet key performance indicators and of ERSAPS to exercise its regulatory role. Such an approach will ensure the technical and strategic soundness of investments and ongoing commitment of participating municipalities/UWPs.

63. **Economic analysis and development impact.** The economic costs and benefits of assessed project interventions were derived from the following impacts: (i) improved operational efficiency of participating UWPs, which will increase the availability of water supply services without necessarily increasing the production capacity of water utilities and will result in the reduction of GHG emissions; (ii) improved financial efficiency of participating UWPs, which will enable them to fully cover their operation and maintenance costs, contribute to the financing of infrastructure investments, and pay their regulatory fees to ERSAPS, which will oversee their performance; and (iii) increased continuity of water supply service in urban areas served by participating UWPs, which will free customers from the need to spend time fetching water from other sources, including from private vendors, at higher prices.

64. **Key parameters for the economic analysis.** The rate of discount used is 6 percent, which represents the opportunity cost of investment projects with activities that contribute to the mitigation of GHG emissions and adaptation to the effects of climate change. The rate of exchange used is Lempiras 24.5 per US\$1. The time horizon for the cost-benefit analysis (CBA) is 6 years, while the life of infrastructure investment is assumed to be 20 years. The Shadow Price of Carbon (SPC) used in the GHG accounting are US\$40 and US\$80 per tCO<sub>2</sub>-eq for the lower and higher bounds; both are assumed to increase at a rate of 2.26 percent per year.

65. **Economic viability.** The economic internal rate of return (EIRR) and economic net present value (NPV) indicators were estimated using CBA methodology based on the cash flows of a sample of four water utilities visited during project preparation<sup>38</sup> that are candidates to participate in the Project. The EIRR of the Project for the base case scenario is 12.9 percent, and the economic net present value (NPV) for the base case is US\$14.09 million. When the Project's contributions to reducing carbon, emissions are considered, the EIRR goes from 12.9 percent up to a range of 14.2 – 15.5 percent and the economic NPV goes from US\$14.09 million up to a range of US\$17.02 – US\$19.95 million. This means that the Project is not only viable according to its own economic merits but also contributes to global social benefits of mitigating GHG emissions through the reduction of energy used to produce each cubic meter of water for final beneficiaries of water services. The corresponding gross and net emissions savings amount to 892,996 tCO<sub>2</sub>-eq and 104,992 tCO<sub>2</sub>-eq, respectively.

<sup>38</sup> *Aguas de Juticalpa, Aguas de La Paz, Aguas de Siguatepeque, and Aguas de Danlí.*



66. **Financial analysis.** Using a cash flow model, the financial analysis assessed the financial returns of the sample water utilities visited during preparation. Based on this model, the return on investments allocated to turnaround operational and financial efficiency of the UWPs will be moderately high, provided that the UWPs achieve their NRW targets, increase operational efficiency, and improve collection efficiency. If the average utility participating in the Project achieves its performance targets in the base case scenario, the financial internal rate of return (FIRR) of the investment will be 7.7 percent and the financial NPV will be US\$3.31 million.

67. **Financial viability.** The analysis shows that participating UWPs will achieve financial viability, with an operating ratio of 1.30, by the end of project implementation, provided that the UWPs manage to control their NRW, improve their productivity, and improve their collection efficiency.

68. **Fiscal impact.** The fiscal impact of the Project will be nil, as investments will be financed by the IDA credit and co-financed by municipalities' own resources. In the medium to long term, the Government will have to pay back the IDA credit.

69. **Rationale for public sector provision/financing.** Public sector financing is justified by the current state of most municipalities' water utilities; i.e., their water utilities work under a legal framework that promotes water services as a "public good" bearing low fees for services and allowing service provision by other service providers, including water boards. Having more than one water service provider in each urban area has not allowed municipal water utilities to take full advantage of economies of scale to reduce costs of service provision. Also, at present, ERSAPS needs support to develop its economic regulatory capacity to mitigate current high regulatory risks. Such risks result in higher costs of commercial financing that would result in private sector demands for extremely high cost recovery tariffs, rendering commercial funding too high compared with public funding.

70. **Sensitivity analysis.** A sensitivity analysis was carried out for the base case scenario of a prototype utility to assess the impact on the Project's economic viability from changes in key parameters such as investment cost overruns, failure to achieve NRW reductions, and the impact of not achieving continuity of water service provision improvements. The results were as follows:

- (i) *A 10 percent investment cost overrun results in losing 0.8 percentage points in the EIRR of the Project, from 12.9 down to 12.1 percent. Since the Project has a relatively high EIRR for the base case, losing less than 1 percentage point for each 10 percentage points of cost overrun gives ample room for it to achieve its development objectives. That is, there is ample room for the Project, in dealing with the needed operational and management turn-around of the water utilities, to improve the efficiency and reliability of water service provision.*
- (ii) *The base case scenario includes achieving a NRW target of 45 percent at the end of Project implementation, down from the current 50 percent at the start of implementation. Reducing the NRW to 46 instead of 45 percent would decrease the EIRR from 12.9 to 10.8 percent. These results indicate that the UWPs' achievement of agreed NRW reduction targets is key for project success. The Project will ensure that the RIRPs and BPs of participating UWPs include well-defined strategies to control NRW before funds are allocated to them.*
- (iii) *The base case scenario includes the achievement of 4 hours per day of continuous water service by the end of Project implementation, up from 2 hours at the start of implementation. Failure to achieve 4 hours of service provision (and instead achieving only 3.5 hours) actually improves the economic result, increasing the EIRR from 12.9 to 15.9 percent and the Internal Rate of Return (IRR) from 7.7 to 9.1 percent. If the number of hours of service is increased to 4.5 rather than 4, the economic IRR falls from 12.9 to 9.5 percent, making the project less economically viable. These results show a powerful incentive for participating UWPs to reduce (rather than increase) the number of hours of service provision until they can control physical losses. The removal of that incentive will require thoughtful diagnostic and design of interventions as part of the utilities' RIRPs and BPs.*



## B. Fiduciary

### Financial Management

71. **The Bank has conducted a Financial Management Assessment (FMA) of the Project's financial management (FM) arrangements.**<sup>39</sup> The FMA included: (i) an evaluation of existing FM systems to be used for project monitoring, accounting and reporting; (ii) a review of staffing arrangements; (iii) a review of the flow of funds arrangements and disbursement methods to be used; (iv) a review of internal control mechanisms in place, including internal audit; (v) a discussion with INVEST-H regarding reporting requirements, including the format and content of unaudited interim financial reports (IFRs); and (vi) a review of the external audit arrangements.

72. **The FMA concluded that INVEST-H's capacity and the proposed fiduciary arrangements meet the World Bank's requirements under Bank Policy.** INVEST-H is a well-established entity with significant experience implementing donor-funded operations and is currently implementing three Bank-financed projects.

73. **Based on the FMA and subject to the implementation of an agreed action plan for strengthening certain aspects, the proposed FM arrangements can be considered acceptable to the Bank.** The action plan covers: (i) the format and content of the IFRs and a chart of the Project's accounting structure; (ii) monitoring controls of contracts financed under the Project; (iii) incorporating in the POM, among other things, activities, organizational structure, flow of funds, and information systems; and (iv) selection and contracting of the required additional FM staff and external auditors by INVEST-H. The PMU will provide fiduciary training for contractors to ensure that they understand their fiduciary responsibilities. These arrangements will be reviewed within the first 6 to 12 months of execution to ensure they are operating as intended, and adjustments will be made if necessary.

### Procurement

74. **The Bank conducted a capacity assessment to evaluate the adequacy of procurement arrangements of INVEST-H.** The assessment focused on how INVEST-H will be organized to procure using credit funds, in terms of staffing structure, procurement record system, internal controls, roles and responsibilities, etc. INVEST-H has experience with Bank-financed projects and is expected to staff its PMU with qualified procurement experts according to the complexity of the procurement activities. The technical aspects of the envisaged procurement activities will require appropriate coordination among the technical and procurement units, and clear definition of the specific roles and responsibilities of all parties involved.

75. **Procurement will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers (July 2016, revised November 2017 and August 2018) ("Procurement Regulations").** A Project Procurement Strategy for Development (PPSD) has been prepared by the Recipient, through INVEST-H, which describes how procurement in this operation will support the attainment of the PDO and deliver value for money under a risk-based approach. The PPSD has been assessed by the Bank and found to provide adequate supporting market analysis for the selection methods detailed in the Procurement Plan. Mandatory Procurement Prior Review Thresholds detailed in Annex I of the Bank's Procurement Procedure will be observed. All procurement procedures, including the roles and responsibilities of different units, will be defined in the POM. Considering the complexity of inter-institutional coordination, and since such coordination is key to the success of the Project, the POM and the Partnership Agreements will clearly define the specific steps, roles, and responsibilities (including enhancements based on lessons learned from previous and current projects) of INVEST-H related to the implementation of procurement processes.

76. **The key procurement-related issues and risks for project implementation include:** (i) the current structure and workload of INVEST-H, and its capacity to take on new work and absorb additional resources; (ii) coordination requirements between technical and procurement units; and (iii) complex inter-institutional arrangements. Corrective measures include, *inter alia*, (i)

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<sup>39</sup> The FMA was carried out in accordance with Bank Policy: *Investment Project Financing* and Bank Directive: *Investment Project Financing* and the *Financial Management Manual for World Bank-Financed Investment Operations* (effective March 1, 2010 and revised February 10, 2017).



ensuring that the PMU and the procurement unit have sufficient numbers of qualified staff; (ii) clearly defining the roles and responsibilities of the technical and procurement units in the POM; and (iii) setting forth the roles and responsibilities of the different entities in the Partnership Agreements.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

77. The proposed Project triggers OP 7.50 on Projects in International Waterways due to the demand-based approach and the fact that investments may take place in international basins that Honduras shares with its neighboring countries. Nonetheless, since investments would only be undertaken in existing schemes, they would not adversely change the quality or quantity of water flows to riparian states nor be adversely affected by riparian’s water use. As such, an exception to the notification requirement was approved by the Regional Vice President on March 24, 2020.

D. Environmental and Social

78. **The Project’s social and environmental risks are considered Moderate.** The main social risks and impacts expected under the Project include: (i) negative reaction of community members to volumetric tariffs (a pre-condition to finance ring-fenced providers’ needs and priorities) and the potential that they could be cost-restrictive, thus increasing tensions over water access; (ii) a national context characterized by high levels of crime and violence, particularly in urban settings; (iii) weak citizen engagement and involvement in management of water and sanitation services; and (iv) potential exclusion of Indigenous Peoples, Afro-descendants and other vulnerable groups from project benefits and activities. To mitigate these risks, the Project will support, among other measures: (i) a comprehensive social outreach program during the design and implementation of infrastructure works; (ii) technical assistance to participating UWPs on how to avoid negative impacts on the poor and vulnerable populations; (iii) strengthening of local water and other governance structures as part of their technical support during implementation; (iv) social screening of each sub-project to determine the presence of Indigenous Peoples or Afro-descendants and address their specific needs, in line with Environmental and Social Standard 7 (ESS7) on historically underserved traditional local communities; and (v) technical support to raise awareness and identify vulnerable groups. The main environmental risks could arise from minor civil works to rehabilitate and expand participating municipal service providers’ water supply systems, including traffic disruptions (for works in road rights-of-way), noise, dust, generation of construction related wastes, etc. Such impacts are expected to be site-specific, limited in scope and duration, and easily mitigated with proven technologies and measures. A major focus of the Project will be to strengthen participating UWPs’ capacity to improve operations and maintenance (O&M) of municipal water supply systems, which should contribute to environmental and health benefits in the long term through enhanced watershed management, reduced public health risks from poorly treated water, more efficient water use, and reduced pollution to downstream waterways.

79. **Given the Project’s demand-based approach, the location of sub-projects and their specific risks will only be determined during implementation.** Hence, a framework approach was adopted for project environmental and social planning instruments. To further assess potential risks and impacts, and to delineate management processes and mitigation measures, the Government developed, consulted with key stakeholders, and disclosed prior to appraisal an Environmental and Social Management Framework (ESMF), a Resettlement Framework (RF), an Indigenous Peoples Planning Framework (IPPF), a Stakeholder Engagement Plan (SEP), including a Project-level grievance redress mechanism (GRM), and Labor Management Procedures (LMP). In addition, a draft Environmental and Social Commitment Plan (ESCP) was agreed between the Government and the Bank and disclosed<sup>40</sup>, laying out the Government’s requirements to implement these instruments at the site-specific

<sup>40</sup> The Recipient disclosed E&S instruments by April 24, 2020 prior to appraisal and relevant documents were redisclosed thereafter as needed: the



level and to periodically report to the Bank on its compliance with environmental and social commitments. During implementation, as municipal service providers are selected to participate in the Project and RIRPs and BPs are developed detailing site specific investment plans, Environmental and Social Impact Assessments (ESIAs) will be carried out as well as all relevant plans spanning environmental, social, health and safety (ESHS) issues, as applicable, as well as Indigenous Peoples and resettlement plans, when applicable. All required construction phase mitigation, management and monitoring measures identified in the ESMF will be reflected in bidding and contracting documents. Contractors will be required to maintain ESHS officers who will ensure all ESHS contract requirements are implemented, and lead training of workers. The activities and technical assistance at the sub-project level will also include appropriate capacity building on ongoing ESHS-related management aspects.

80. **INVEST-H has previous experience working on similar projects with multilateral lenders, including the World Bank.** Nonetheless, the agency's capacity to effectively manage environmental and social risks will require further strengthening, considering the new areas of the ESF and the challenges of implementing simultaneous sub-projects. The implementing team will include environmental and social specialists as well as support from INVEST-H's staff specialized in ESHS, labor, resettlement and gender issues. INVEST-H will be responsible for complying with environmental and social commitments, supervising firms and contractors to ensure application of mitigation measures, monitoring implementation, and reporting to the Bank and relevant national authorities. INVEST-H will submit semi-annual implementation reports to the Bank, including a dedicated section on compliance with the environmental and social requirements set forth in the ESCP and specified in each of the E&S instruments developed for this Project.

#### **Climate and Disaster Risk Screening and Climate Co-Benefits**

81. **The potential impacts of climate and geophysical hazards on the Project's water supply investments were evaluated based on exposure ratings for the Project's potential intervention areas and the Project's historical and future sensitivity to these risks.** The potential impact was rated for the following three aspects: (i) water resources, (ii) physical damage, and (iii) water demand. The screening helped identify the effect these impacts may have on the investments and the ability of the Project to sustain and enhance water supply under a changing climate. The risk screening report concluded that Honduras is moderately exposed to flooding and drought risks, due to aggravated climate variability over the last decades. Projected increases in temperature, related increases in evapotranspiration, changes in precipitation (in terms of both volume and temporal distribution) are, *a priori*, expected to pose risks to water supply for urban areas in the eligible municipalities.<sup>41</sup> Improved management of water resources through strengthened planning to improve watershed management, combined with better supply (increasing water quality and rehabilitating of water systems), demand management (metering and promoting rational use of water), are several of the approaches that Component 1 will consider to build resilience to these anticipated risks. In addition, NRW activities and improved energy efficiency will lead to reductions in net GHG emissions due to efficiency gains. At the same time, the Project will address the risk of flooding given that financially sustainable UWPs will be able to channel more funding to maintenance and upgrading, reducing the chance that their infrastructure (pumping stations, WTPs) will be overwhelmed or damaged during a flood. This will, of course, depend on the location of the infrastructure to be rehabilitated (located in or outside of a flood-prone area). Upgrading of works will also prevent overflows from breaks in transmission and distribution mains during floods episodes. The interventions in infrastructure rehabilitation and NRW reduction under Component 1 are expected to result in energy efficiency gains, yielding average annual energy savings of 11.1 gigawatt per hour (GWh)/year. The economic lifetime gross and net GHG emissions from these energy savings are 892,996 tCO<sub>2</sub>-eq and -104,992 tCO<sub>2</sub>-eq, respectively.

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SEP, RPF, ESMF, IPPF and LMP on May 9, 2020; the ESCP on May 12, 2020 and the ESIA May 19, 2020 (<https://projects.worldbank.org/en/projects-operations/document-detail/P173125>).

<sup>41</sup> *Climate and Disaster Risk Screening Report for the Urban Water Supply Strengthening Project in Honduras* (2017). This is the output report from applying the World Bank Group's Climate and Disaster Risk Screening Project Level Tool (Global website: [climatescreeningtools.worldbank.org](http://climatescreeningtools.worldbank.org); World Bank users: [wbclimatescreeningtools.worldbank.org](http://wbclimatescreeningtools.worldbank.org)).





### Citizen engagement

**82. Stakeholder engagement was a key aspect of project preparation and will continue to be throughout implementation in order to mitigate the risk of potential social conflicts and/or misperceptions about project impacts and benefits, and to solicit stakeholder feedback.** During preparation, several meetings took place with municipalities and UWPs that could potentially benefit from the Project, including civil society platforms such as COMAS and USCLs. These consultations informed the development of the SEP, which identifies affected and other interested parties and vulnerable groups, including female-headed households and illiterate individuals, who may require special measures to facilitate their participation. The SEP includes a schedule of engagement actions, including sharing of project information and stakeholder participation, and description of a Project-level GRM. The latter will be used to keep communication lines with residents open throughout implementation, resolve issues and complaints, and answer citizens' questions and concerns. Due to the limitations on public gatherings and mobility imposed as part of COVID-19 prevention and response, consultations with key stakeholders, including indigenous peoples' representatives at the national level, were undertaken through: (i) emails sent to stakeholders to share information and request feedback; (ii) social media; (iii) uploading of information onto INVEST-H's website, with a request to complete an online survey; (iv) follow-up telephone calls to respond to doubts and seek further feedback; (v) targeted virtual/phone meetings with indigenous peoples' representatives. Feedback from such consultations has informed project design and the preparation of environmental and social instruments.

**83. During the identification, design and implementation of sub-projects, regular citizen engagement events will be held through existing platforms such as COMAS and USCLs.**<sup>42</sup> The Project will also advocate for including women's organizations and vulnerable groups (e.g. people with disabilities), in both UWPs' Board of Directors and in the corresponding COMAS and USCLs. Furthermore, the Project will use beneficiary assessment surveys to promote overall accountability and responsiveness to beneficiaries, and will implement, monitor and report on GRM. At the Project level, the GRM will be managed by INVEST-H, and will hinge on the implementation of social mechanisms by the contractors that will channel claims and requests received in the UWPs and municipalities. At the UWP level, a user attention and information window will be established in participating UWPs. Compliance implies an adequately equipped physical space within UWP facilities; additional user claims and request channels (e.g. telephone and online, digital request, complaints and grievance registries); evidence of grievance and claims' resolution within agreed time frames; and availability of service schedules, programmed water cut-offs, etc., as required by law. By doing so, the Project will prioritize the views of communities and civil society, leading to changes that will benefit the poor and marginalized. The POM will contain a section on citizen engagement activities, including detailing grievance and redress mechanisms for the Project.

**84. Inclusion of vulnerable groups, with a focus on people with disabilities.** Each sub-project's environmental and social assessment, to be undertaken as part of its Environmental and Social Management Plan (ESMP), will screen for vulnerable groups, with an additional focus on people with disabilities, who may face additional challenges in terms of water access. The Project will support, as needed, an assessment of the impact of intermittent services on vulnerable groups to close information gaps. Such screening/assessments will receive WB technical support and will be accompanied by capacity building of local authorities or communities to address the needs of persons with disabilities and other vulnerable populations given their particular vulnerability to health and economic impacts associated with infectious diseases. These actions are aimed at creating awareness among institutions and municipal leaders about the need to include vulnerable groups as part of the planning and design cycle as well as to inform future municipal interventions beyond water provision.

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<sup>42</sup> Some consultation platforms are already established in the national laws. For instance, the Municipal Law establishes (Art. 33 and By-Law Art. 19) enables meetings (*Cabildos Abiertos*) among residents of a municipality representatives of legally constituted local organizations, and municipal authorities in open town council sessions or in consultative assemblies, as an instrument of direct communication necessary to consult or agree on important issues that are of concern to the local population.



## Gender

85. **To address the gender gap, TA will be provided under Component 3 to support the development of gender policies and strategies aimed at promoting women’s participation in water-related decision-making processes** in UWPs with more than 20,000 connections. The UWPs will be required to articulate those principles in their human resources policies and procedures, including staff selection and promotion processes. An initial action plan detailing potential measures to improve male/female ratios is provided in Annex 4. Progress will be monitored in the Results Framework (RF) through the following intermediate indicators/targets for UWPs with more than 20,000 connections: (i) percentage of UWPs (with more than 20,000 connections) with gender policy elaborated, endorsed, and launched; and (ii) percentage of UWPs with at least 10 percent female representation in leadership and technical positions.<sup>43</sup> The POM will include a gender section detailing the gender strategy and outlining appropriate gender-sensitive approaches to promote women’s participation in leadership roles.

86. **Gender-based violence (GBV).** The Project was screened for GBV risks, which were determined to be low. Awareness raising and sensitization efforts will be included in the design of sub-projects as part of the social outreach program and technical assistance. These efforts will be complemented with gender and GBV capacity building processes for staff of participating UWPs, municipalities<sup>44</sup> and contractors. GBV risk assessments and these mitigation measures are reflected in the ESMF. All civil work contracts financed by the Project will include a code of conduct with specific mention of GBV. Contractors will be required to monitor compliance with the code of conduct and to organize gender training and harassment prevention workshops for their employees.

## V. GRIEVANCE REDRESS SERVICES

87. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB’s independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank’s attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank’s corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## VI. KEY RISKS

88. **The overall risk of the Project is rated as *Substantial*.**

89. **Political and Governance: *Substantial*.** Political polarization has traditionally delayed approvals of internationally financed projects in Honduras, while political changes at both the central and municipal levels could divert the focus away from key objectives, negatively impacting the pace of implementation and limiting achievement of the PDO. The risk of declining municipal political commitment to politically sensitive reforms, particularly during electoral cycles, could prevent UWPs from implementing micro metering and volumetric tariffs, and divert necessary counterpart funds to other priorities. To mitigate these risks, prior to applying for support under the Project, UWPs will be required to provide a resolution from the Municipal

<sup>43</sup> The Project will work with participating UWPs to avoid the risk of having few or no female applicants for these positions by running a strong advertisement and recruitment campaign targeting women. In addition, the Project will provide training to existing INVEST-H staff on gender equality aspects and help organize mentoring programs for women to accelerate their career development.

<sup>44</sup> As mandated by the Municipal Law, the Municipal Offices for Women of the participating urban municipalities, will be involved in the capacity building initiatives which will include an assessment of the incidence of GBV and tailoring of training to staff of participating UWPs, municipalities and contractors.



Corporation certifying both parties' commitment during project implementation to (i) move from fixed to volumetric tariffs; and (ii) in the case of A and B municipalities, to provide counterpart funding during project implementation. The volumetric tariff structure will require the endorsement of ERSAPS, the Municipal Corporation, users, and local organizations (COMAS, USCL). ERSAPS' regulatory mandate over tariff setting will help offset the political cost of implementing unpopular measures. Once an UWP is selected to participate in the Project, an Inter-institutional Partnership Agreement will be signed by INVEST-H, the UWP and the municipality, laying out commitments, including for installing micrometers and for volumetric tariffs, and counterpart funding. INVEST-H will keep close and continuous dialogue throughout the transition period with the incoming administration to maintain commitment to the agreements.

90. **Macroeconomic and Fiscal:** *Substantial.* A sharper global downturn amid the COVID-19 pandemic will inevitably weaken economic growth performance as well as external and fiscal accounts. A deeper economic decline could be expected depending on the magnitude of shocks and the slowdown in key trade and investment partners and if remittances nosedive. Increasing political polarization in the country may pose a risk to macroeconomic stability and delay ongoing water sector reforms, which are crucial to the sustainability of the country's economy, and energy sector reforms, which are needed to free up counterpart resources for the Project's infrastructure investments. To mitigate these risks, the Government aims to strengthen fiscal sustainability by: (i) enacting strong disease containment measures and implementing the first phase of its Economic Rescue Plan, which can be financed, in part, with the large available stock of foreign exchange reserves (20 percent of GDP); (ii) increasing revenue mobilization through reform of the Tax Code; and (iii) enhancing the transparency and governance of the electric utility, with support from the precautionary International Monetary Fund (IMF) program.

91. **Technical Design of Project or Program:** *Substantial.* The Project's innovative demand-based approach hinges on sufficient demand from service providers and could challenge existing capacities of INVEST-H, participating municipalities and ERSAPS. Despite INVEST-H's capacity and experience with previous and ongoing World Bank-financed projects, this will be the first time it implements and oversees a demand-based operation, which will require active and ongoing engagement with UWPs to: (i) promote the benefits of participating in the Project; (ii) review applications; and (iii) coordinate with, and provide assistance to, weaker municipalities and UWP start-ups. Similarly, ERSAPS' technical capacity to undertake additional regulatory, advisory and oversight functions under the operation could be stretched. To ensure enough demand, the Project includes the promotion of project benefits to municipalities/UWPs and further aids in preparing applications, and in developing and implementing their RIRPs and BPs. To ensure that both INVEST-H and ERSAPS have sufficient capacity to manage incremental activities under the Project, substantial TA is provided to support: (i) INVEST-H in undertaking activities associated with the demand-based approach; and (ii) ERSAPS to undertake the monitoring and regulatory oversight of UWPs participating under Component 1.

92. **Institutional Capacity for Implementation and Sustainability:** *Substantial.* Although INVEST-H has experience managing WB-financed projects, its rapidly growing portfolio, coupled with the increased demands resulting from the COVID outbreak could challenge its implementation capacities, resulting in delays. The Project also requires effective inter-institutional coordination between INVEST-H and a range of municipalities and UWPs with different capacity levels and needs, which could overburden staff and delay implementation. The COVID pandemic could also, in the short-term, negatively impact utility revenue necessary to finance chemicals, parts and maintenance. To mitigate these risks, the Project will add qualified staff to the PMU in INVEST-H. In order to ease COVID's impact on utility revenues and ensure ongoing system operations, subcomponent 1.5 could finance some operational costs now shouldered by municipal providers to alleviate the pandemic's short-term impact on cashflows.



## VII. RESULTS FRAMEWORK AND MONITORING

### Results Framework COUNTRY: Honduras Urban Water Supply Strengthening Project

#### Project Development Objectives(s)

To improve the quality and efficiency of water supply services delivered by Participating Urban Water Providers and support urban municipalities to respond to water supply and sanitation emergency needs.

#### Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
<b>Financial, Operational and Commercial Efficiency</b>								
Participating UWPs that increase micro metering as a basis for billing by 10 percent (commercial efficiency - Climate Informed) (Percentage)		0.00	0.00	10.00	10.00	20.00	40.00	50.00
Participating UWPs that reduce NRW by 5 percentage points (operational efficiency - Climate Informed) (Percentage)		0.00	0.00	0.00	0.00	15.00	25.00	50.00
Participating UWPs that reach operating cost recovery ratio greater than one (financial efficiency)		0.00	0.00	0.00	30.00	50.00	60.00	80.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
(Percentage)								
<b>Quality of services</b>								
Participating UWPs that increase hours of water service provision above 21 hours per week (service quality/ reliability - Climate Informed) (Percentage)		0.00	0.00	0.00	10.00	15.00	30.00	50.00
Participating UWPs that meet national water quality standards (quality of water) (Percentage)		0.00	0.00	0.00	0.00	50.00	70.00	90.00
<b>Responding to COVID-19 emergency needs</b>								
Participating urban municipalities that have implemented water supply and hygiene activities prioritized in the emergency intervention plans to address COVID-19 (Percentage)		0.00	70.00	90.00	90.00	90.00	90.00	90.00

**Intermediate Results Indicators by Components**

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
<b>1. Improving Water Supply Services Provision in Urban Areas</b>								



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Participating municipalities that applied for the Project and created a deconcentrated provider (Percentage)		0.00	0.00	0.00	0.00	25.00	50.00	70.00
Participating UWPs that elaborated a RIRP (Climate Informed) (Percentage)		0.00	25.00	50.00	70.00	70.00	70.00	70.00
Participating UWPs created within a 5 year-timeframe that are operating satisfactorially (Percentage)		0.00	0.00	0.00	10.00	30.00	50.00	70.00
Participating UWPs that increased micro metering coverage at least 15 percentual points (Climate Informed) (Percentage)		0.00	0.00	0.00	0.00	10.00	40.00	50.00
Participating UWPs with user’s attention and information office (Citizen engagement contribution) (Percentage)		0.00	0.00	0.00	10.00	50.00	70.00	80.00
Participating UWPs that implemented social outreach and communication plans to incentivize rational water and WASH practices (Climate informed) (Percentage)		0.00	0.00	0.00	0.00	40.00	60.00	80.00
Participating UWPs that installed macro metering in all the producing units		0.00	0.00	0.00	30.00	60.00	60.00	60.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
(Percentage)								
Participating UWPs with electrical energy costs greater than 30% of their operating costs, which reduce their Kwh consumption per m3 of water produced by at least 5% (Climate informed) (Percentage)		0.00	0.00	0.00	0.00	0.00	40.00	60.00
Participating urban municipalities that have implemented water supply and hygiene activities prioritized in the emergency intervention plan approved by the Municipal Corporation (Percentage)		0.00	60.00	90.00	90.00	90.00	90.00	90.00
Registered social tariff household bills exempted by Municipalities using a liquidity facility (Number)		0.00	700,000.00	1,400,000.00	1,400,000.00	1,400,000.00	1,400,000.00	1,400,000.00
Participating UWPs that meet national water quality E1 and E2 standards (quality of water) (Percentage)		0.00	0.00	0.00	0.00	30.00	40.00	50.00
<b>2. Institutional Strengthening of ERSAPS</b>								
Participating UWPs reporting/sharing the information to ERSAPS (Percentage)		0.00	0.00	10.00	30.00	50.00	70.00	80.00
"Improvement		0.00	0.00	80.00	80.00	80.00	80.00	80.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Agreements” signed and monitored by ERSAPS (Climate Informed) (Percentage)								
Volumetric tariff structure reviewed and endorsed by ERSAPS (Percentage)		0.00	80.00	80.00	80.00	80.00	80.00	80.00
<b>3. Project management, Communication, Outreach, Monitoring and Evaluation</b>								
Participating UWPs with independent annual audits reports, in compliance with international standards, submitted by INVEST-H to ERSAPS and the Bank (Percentage)		0.00	0.00	0.00	40.00	70.00	90.00	90.00
Applications of UWPs received and analyzed by INVEST-H (Percentage)		0.00	90.00	90.00	90.00	90.00	90.00	90.00
Participating UWPs (with more than 20,000 connections) with gender policy implemented through a phased approach (elaborated, endorsed, and launched)- (Gender) (Percentage)		0.00	0.00	0.00	0.00	30.00	60.00	70.00
Participating UWPs (more than 20,000 connections) with at least 10% female representation in leadership and technical positions (Gender) (Percentage)		0.00	0.00	0.00	0.00	20.00	50.00	70.00





Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Share of grievances satisfactorily addressed and resolved within the agreed timeframe (Citizen engagement) (Percentage)		0.00	0.00	60.00	70.00	80.00	80.00	80.00

**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Participating UWPs that increase micro metering as a basis for billing by 10 percent (commercial efficiency - Climate Informed)	Percentage of participant UWPs that increased micro metering as a basis for billing by 10% (PIMBF indicator, by its Spanish acronym). It will be calculated as the ratio between the number of UWPs that have increased their Effective Micrometering Index (EMI) by 10% (numerator) between the total of participating UWPs (denominator). The IME for each UWP is the ratio	Annual	UWPs	Water consumption histograms according to the metering readings; data E012 and E006 provided by UWP and submitted through SIRAPS	ERSAPS



	between the number of meters installed and in good conditions which are being used for billing according to the reading consumption (numerator) and the total number of active connections (denominator).				
Participating UWPs that reduce NRW by 5 percentage points (operational efficiency - Climate Informed)	Percentage of participant UWPs that reduced NRW at least 5 percentual points (PAMC indicator, by its Spanish acroninum). NRW includes physical and commercial losses. It will be calculated as the ratio between the number of UWPs that have reduced their NRW at least 5 percentual points (numerator) between the total of participating UWPs (denominator). The NRW for each UWP is the ratio between the volume of billed water (m3/month) (numerator) and the volumen of water produced and distributed (m3/month) (denominator).	Annual	UWPs	Register of macro and micro readings of water delivered to the distribution system carried out by the UWPs and verified by ERSAPS. ERSAPS defines non-revenue water as water that has been produced and is "lost" before it reaches the customer. Losses can be real (through leaks, sometimes also referred to as physical losses) or apparent losses (for example, through theft or metering inaccuracies).	ERSAPS



<p>Participating UWPs that reach operating cost recovery ratio greater than one (financial efficiency)</p>	<p>Percentage of participant UWPs that reached financial sustainability, calculated as the ratio between the sum of all UWPs with cost recovery ratio (CCR) greater than one (numerator) and total number of UWPs participating in the Project. The CCR is calculated as the ratio between water services revenues (numerator) and operational expenses (denominator). A CRR &gt; 1 indicates financial sustainability. This indicator is defined and already monitored by ERSAPS and does not consider either budget transfers or subsidies.</p>	<p>Annual</p>	<p>UWPs</p>	<p>The financial/ administrative information system will generate monthly data about the revenues and expenses, in line with the monthly financial statements, to be submitted to ERSAPS and SIRAPS by the UWPs, which in addition are audited annually and randomly inspected by ERSAPS.</p>	<p>ERSAPS</p>
<p>Participating UWPs that increase hours of water service provision above 21 hours per week (service quality/ reliability - Climate Informed)</p>	<p>Percentage of participant UWPs that increased service continuity (CS) above 25 hours per week (PACS indicator, by its Spanish acronym). It will be calculated as the ratio between the number of UWPs that have increased CS above than 25 hours</p>	<p>Annual</p>	<p>UWPs</p>	<p>Water service schedule and commercial cadaster provided by the UWP, field verification by ERSAPS</p>	<p>ERSAPS</p>



	(numerator) between the total of participating UWPs (denominator). The CS for each UWP is the sum of all the hours of service provided in all the sectors/neighbourhoods. CS for each sector (CSs) is obtained multiplying Number of connections by Number of days per week with service by Number of hours of service per day.				
Participating UWPs that meet national water quality standards (quality of water)	Percentage of UWPs that meet national water quality standards E1. Compliance will be evaluated through 2 dimensions: i. compliance with the water quality standard E1 (E1 means deliver safe water with a minimum concentration of residual chlorine of 0.5 mg / liter); and ii. frequency of analysis	Annual	ERSAPS	The UWPs will inform and report to ERSAPS the results of the water quality analysis according to the quality and minimum frequency standards established in the National Technical Standard for the quality of drinking water (Agreement Number 084-1995), only for category E1. These results will be part of the SIRAPS (public information system), will be audited (water	ERSAPS



				quality audit) by ERSAPS, and feedback about the results and suggested actions will be provided to the UWPs. The Project will provide logistical support for this activity.	
Participating urban municipalities that have implemented water supply and hygiene activities prioritized in the emergency intervention plans to address COVID-19	People benefitted from the different interventions under Subcomponent 1.5 mitigating the effects of COVID-19. The municipalities will present emergency plans approved by the Municipal Corporations to address COVID 19.	Annual	ERSAPS	Municipal random surveys	INVEST-H

**Monitoring & Evaluation Plan: Intermediate Results Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Participating municipalities that applied for the Project and created a deconcentrated provider	Ratio between the number of municipalities that successfully created a ring-fenced service provider between the total number of municipalities that applied and were selected	Annual	Municipality	The PMU/ERSAPs will collect proof of evidence of creation.	ERSAPS, INVEST-H



	for participating in the Project (subcomponent 1.1). The creation implies that the Municipality has solicited ERSAP to pass a resolution regarding the most suitable service provider management model, and has approved the creation of the ring-fenced service provider. To be officially created, there should be an agreement signed by the Municipal Corporation; statutes and management board approved; and general manager appointed.				
Participating UWPs that elaborated a RIRP (Climate Informed)	Percentage of participant UWPs with RIRPs elaborated by consultancy firm and approved by the UWP's management board between total number of participating UWPs.	Annual	Consultancy firm hired for RIRPs, UWPs	RIRPs draft and final (approved)	INVEST-H
Participating UWPs created within a 5 year-timeframe that are operating satisfactorially	Ratio between participant UWPs created within a 5 year-timeframe that are operating satisfactorially and with autonomy, according to the Framework Law definition (of the UWP;	Annual	Municipality and UWPs	The PMU/ERSAPs will collect proof of evidence of operationalization	ERSAPs, INVEST-H



	<p>statutes and management board approved; general manager appointed), between the total number of participating UWPs. ERSAPS will certify the level of performance, according to parameters previously agreed with INVEST-H and WB.</p>				
<p>Participating UWPs that increased micro metering coverage at least 15 percentual points (Climate Informed)</p>	<p>Percentage of UWPs that increased micro metering coverage at least 15 percentual points (numerator) between the total of participating UWPs (denominator) (PIM indicator). The micro metering coverage ratio (ICM) for each UWP is calculated as the ratio between the number of water connections with micro meter (numerator) and the total number of water connections (denomintor).</p>	<p>Annual since year 4</p>	<p>UWPs</p>	<p>Users cadaster provided by UWP, monthly reports with micro metering coverage data submitted through SIRAPS</p>	<p>ERSAPS</p>
<p>Participating UWPs with user’s attention and information office (Citizen engagement contribution)</p>	<p>Percentage of participant UWPs with adequate user’s attention and information office (POAU) between total</p>	<p>Annual</p>	<p>UWPs</p>	<p>Visual verification; Report showing grievances and claims received and how has</p>	<p>ERSAPS</p>



	number of participating UWPs. Compliance implies adequate facilities; existence of digital register of request, complaints and grievances; evidence of these are addressed and resolved within the agreed time frame; information available about service schedules, water cut-offs and others as required by law.			been addressed and resolved	
Participating UWPs that implemented social outreach and communication plans to incentivize rational water and WASH practices (Climate informed)	Percentage of participant UWPs which have implemented social outreach and communication plans to incentivize both, rational water use, as well as WASH practices (e.g. hygiene and sanitation, such as hand washing to mitigate disease contagion, including COVID-19); between total number of participating UWPs.	Annual	UWPs	Evidence of the campaign published/broadcasted, divulgative-promotional materials (videos, flyers, etc.)	ERSAPS
Participating UWPs that installed macro metering in all the producing units	Percentage of UWPs that have installed macro-meters and are measuring water produced and distributed to the system (numerator) between the total of	Annual after year 3	UWPs	Macro metering readings	ERSAPS, Invest-H





	participating UWPs (denominator). Note: this indicator needs to be met by year 3. Producing unit (WTP, wells, etc)				
Participating UWPs with electrical energy costs greater than 30% of their operating costs, which reduce their Kwh consumption per m3 of water produced by at least 5% (Climate informed)	It will be calculated as the ratio between the number of UWPs that have reduced their consumption of kwh per m3 of water produced by 5% (numerator) between the total of participating UWPs (denominator). The ECPWP for each UWP is the ratio between the energy consumption)(Kwh/month) (numerator) and the volume of water produced and distributed (m3/month) (denominator).	Annual	Based on ENEEs bill and other relevant data generated by the UWP	The UWPs will inform and report Monthly to ERSAPS the consumption of Kw/month and the volume of water produced register of macro reading, and verified by ERSAPS periodically.	ERSAPS
Participating urban municipalities that have implemented water supply and hygiene activities prioritized in the emergency intervention plan approved by the Municipal Corporation	Monitor progress regarding the implementation of the Initiatives in response to the municipal emergency plans for water supply and hygiene financed through subcomponent 1.5	Annual	ERSAPS	Data collection from different sources: Municipalities or its utilities.	INVEST-H with support from ERSAPS
Registered social tariff household bills exempted by Municipalities using a liquidity facility	This indicator will measure the support provided through the Project to water	Annual	ERSAPS and Municipal registered	The cost of the bill will be equivalent to the value of the fixed social	End target estimated in US\$2,000,000/L\$120 =



	systems during the COVID related emergency by exempting social tariff households from their obligation to pay their bills while the liquidity facility is in effect		users reports	tariff applied by the respective municipalities C and D. There are currently 47 urban municipalities C and D. All of them may apply.	400 000 bills.
Participating UWPs that meet national water quality E1 and E2 standards (quality of water)	Percentage of UWPs that meet national water quality standards E1 and E2 , identified from an initial water quality analysis, determining which parameters needs to be measure in order to ensure drinking quality, certified by ERSAPS.	Annual	UWPs	UWPS finance laboratory tests from revenues, which results will be certified by ERSAPS	UWPs and ERSAPS
Participating UWPs reporting/sharing the information to ERSAPS	Percentage of WTP reporting on a monthly basis the required information (numerator) between the total of participating UWPs (denominator). Required information includes management/performance reports and financial statements received, analyzed and disclosed (SIRAPS) by ERSAPS	Annual	UWPs, SIRAPS	Management and financial reports submitted to ERSAPS and disclosed in SIRAPS	ERSAPS



<p>“Improvement Agreements” signed and monitored by ERSAPS (Climate Informed)</p>	<p>Percentage of UWP that have entered into “Improvement Agreements” (numerator) between the total number of participating UWPs (denominator)</p>	<p>Annual</p>	<p>UWPs</p>	<p>“Improvement Agreements” signed</p>	<p>ERSAPS</p>
<p>Volumetric tariff structure reviewed and endorsed by ERSAPS</p>	<p>Percentage of UWP that approved and are implementing volumetric tariff (numerator) between the total number of participating UWPs (denominator). The volumetric tariff according will be set up following the methodology of ERSAPS and will be submitted to the latter for endorsement.</p>	<p>Annual</p>	<p>UWPs</p>	<p>Municipal corporation resolution about the decision of applying volumetric tariff</p>	<p>ERSAPS</p>
<p>Participating UWPs with independent annual audits reports, in compliance with international standards, submitted by INVEST-H to ERSAPS and the Bank</p>	<p>Percentage of UWP with independent annual audits reports, in compliance with international standards, submitted by INVEST-H to ERSAPS and the Bank (numerator) between total number of participating UWPs (denominator).</p>	<p>Annual</p>	<p>UWPs</p>	<p>Financial statements by ERSAPS (web) audited by an external independent firm</p>	<p>ERSAPS</p>
<p>Applications of UWPs received and analyzed by INVEST-H</p>	<p>Percentage of applications of UWPs received and analyzed by Invest-H (numerator) between the</p>	<p>Annual</p>	<p>Invest-H, thrid-party consultancy</p>	<p>Applications register</p>	<p>INVEST-H</p>



	total number of application received (denominator).				
Participating UWPs (with more than 20,000 connections) with gender policy implemented through a phased approach (elaborated, endorsed, and launched)- (Gender)	Percentage of UWPs with more than 20,000 connections that have elaborated a gender policy and have embedded the principles in the UWP’s policies (e.g. human resources, using measures such as: staff trained on gender in the workplace; women mentored to assist career advancement; women recruited etc. reflecting the mandates of the policy in action) between total number of participant UWPs (with more than 20,000 connections). This indicator will be measured in a phased manner: 1) policy elaborated, 2) endorsed, and 3) launched.	Annual	UWPs	Gender policy prepared, adopted and its first actions implemented (e.g. proof of trainings, mentoring program, recruitment campaign targeting womens, etc.). This indicator will be measured in a phased and accumulative manner: a) 30% progress will be considered when the gender policy is elaborated b) 60% when the policy is endorsed by relevant authorities c) 100% when the policy is launched.	INVEST-H
Participating UWPs (more than 20,000 connections) with at least 10% female representation in leadership and technical positions (Gender)	This indicator will be achieved if participation of women in leadership and technical positions > 10%	Annual	UWPs	UWP’s statistics of labor force composition	INVEST-H
Share of grievances satisfactorily addressed and resolved within the agreed timeframe (Citizen engagement)	Grievances and claims mechanim established for the Project and these are	Annual	Claims and requests are submitted	INVEST-H will report on grievances and claims and will be verified by	INVEST-H



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	addressed and resolved within the agreed time for those claims, requests,etc		directly to Invest or through the existing mechanism in the UWP or the Municipality. There should be coordination mechanism for gathering all together	the WB team during supervisory missions	
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## ANNEX 1: Implementation and Fiduciary Arrangements

### Republic of Honduras

### Urban Water Supply Strengthening Project

1. **The Project will be implemented by the Honduras Strategic Investment Office (INVEST-H).** INVEST-H, under the General Coordinator of the Presidency of the Republic of Honduras, is a government agency that supports strategic projects for the country's socioeconomic development. INVEST-H will establish, operate and maintain the PMU with functions, responsibilities, resources and composition acceptable to the Bank. The PMU will coordinate with the municipalities, the UWPs, ERSAPS, and other local organizations, which may include the Honduras Water Utilities Association and Honduras Municipalities Association. The PMU will oversee all technical, administrative, and fiduciary aspects of the Project; ensure compliance with Bank environmental and social (E&S) standards; and be responsible for monitoring and evaluation (M&E) of the Project. The institutional arrangements build on the successful experience of INVEST-H with the Bank in the implementation of the COMRURAL Project (P101209), the *Corredor Seco* Food Security Project (P148737) and the Pilot Program for Climate Resilience (P157795), as well as its experience with other multilaterals and bilateral donors, including the IDB, CABEL, and the Millennium Challenge Corporation.
2. **INVEST-H will designate a Project Coordinator to head the PMU.** The Coordinator will have responsibility for the day-to-day management of the Project and will report directly to the Executive Director of INVEST-H. In addition to the Coordinator, the PMU will comprise the following key staff: (i) a procurement specialist; and (ii) a financial management specialist, all of which would be established prior to effectiveness. The PMU will also include professional staff with qualifications and experience acceptable to the Bank as needed, including *inter alia*: (i) an engineer with experience in water utility management; (ii) two procurement officers; (iii) an environmental specialist; (iv) a social development specialist; (v) a communications specialist with experience in behavior change, including sanitation and hygiene practices and rational water use; and (vi) technical (including in emergency response management), administrative and support personnel, all financed under Component 3. The composition of PMU and corresponding TORs will be included in the POM.
3. **INVEST-H, through the PMU, will also be responsible for selecting participating municipalities and UWPs based on eligibility criteria defined in the POM.** INVEST-H's role will require, *inter alia*: (i) promoting to municipalities/UWPs the benefits of participating in the Project, particularly to categories C and D municipalities; (ii) reviewing applications, on a first-come first-served basis; (iii) coordinating and handholding of weaker municipalities (particularly C and D) and UWPs in operation for less than 5 years; and (iv) disclosing results of applications in terms of eligibility criteria. The POM will define the criteria so allocations among the Component 1 subcomponents ensure that at least 50 percent of participating UWPs are from C and D municipalities.
4. **INVEST-H, through the PMU, will enter into the following agreements:**
  - (i) *Tripartite Partnership Agreements (PAs) with the UWPs and municipalities with regard to subcomponents 1.1 through 1.4* describing the commitments of each participating municipality and UWP. Each PA will define time-bound phases, to be reflected in the RIRPs and BPs that must be completed before the parties sign PAs for the subsequent phases. Commitments by the municipalities will include (i) supporting the creation of their respective UWPs through a Municipal Corporation Resolution; (ii) provision of necessary counterpart funding throughout implementation; and (iii) approval of micro-meter installation and the use of volumetric information in the billing system through a Municipal Corporation Resolution. Commitments to be entered into by the UWPs will include: (i) presentation of a National Tributary Code (RTN) to INVEST-H to confirm their financial independence from the municipal budget; (ii) implementation of the Improvement Agreements negotiated with ERSAPS and aligned with the RIRP or BP; (iii) installing a specified number of micrometers and implementing volumetric tariffs during project implementation; (iv) reaching a cost recovery ratio of at least



one during project implementation; and (v) providing, after the first year of operations, audit reports by a certified auditor satisfactory to the Bank. INVEST-H will be responsible for ensuring that all TA, goods and works are provided to participating UWPs as outlined in the PAs.

(ii) *Inter-institutional Agreement with each municipality with regard to subcomponent 1.5.* To this end, INVEST-H will receive from the respective municipalities, electronic applications which will include the associated Inter-institutional Agreement, endorsed by the Municipal Corporation.

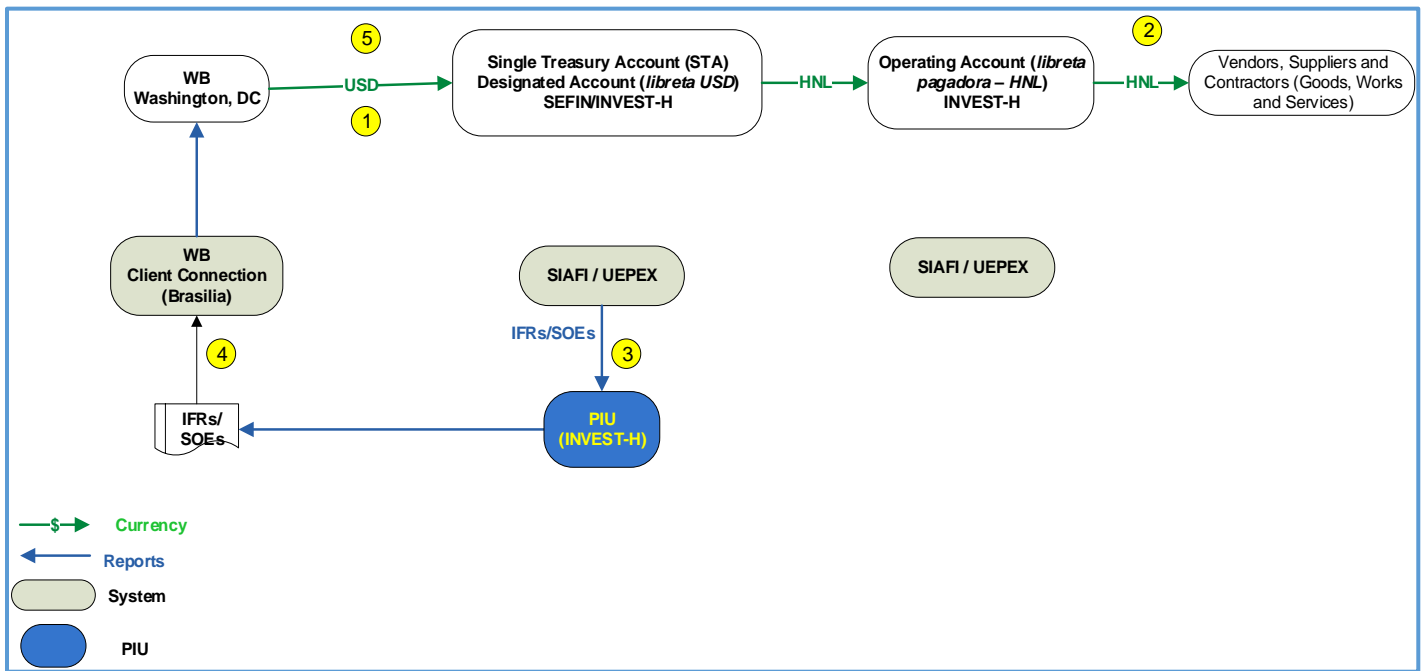
5. **With regard to Component 2,** the details regarding the respective roles and responsibilities of INVEST-H and ERSAPS will be covered in the POM.

**Financial Management**

6. **Planning, Budgeting and Accounting.** The PMU, with the support of dedicated financial staff for the Project, will be responsible for preparing and monitoring the annual operating plan and the corresponding budget, the latter integrated into the annual budget. The Project’s budgeting and accounting transactions will be processed through SIAFI/UEPEX, the Government’s official financial management information system (FMIS). The SIAFI/UEPEX accounting structure captures project information by component and subcomponent. All payments will follow the official commitment, verification, and payment routine.

7. **Flow of Funds and Disbursement Arrangements.** The proposed funds flow (See Figure 1.1) and disbursement arrangements are streamlined within the Project, to facilitate execution, avoid unnecessary incremental operational arrangements, and rely as much as possible on existing Country Public Financial Management (PFM) systems. All payments will be made by INVEST-H using the SIAFI/UEPEX, once payment obligations have been incurred, verified and properly documented. To make payments, the system requires that funds be committed by source, making possible the tracking of credit disbursements to project expenditures.

Figure. 1.1 Flow of Funds



8. **Disbursement Arrangements.** Disbursement arrangements will take into consideration the FM and procurement assessments of INVEST-H, the Project’s flow of funds, the cash flow needs of the Project, and the Recipient’s experience with



Bank operations. Disbursement of project funds will be processed in accordance with Bank's procedures as stipulated in the Financing Agreement and Disbursement and Financial Information Letter (DFIL). Withdrawal Applications and necessary supporting documentation will be submitted to the Bank electronically through the Client Connection web site.

9. The following disbursement methods may be used to withdraw funds from the loan: (i) reimbursement, (ii) advance, and (iii) direct payment, with the advance method being the primary disbursement method. Payments will be processed through SIAFI, interfaced with UEPEX. Funds will be disbursed to the Designated Account (*libreta*), within the single treasury account (STA) in SIAFI, which are then transferred to the operating account (*libreta pagadora*) in Honduran lempiras or U.S. dollars, as applicable, for payment to vendors. The minimum application amount for direct payments and reimbursements are defined in the DFIL. The Project will also have a four-month grace period, after the closing date, to document expenditures incurred prior to the Closing Date.

10. **Financial Reporting.** INVEST-H, with the support of the PMU's financial coordinator, will ensure the timely production of semester interim unaudited financial monitoring reports (IFRs) to be submitted within 45 days after the end of each reporting period. These IFRs prepared in the currency of the Project (US\$), will be produced from financial information extracted from the SIAFI/UEPEX system, following project design, and will consolidate the Project's financial data for all components. Accordingly, the format and content of the IFRs, on a cash accounting basis, agreed with the Recipient will cover the following items:

- (i) IFR 1-A: Statement of Sources and Uses of Funds, by project component and category, respectively (Project-to-date, year-to-date, and for the period)
- (ii) IFR 1-B: Statement of budget execution per subcomponent (with expenditures classified by the major budgetary accounts)
- (iii) IFR 1-C: Designated Account Activity Statement

11. The POM will document these processes and serve as an important reference for processing steps to be followed during Project implementation. The POM will contain detailed procedures and guidelines for disbursements, payments, approvals, commitments, payments, and reporting, and will be submitted to the Bank for review prior to its adoption by the Government.

12. **External Auditing:** The external audit will be undertaken by a private external audit firm, to be selected following agreed Terms of Reference (TOR) acceptable to the Bank, and in accordance with International Standards on Auditing (ISAs). The financial statements must be prepared in accordance with the International Public Sector Accounting Standards (IPSAS). National standards may be accepted only if they are not significantly different from IPSAS. The auditors will be required to issue an opinion on the Project's IFRs, and produce a management letter, where any internal control weaknesses will be identified, contributing to the strengthening of the control environment.

13. The auditor's report will be submitted to the Bank no later than six months after the end of the Recipient's fiscal year (December 31). The Bank will review the audit report and will periodically determine whether the audit recommendations are satisfactorily implemented. The Bank also requires that the Recipient disclose the audited financial statements in a manner acceptable to the Bank and following the Bank's formal receipt of these statements from the Recipient, the Bank will also make them available to the public in accordance with the World Bank Policy on Access to Information.

14. The scope of the audit's TOR will include, but not be limited to reviewing: (i) the IFRs and use of the Designated Account; (ii) the appropriate observance of the financial management arrangements included in the POM, the PAD, the Financing Agreement, as well as any other official Bank documentation; (iii) the use of SIAFI/UEPEX and other FM monitoring systems; (iv) adequacy of internal control arrangements; (v) compliance with agreed disbursement arrangements; and (vi) that amounts disbursed were used for eligible expenditures according to the Financing Agreement.

15. All supporting records will be maintained at the PMU for at least (i) two years after the Closing Date; or (ii) one year after the Bank has received the audited financial statements covering the period during which the last withdrawal from the Loan Account was made, whichever is later.





16. **Financial Management Supervision during implementation.** FM supervision will include, among others, (i) review of IFRs; (ii) review of the auditors' reports and follow-up of issues raised by auditors in the management letter, as appropriate; (iii) follow-up on any financial reporting and disbursement issues; (iv) responses to project team's questions, and (v) update of the FM risk and performance rating in the Implementation Status and Results (ISR) Report.

17. **Operating Costs.** Imply reasonable costs, as shall have been approved by the World Bank, for the incremental expenses incurred on account of project implementation, consisting of, among others: administrative costs, communication, office supplies and maintenance, equipment maintenance, utilities, document duplication/printing, non-durable goods, insurance, fuel, maintenance and repair of vehicles, travel cost and per diem for project staff for travel linked to the implementation of the Project. Salaries of the Recipient's officials and/or civil servants are not eligible for financing under the Project.

### **Procurement**

18. **Procurement will be carried out in accordance with the *World Bank Procurement Regulations for IPF Borrowers*** (July 2016, revised November 2017 and August 2018) ("Procurement Regulations"). A Project Procurement Strategy for Development (PPSD), was prepared by the Recipient, which describes how procurement in this operation will support the attainment of the PDO and deliver value for money under a risk-based approach. The PPSD provides adequate supporting market analysis for the selection methods detailed in the Procurement Plan. Mandatory Procurement Prior Review Thresholds detailed in Annex I of the Bank's Procurement Procedure have been observed. All procurement procedures, including the roles and responsibilities of different units, will be defined in the POM. Considering the complexity of inter-institutional coordination and the support to the demand based projects, and since this is key to the success of the Project, the POM will clearly define implementation arrangements, and the specific steps, roles, and responsibilities (including enhancements based on lessons learned from previous and current projects) of INVEST-H related to the implementation of procurement processes.

19. It has been agreed that, to properly carry out the required procurement functions for the Project, INVEST-H will need to hire for the PMU one procurement specialist and two procurement officers.

20. **Procurement Plan.** In accordance with paragraph 5.9 of the Procurement Regulations, the Bank's Systematic Tracking and Exchanges in Procurement (STEP) system will be used to prepare, clear and update Procurement Plans and conduct all procurement transactions for the Project. The Procurement Plan was prepared by the Recipient in accordance with the results provided by the PPSD including a timeline for implementation of procurement processes and was agreed with the Bank as part of the Negotiations. A summary of PPSD includes recommended procurement approach for higher risk/value contracts.

21. **Civil Works.** The Project will finance civil works including repairs and replacement of pipelines in the water supply system.

22. **Goods.** Goods to be financed under this Project include software, computers, pumping equipment, micro and macro-meters, among others.

23. **Selection of consulting services.** Consulting services under the Project will include, *inter-alia*, technical assistance to support: (i) ERSAPS; (ii) INVEST-H; and (iii) UWPs to, among others, prepare and supervise Rapid Investment Rehabilitation and 5-year Business Plans, communication strategies and campaigns, support commercial and management systems, and monitoring of key performance indicators.



**Table 1.1: Goods, Works, and Services to be Financed – Procurement Methods**

Description	Estimated cost (US\$)	Prior/Post review	Market approach	Procurement method
<b>Goods</b>				
Equipment purchases (servers, computers, printers, GPS, etc.)	74,200	Prior	Local	Request for Bids
<b>Works</b>				
Rehabilitation, replacement and upgrading of structures, pumps, electrical panels, defective pipes and installation of any device or minor structure to improve water delivery.	28,000,000	Prior	International	Request for Bids
<b>Consulting services</b>				
Technical assistance to support urban wastewater service providers, design and supervise works.	7,000,000	Prior	International	Quality based selection

24. **Capacity assessment.** The WB performed a capacity assessment to evaluate the adequacy of procurement arrangements of INVEST-H. The assessment was focused on how INVEST-H will be organized to procure using the credit’s funds and support procurements from demand-based projects, in terms of staffing structure, procurement record system, internal controls, roles and responsibilities, etc.

25. **The key issues and risks concerning procurement for project implementation include:** (i) current structure and workload of INVEST-H; (ii) incremental work due to new available resources; (iii) coordination between technical units and procurement; and (iv) complex interinstitutional arrangements. The agreed corrective measures include: (i) conform the PMU and the procurement unit with appropriate staff in terms of qualifications and quantity, (ii) define roles and responsibilities of the technical and procurement units in the POM; and (iii) include in implementation agreement or MOUs the roles and responsibilities of the different entities.

26. **Bidding Procurement Documents.** Standard procurement documents (SPDs) shall be used for all contracts subject to international competitive procurement and those contracts as specified in the Procurement Plan tables in STEP. For bidding processes with national market approach, bidding and request of quotations documents were agreed with the Bank prior to Negotiations.

27. **Frequency of Procurement Supervision.** In addition to prior review supervision, the WB will perform annual post-procurement review supervision missions with a minimum sample of 20 percent of all post review contracts.



## ANNEX 2: Detailed Project Description

### Republic of Honduras

### Urban Water Supply Strengthening Project

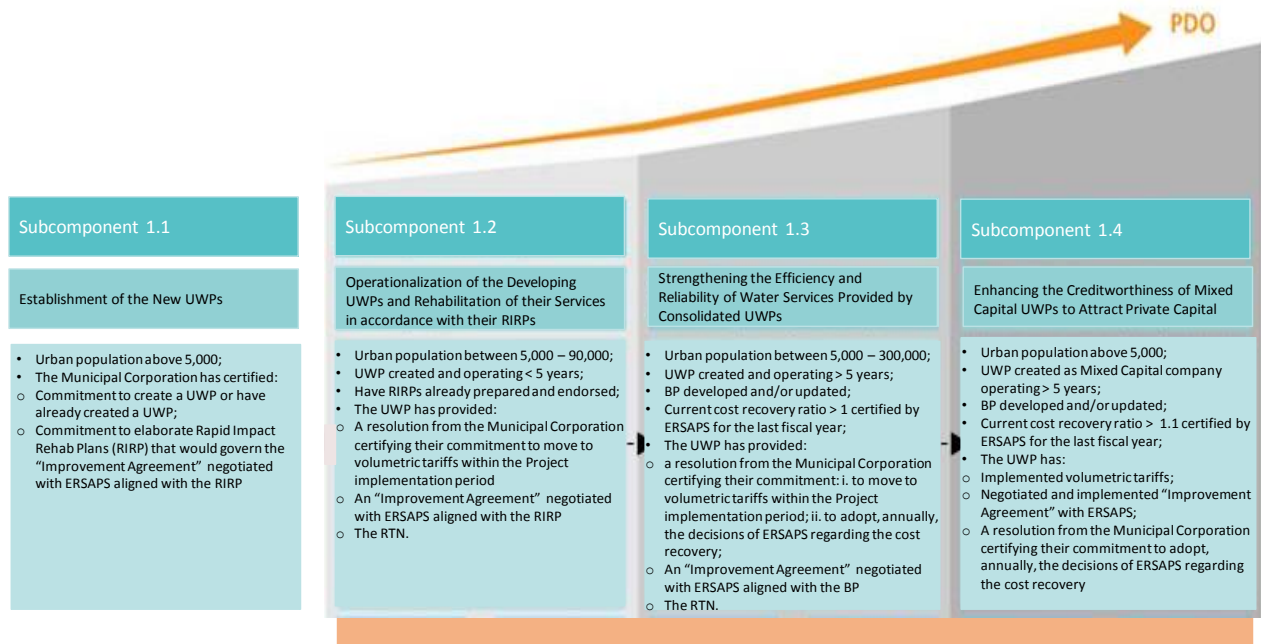
- 1. The proposed Project utilizes an Investment Project Financing (IPF) approach, to be implemented over 5 years, and is financed by an IDA Credit in the amount of US\$45 million.** Participating municipalities are expected to contribute a combined amount of US\$1.5 million to finance infrastructure rehabilitation investments. The Project will follow a demand-based approach that will require that UWPs and/or municipalities apply to participate in the Project, with acceptance based upon compliance with pre-defined eligibility criteria.
- 2. The Project builds on advances made under its predecessor, the WSSMP (P103881) in supporting efforts to decentralize and improve the quality of water services to households,** while also supporting municipalities in responding to water supply and sanitation emergency needs. Under component 1, the Project takes a four-pronged approach: (i) supporting municipalities that aim to create ring-fenced municipal service providers; (ii) supporting the operationalization of those that have created ring-fenced municipal service providers; (iii) strengthening ring-fenced municipal service providers that have been operating; and (iv) supporting ring-fenced service providers incorporated as mixed capital companies to attract private sector capital. The creation and/or operationalization of the UWPs will contemplate the principles of the *Utility of the Future Framework*, which provides guidance aimed at enhancing utility performance.<sup>45</sup> The Project also includes resources to support affected urban municipalities to implement short term priority interventions focused on water supply and hygiene in response to the COVID-19 outbreak. Component 2 supports ERSAPS in its efforts to help service providers improve their WSS services by complying with sector rules and regulations, and also supports ERSAPS in monitoring the performance of the providers. Component 3 supports the PMU in its efforts to help municipalities/providers meet the eligibility criteria to participate in the Project and also supports the PMU in overseeing Project implementation and strengthening the COMAS and USCLs.
- 3. Component 1. Improving Water Supply Services Provision in Urban Areas (US\$40 million IDA, US\$1.5 million counterpart funds).** This component will support the operationalization of water systems as contemplated in the Framework Law, using a demand-based approach. It will also support the design and implementation of communications campaigns aimed at promoting more rational use of water supply, as well as adequate education in hygiene and sanitation practices to stem the outbreak of pandemic and waterborne diseases. The component will finance goods, works, technical assistance and services. Technical assistance will include the design or upgrading of the UWPs' Rapid Impact and Rehabilitation Plans (RIRPs) and Business Plans (BPs), while investments will contribute to the rehabilitation and upgrading of urban water systems prioritized in the RIRPs and BP. Both the plans and investments will aim at improving the operational and financial management of the service providers, enhancing energy efficiency, optimizing existing water supply systems, improving water quality testing capacities and increasing water continuity. More reliable water supply services, resulting from more efficiently operating and financially sustainable service providers, is expected to render beneficiary communities more resilient to climate change-related droughts and diseases and may reduce the need for new water abstraction.
- 4. The Project will use Honduras' Municipal Development Index to determine the percentage of counterpart financing to be provided by each participating municipality and to promote pro-poor access.** The index, as defined by the Ministry of Interior, categorizes Honduras' 298 municipalities according to a poverty scale ranging from A (municipalities with the lowest poverty levels) to D (highest poverty levels). Category A and B municipalities are expected to contribute 10 percent in counterpart funding for goods and works contracts. Category C and D municipalities will not be required to contribute counterpart funds. INVEST-H will be responsible for ensuring that all TA, goods and works are provided as outlined in the respective Partnership Agreements (PAs) to be entered into with the municipalities. Support under emergency response

<sup>45</sup> The *Utility of the Future Framework*, created by the WB's Water Global Practice, provides a three-pronged approach to enhancing water utilities' performance: (i) strengthening the operational efficiency of the utility; (ii) improving the governing environment; and (iii) improving access to funding. See paragraph 55.



subcomponent 1.5 will not be subject to counterpart financing requirements regardless of municipal category. All applications from eligible UWPs will be accepted on a first-come, first-served basis, subject to the specific criteria described in the Project Operations Manual (POM).

**Figure 2.1 Eligibility Criteria for UWP Participation in Component 1**



5. **Subcomponent 1.1. Establishment of the New UWPs.** This subcomponent will finance in-country travel, training and consulting services to (i) support eligible municipalities to establish new UWPs as deconcentrated or mixed capital service providers in compliance with applicable sector rules and regulations; and (ii) support the preparation of the new UWPs' RIRPs, including strategies to control NRW, as necessary. Additional support will be provided under Components 2 and 3 to ensure implementation of this subcomponent.

6. **Eligibility criteria.** Municipalities with urban center populations of over 5,000<sup>46</sup> to be served by one UWP, will be eligible to participate in this subcomponent. Prior to applying for support under this subcomponent, each Municipal Corporation must have passed a resolution certifying that a UWP has been created.

7. **Subcomponent 1.2. Operationalization of the Developing UWPs and Rehabilitation of their Services in Accordance with their RIRPs.** This subcomponent will support each developing UWP in, inter alia, (i) developing policies, procedures, manuals, systems and other commercial, operational and administrative tools to support implementation of its management model; (ii) developing and/or updating and implementation of the RIRP to quickly increase household water availability, as needed; (iii) improving the water quality testing capacities of their WTP laboratories; (iv) developing a micro metering strategy and a cadaster; (v) preparing and implementing social outreach and communication campaign, including promotion of rational water use and better hygiene practices; and (vi) developing BPs for the developing UWPs, that will include a financial plan and a plan for tariff adjustments; and (vii) implementing priority activities included in approved BPs by the pertinent Municipal Corporation.

8. **Eligibility criteria.** Municipalities with urban center populations of 5,000 to 90,000, served by a UWP in operation for less than 5 years will be eligible to participate in this subcomponent. Prior to applying for support under this subcomponent, each

<sup>46</sup> For purposes of eligibility criteria under the Project, urban population estimates are based on the 2013 National Census.



Municipal Corporation must have passed a resolution certifying its commitment to move from fixed to volumetric tariffs during Project implementation. Additionally, the UWP will need to provide its RTN number and an Improvement Agreement negotiated with ERSAPS and aligned with its RIRP. Rehabilitation and upgrading works to be implemented under this subcomponent will aim to optimize water service delivery but are not expected to change the system’s original footprint.

9. The TA will support the development of policies, procedures, manuals, systems and other management, operational and administrative tools. These instruments will be used to support the units’ daily operations. Instruments may include, among others, policies, strategies, rules and regulations, information systems, manuals, plans, procedures, and hydraulic models. Table 2.2 presents a tentative list of instruments that could be developed and approved for successful operationalization of the UWP.

Table 2.1 Examples of Operational and Administrative Instruments

Function	Subfunction	Required instruments
Administration and finance	Accounting	Charter of accounts, accounting principles, accounting manual and procedures, and cost accounting policy and procedures
	Asset management	Asset inventory and updating procedures, and asset management policy and procedures
	Consumables management	Storage policy and procedures (spare parts, networks accessories and pipes, chemicals) and stock management policy and procedures
	Treasury	Financial management and reporting policy and procedures
	Human resources	Human resources policy and procedures, hiring procedures and career development based on gender principles, including remuneration/health and safety policies and procedures
Commercial	General	Commercial policy (general guidelines for billing, categorization of customers, dealing with debtors, etc.) and information technology policy and procedures
	Billing	Tariff regime; schedule of customer categories; customer database updating procedures; billing system and procedures; meter reading, maintenance and replacement policies and procedures
	Collection	Collection policy including all collection mechanisms, collection procedures for each channel, and account management procedures; procedure to cut off services to bad debtors
	Customer service	Customer relations policy, call center policy and procedures, customer service policy and procedures, back-office procedures, and customer communication campaigns emphasizing the adoption of water conservation practices and individual responsibilities for payments
Operations	General	Operations and maintenance policies (general guidelines on service operations for each subsystem and interaction with other subsystems, isolation or overlapping of subsystems, and maintenance of equipment; hydraulic modeling policy, manuals and procedures; information technology policy and procedures; and principles for resilience in WSS planning
	Water resources management	Catchment protection policy and procedures to minimize the exposure of the <i>Laureles</i> and <i>Concepción</i> reservoirs to the impacts of climate change associated with heavy rainfall, flooding, and droughts as well as pollution resulting from uncontrolled urban and agricultural activity
	Water production	Production policy and procedures for each subsystem; operational manual for each production subprocess and quality standards at each interface; quality control procedures and manual; laboratory procedures and standards; and maintenance policy, procedures, and manuals
	Distribution	Network operations policy; sectorization/district meter area policies and procedures; water balance procedure; network maintenance; repair, rehabilitation, and renovation policies and procedures; and network water sampling policy, procedures, and quality standards
	Energy efficiency	Bringing best practices to reduce energy intensity of the water treatment plant and other key energy components of the system.

Source: World Bank Group. 2018. *Building the Resilience of WSS Utilities to Climate Change and Other Threats: A Road Map*. Washington, DC: World Bank. <https://hubs.worldbank.org/docs/imagebank/Pages/docProfile.aspx?nodeid=30732776>

10. Subcomponent 1.3. Strengthening the Efficiency and Reliability of Water Services Provided by Consolidated UWPs. This subcomponent will support the implementation of activities prioritized in the 5-year BPs of Consolidated UWPs approved by the respective Municipal Corporation. It will finance TA to update the BPs, including strategies to control NRW, as needed, for UWPs older than 5 years. Activities prioritized in this subcomponent will focus on, inter alia: (i) developing and implementing a micro metering strategy and cadaster; (ii) preparing and implementing social outreach and communication plans, including



promotion of rational water use and better hygiene practices; (iii) reducing NRW losses; (iv) improving energy efficiency by rehabilitating and upgrading water systems (e.g., optimization of pumping); and (v) improving water quality testing capacities of WTP laboratories. This subcomponent will also finance consulting services to interested UWPs to support the development of management plans for prioritized micro-watersheds, assessment of sanitation alternatives, as well as studies and training for climate adaptation strategies.

11. **The activities envisaged in subcomponents 1.2 and 1.3 will help reduce water shortages and increase water availability to other users of the system**, thereby increasing the water supply system's resilience to climate change-induced droughts. These activities are also expected to reduce the need for additional water sources and further increase residents' resilience to climate change. Investments in NRW reduction and energy efficiency will increase water pressure in the network, resulting in less water abstraction and leading to reductions in net GHG emissions, thereby contributing to the mitigation of climate change impacts.

12. **Eligibility criteria.** Municipalities with urban center populations of 5,000 to 300,000 and served by one UWP operating for more than 5 years will be eligible to participate in this subcomponent. Prior to application, each UWP must provide to INVEST-H: (i) a developed/updated BP; (ii) a certification from ERSAPS showing a cost recovery ratio above 1 for the previous fiscal year (with the exception of 2020); (iii) a resolution from the Municipal Corporation certifying its commitment to move to volumetric tariffs during Project implementation; (iv) a resolution from the Municipal Corporation to adopt ERSAPS' annual directives regarding cost recovery; (v) an Improvement Agreement negotiated with ERSAPS and aligned with the BP; and (vi) the RTN number of the UWP. The rehabilitation and upgrading works will not change the system's original footprint.

13. **Macro metering.** Proposed activities focus on the improvement of bulk water use knowledge through the macro metering and regularization of large water users. Universalizing macro metering aims at increasing more precise knowledge on the major systems demands through the implementation of flow meters for large users (i.e. urban supply, industries, irrigated perimeters), fostering the right assessment of volumes produced and volumes delivered.

14. **Water Losses Control and Reduction.** This set of activities aims at improving water supply efficiency through the implementation of water losses control and reduction activities. The proposed activities will focus on controlling pressure, sectorization and creation of District Metering Areas (DMAs) in priority sectors. Implementation can consider a design and build approach, bringing the private sector through performance-based contracts. A very effective and proven methodology to reduce water losses is to divide the water network in manageable sectors (i.e. DMAs) to identify the major causes of water losses in each DMA and address these.

15. **The creation of DMAs is a methodology used worldwide and will enable detailed knowledge of losses related problems in the system**, provide better equalization of pressures, localized fraud surveys, and contribute to manage the losses in smaller areas, bringing better returns both in relation to actual and apparent losses. The works involved in implementing a DMA includes, among other activities, installing valves (including pressure-reducing valves where appropriate), inflow meters, and new feeder lines if necessary; cutting and plugging old networks and installing consumption meters; and setting the baseline value for NRW. The activities will reduce water shortages and increase water availability to other users of the system, thereby increasing the water supply sector's resilience to climate change-induced droughts. It may also reduce the need for water withdrawals from existing sources, thereby contributing to flexibility in the face of climate shocks and further increasing the residents' resilience to climate change. In addition, NRW reductions and the adequacy of the pressures in the network will lead to reductions in net GHG emissions due to energy efficiency gains.

16. **Non-revenue water reduction in targeted areas.** After implementing the DMAs, the water balance for each sector will be calculated, setting the baseline value for NRW and allowing the probable causes of water losses in each sector to be identified. NRW reduction activities can then be planned and executed. NRW reduction activities to be implemented include step tests, zero pressure tests, active leak detection, pipeline repairs and replacements, service pipe replacements, regularization of illegal connections, cutting and plugging of old networks and replacing defective consumption meters.



17. **Energy Efficiency Activities.** The measures aimed at reducing energy consumptions and costs could include, inter alia, the following areas: (i) *improving efficiency in in pumping systems operations*, such as replacement of inefficient and old pumps, installation of variable frequency/speed drives and capacitors; utilization of gravity-fed systems instead of pumping, optimization of pumping system operation and pumping operational schedules, e.g. load management involves shifting of pumping hours from peak to off-peak periods, and better maintenance; (ii) *water loss management technologies*, such as leak reduction and optimized pipe pressure; and (iii) *energy-efficient lighting*. The TA shall carry out energy efficiency audits, including an assessment of electricity bills paid by the water utility and a prefeasibility analysis to translate key findings into prioritized investment plans. Improving energy efficiency in UWPs leads to lower energy costs and reduced vulnerabilities. At the same time, reduced energy use leads to lower GHG emissions, thereby contributing to mitigation of climate change impacts.

18. **Subcomponent 1.4. Enhancing the Creditworthiness of Mixed Capital UWPs to Attract Private Capital.** This subcomponent will finance TA to support mixed capital UWPs. The TA will include in-country travel, training and consulting services to assist the UWPs in (i) upgrading their BPs to align them with private sector practices; (ii) upgrading and fully integrating their financial and accounting systems; (iii) strengthening processes to prepare financial statements in compliance with IFRS; (iv) strengthening their capacity for financial analysis and planning; (v) improving their performance to achieve cost recovery ratios and EBITDA margins sufficient to attract commercial financing; and (vi) improving their corporate governance rules.

19. **Eligibility criteria.** Municipalities with urban center populations of more than 5,000 residents, served by one UWP, and operating as a mixed capital company will be eligible to participate in this subcomponent. Prior to application, each UWP must provide to INVEST-H: (i) a 5-year BP focused on operational sustainability; (ii) a certification from ERSAPS showing a cost recovery ratio above 1.1 for the previous fiscal year (with the exception of 2020); (iii) a certification from ERSAPS showing that the UWP has implemented volumetric tariffs; (iv) a commitment by the Municipal Corporation to adopt ERSAPS' annual directives regarding cost recovery; and (v) an Improvement Agreement negotiated and implemented with ERSAPS and aligned with the BP.

20. **Subcomponent 1.5. Supporting the Municipal COVID-19 Emergency Response.** This subcomponent will support short-term priority activities defined by urban municipalities in response to the COVID-19 outbreak, prioritizing vulnerable groups, unserved, and underserved populations healthcare centers and schools. To this end, it will finance goods and services related to water supply and hygiene as well as social tariff subsidies for low-income consumers. Such support will focus on, inter alia: (i) ensuring the provision of adequate water supply through the distribution of water bottles, sachets, small water tankers, and water storage tanks; (ii) preparing and implementing social outreach and communication (radio, television, social media) campaigns to promote handwashing and other hygiene practices; (iii) setting up a temporary COVID-19 emergency relief facility to subsidize the social tariffs paid by poor urban households to municipal service providers; (iv) developing, in the medium term, disease mitigation interventions such as the adoption of electronic payment systems (ATMs, cellphones) to reduce disease transmission at payment sites; (v) providing water treatment chemicals and laboratory chemicals/reagents; (vi) ensuring an adequate supply of fuel and spare parts necessary for ongoing O&M of the water supply system; and (vii) providing protective equipment and disinfectant supplies for utility staff.

21. **Eligibility Criteria.** Municipalities with urban center populations of 5,000 to 300,000 can apply for support under this subcomponent. Such municipalities will be required to have issued an emergency declaration and to have submitted a priority emergency activities plan approved by the Municipal Corporation. Furthermore, in order access the Project's emergency relief subsidy, the Municipal Corporation must have issued a resolution exempting social tariff households from their obligation to pay their water bills throughout the period that the subsidy is in effect.

22. **Component 2. Institutional Strengthening of ERSAPS (US\$1.5 million IDA).** This component will enhance ERSAPS' institutional capacity to implement incremental activities associated with Component 1 for Participating UWPs. This component will focus on: (i) assisting UWPs in selecting a management model that reflects their institutional capacity; (ii) certifying the management model and overseeing the operationalization of UWPs; (iii) establishing a volumetric tariff structure in



consultation with the COMAS and USCLs, as applicable; (iv) negotiating, publishing and following up UWPs' performance under the applicable Improvement Agreements; and (v) supporting mechanisms to promote the transparency and accountability of UWPs. Incremental activities resulting from Component 1, including collection and analysis of data, monitoring of UWP services, management of unresolved complaints, enforcement of regulations and fees related to the conversion of UWPs, will also be supported. This component will finance consulting services, in-country travel, training, workshops and goods. Support to be provided by ERSAPS is expected to improve water supply services, and in turn make participating urban areas more resilient to climate change-related droughts.

**23. Component 3. Project Management, Communication, Outreach, Monitoring and Evaluation (US\$3.5 million IDA)** This component will support project implementation through, *inter alia*: (i) monitoring and evaluation of project results, using ERSAPS' information system; (ii) undertaking procurement and financial management activities; (iii) implementing the environmental and social standards; (iv) undertaking annual audits for the Project and UWPs; (v) developing, financing and overseeing gender strategies for UWPs to ensure women's participation in water-related decision-making; (vi) coordinating with central institutions responsible for promoting water supply delivery and climate change initiatives to improve resilience of the water systems; (vii) carrying out national and local communication and outreach activities to explain Project benefits to beneficiaries; (viii) establishing clear rules of prioritization to manage the demand from potential Project participants; (ix) exploring alternative financial mechanisms to support the water sector's capacity to cope with emergencies; (x) establishing citizen engagement measures and additional tools, training and guidance to support COMAS and USCLs in monitoring the UWPs' performance and compliance with sector regulations; and (xi) supporting GRM for project activities as a whole. This component will finance incremental operating costs for the PMU such as consulting services, travel, training and general operating costs

**24. Component 4. Contingent Emergency Response Component (CERC) (US\$0 million).** Reflecting the strategic approach taken in Honduras across the Bank's portfolio, this component will provide immediate response to eligible emergencies. As such, in the event of such an eligible emergency, as defined in the Contingency Emergency Response (CER) operational manual prepared and adopted by the GoH, this component will finance emergency activities and expenditures through the reallocation of funds from the Project.



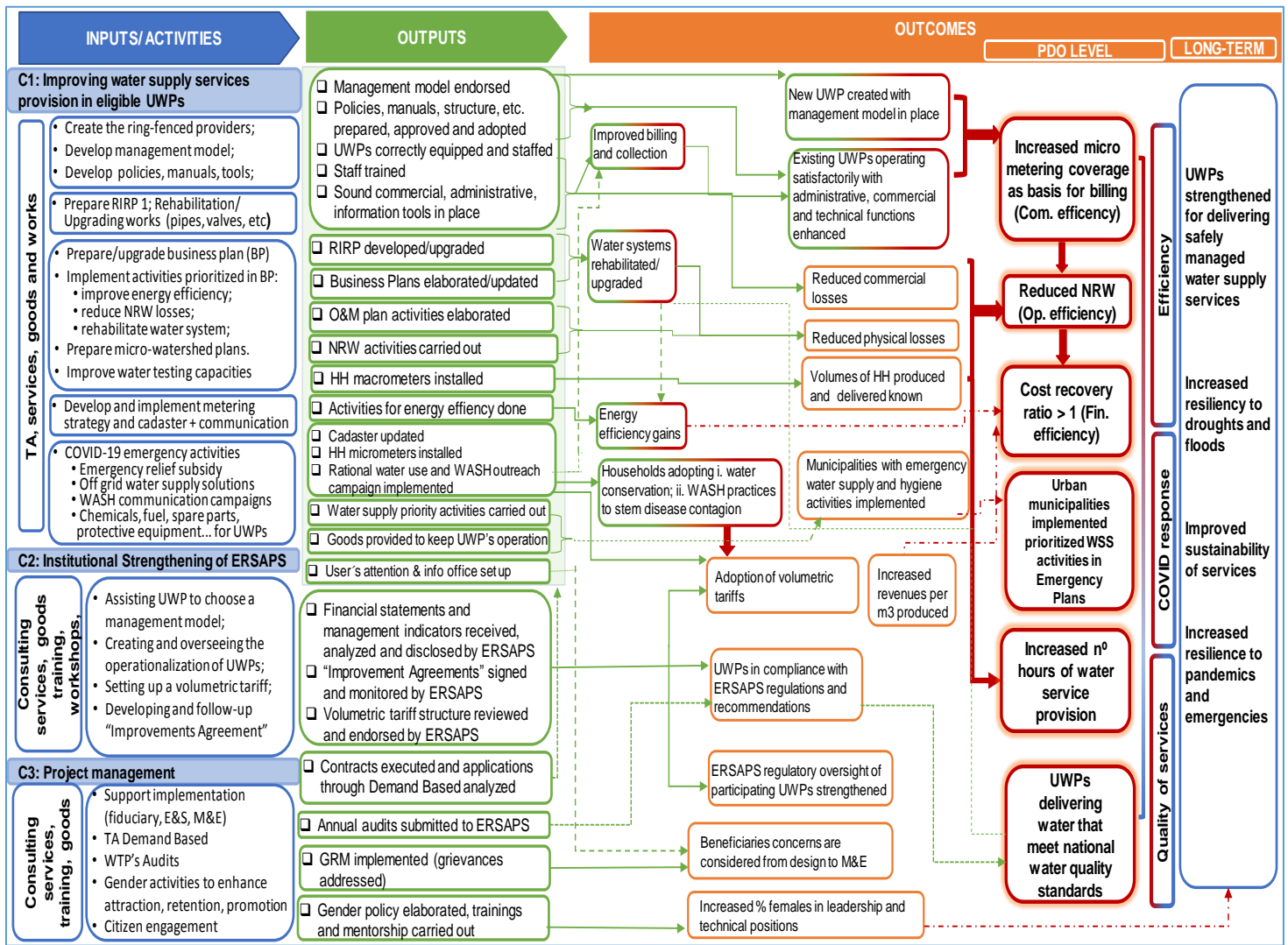


ANNEX 3: Theory of Change

Republic of Honduras  
Urban Water Supply Strengthening Project

1. The following are the critical assumptions underlying the Project's Theory of Change:

- (i) Sufficient demand from Service Providers to participate in the Project;
- (ii) User buy-in to the installment of micro-meters and service billing;
- (iii) Municipal authority commitment to the introduction of volumetric tariffs;
- (iv) Willingness of the municipalities to adopt ERSAPS' cost recovery directives;
- (v) Technical capacity and political willingness of ERSAPS to take on full breadth of responsibilities;
- (vi) Strong coordination between INVEST-H, municipalities, UWPs and ERSAPS.





## ANNEX 4: Suggestions on How to Incorporate a Gender Perspective into the Project

### Republic of Honduras

#### Urban Water Supply Strengthening Project

- 1. The Implementation Completion Report for the Water and Sanitation Modernization Project (P103881) revealed gender gaps both in terms of participation and decision-making in the UWPs.** Data collected from a 2018 survey of UWPs show that female labor force participation in WSS utilities in Honduras (18 percent) lags behind both male (82 percent), and female (32 percent) participation in utilities throughout the LAC region.<sup>47</sup> Women are especially underrepresented in technical, engineer and management positions (only 3 percent hold a leadership position, far from the 23 percent reported at the global level)<sup>48</sup>. In addition, the national average wage for male workers was approximately 12 percent higher than for comparable female workers.<sup>49</sup>
- 2. The factors contributing to the gender gap begin in education,** with a low number of women graduating in science, technology, engineering and mathematics (STEM) fields, combined with gendered social norms that deter women from entering into jobs labelled as “for men” in Honduras, the share of female graduates from STEM has been declining. It was 49.5 percent in 2003, 39.4 percent in 2012 and 37.5 percent in 2015.<sup>50</sup> Evidence demonstrates that those women who do work in utilities often work in administrative, human resources or commercial areas, rather than technical ones. Apart from challenges in attracting women to the water sector, barriers persist in terms of recruitment, retention and promotion. First, women face barriers in hiring processes derived from implicit gender bias in the hiring panel, discriminatory language in job descriptions and lack of incentives. Second, retention is hampered by lack of gender-sensitive policies, work-life balance, unsuitable facilities, discriminatory workplace, sexual harassment and wage gaps. Finally, lack of access to training options and unequal opportunities for career progression undermine women’s professional career development.
- 3. In order to address the gender gap, TA will be provided under Component 3,** to support the development of gender policies and strategies aimed at promoting women’s participation in water-related decision-making processes in UWPs serving more than 20,000 urban residents. The principles of that policy will be articulated in the human resources procedures of participating UWPs, including staff selection and promotion processes, namely: (i) *recruitment*: by introducing specific policies to avoid gender bias in hiring process, equal information about job opportunities and action plans aiming at meeting gender targets; (ii) *retention*: by reviewing policies aiming at fostering work-life balance, adequate facilities and fair wages, at the same time that a respectful and gender-friendly work culture is created by providing training on gender sensitization, sexual harassment, etc.; and (iii) *promotion* through equal access to training (leadership, managements, etc.), career mentoring programs, etc. In addition, to further attract women to STEM careers, and more specifically to the water sector, the Project will encourage UWPs to develop outreach programs for schools and promote internships with equal participation of males and females. Progress will be monitored in the Results Framework through the following Intermediate indicators: (i) Percentage of UWPs (with more than 20,000 connections) with gender policy elaborated, endorsed, and launched; (ii) Percentage of UWPs (more than 20,000 connections) with at least 10 percent female representation in leadership and technical positions.<sup>51</sup> The POM will include a gender section detailing the gender strategy and outlining several gender-sensitive approaches to promote women’s participation in leadership roles.<sup>52</sup>

<sup>47</sup> Combined IBNET data and World Bank HR Utility Survey data. Additional regional data: Ecuador 49%; Mexico 35%; Uruguay 33%; Dominican Republic 12%.

<sup>48</sup> “Women in Water Utilities: Breaking Barriers”, WB. Global averages: 22.8 % for female engineers and 23.3% for female managers.

<sup>49</sup> SCD Honduras, World Bank

<sup>50</sup> Female share of graduates from Science, Technology, Engineering and Mathematics (STEM) programs, tertiary (%) <https://databank.worldbank.org/reports.aspx?source=gender-statistics>

<sup>51</sup> The Project will work with participating UWPs to avoid the risk of having few or no female applicants for these positions by running a solid advertisement and recruitment campaign targeting women. In addition, the Project will provide training to existing staff in gender equality aspects and help organize mentoring programs for women to accelerate their career development.

<sup>52</sup> The Project will work with the utilities to avoid the risk of having few or no female applicants for these positions by running a solid advertisement



4. **Gender-based violence (GBV).** The Project was screened for GBV risks, which were determined to be low. Awareness raising and sensitization efforts will be included in the design of sub-projects as part of the social outreach program and technical assistance. These efforts will be complemented with gender and GBV capacity building processes for staff of participating UWPs, municipalities<sup>53</sup> and contractors. GBV risk assessments and these mitigation measures are reflected in the ESMF. All civil work contracts financed by the Project will include a code of conduct with specific mention of GBV. Contractors will be required to monitor compliance with the code of conduct and to organize gender training and harassment prevention workshops for their employees.

5. **The World Bank’s Regional Gender Action Plan for Latin America emphasizes the importance of closing gender gaps in economic opportunities in the region.** The water sector is traditionally a male-dominated sector. Nevertheless, water facilities can provide opportunities for *women’s economic inclusion and the promotion of women’s agency*.

6. **As the primary managers of household water, women bring valuable experience and insights to UWP decision-making that can help improve the safety and quality of services.** Data from the WSSMP shows severe gender gaps both in participation and decision-making in the WSS service providers (see Table 4.1 below). Women are significantly under-represented in the overall staff count; less than 20 percent of the 469 employees included in this analysis were female. Women are also under-represented in decision-making positions (with the exception of the facility of *Aguas de Danlí*).

Table 4.1 UWPs Gender Assessment

Water and Sanitation Provider	Total # of Employees	Total # of Males	Total # of Females	# of Females in Decision Making	General Description of Positions under Female Leadership
<i>Aguas de Choloma</i>	183	161	22	3	Accounting Manager, Human Resources and Public Relationships
<i>Aguas de Danlí</i>	36	27	9	3	General Manager, Commercial Manager and Accounting Manager
<i>Aguas de Comayagua</i>	54	49	5	0	
<i>Aguas de Siguatepeque</i>	52	31	21	4	Commercial Manager, Administrative Manager, Micrometer Readings and Rational Use of Water Campaigns
<i>Aguas de Puerto Cortes</i>	144	115	29	5	Commercial Manager, Human Resource Manager, Accounting Manager, Public Relations and Operation of WSS System
Total	469	383	86	15	

7. **The proposed Project envisions reducing the gender gaps** by analyzing gender patterns in both participation and decision-making in the WSS service providers. The Project will aim to develop a gender strategy.

8. In order to establish concrete mechanisms that ensure a more balanced participation of women in the Project, at the outset of implementation, a workshop will be organized with key stakeholders to discuss:

- a) Key gender gaps identified in the WSSMP
- b) Drivers behind those gender gaps, including:
  - (i) Barriers to women’s participation in WSS management, commercial, financial and maintenance roles;
  - (ii) Gender bias in technical fields of study that reduce women’s employment in WSS; and
  - (iii) Barriers to men and women in having equal voice in decision-making at the Project and institutional levels.

and recruitment campaign targeting women. In addition, the Project will provide training to existing staff in gender equality aspects and help organize mentoring programs for women to accelerate their career development.

<sup>53</sup> As mandated by the Municipal Law, the Municipal Offices for Women of the participating urban municipalities, will be involved in the capacity building initiatives which will include an assessment of the incidence of GBV and tailoring of training to staff of participating UWPs, municipalities and contractors.



- c) Positive experiences within the WSSMP. For instance, in *Agua de Siguatepeque* women led the house-to-house micrometer reading and the house-to-house rational use of water campaigns. In Puerto Cortés, a gender assessment was undertaken.
- d) Opportunities to enhance gender equality in the Project, related to participation and type of participation (i.e. participation among the different tasks involved instead of a gender segregated distribution of tasks).
- e) A gender equality plan/strategy to be implemented during project implementation.

**Table 4.2 Draft Gender Action Plan/Strategy**

Gender Gap	Factors Affecting Gap	Gender Actions to Address Gap <sup>54</sup>	Gender Indicators
<b>The Project will work directly:</b>			
Female labor force participation in WSS utilities in Honduras (18 percent) is significantly below that of males. Females are especially underrepresented in technical, engineer and management positions.	<ul style="list-style-type: none"> <li>• Recruitment:               <ul style="list-style-type: none"> <li>○ Gender bias</li> <li>○ Lack of incentives</li> <li>○ Lack of knowledge about job opportunities</li> </ul> </li> <li>• Retention:               <ul style="list-style-type: none"> <li>○ Lack of work-life balance</li> <li>○ Inadequate policies</li> <li>○ Unsuitable facilities</li> <li>○ Discriminatory workplace</li> <li>○ Sexual harassment</li> <li>○ Salary inequities</li> <li>○ Advancement</li> <li>○ Lack of training</li> <li>○ Inequal opportunities in promotion</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Equal opportunity recruitment:</b> Specific policies to avoid gender bias in hiring process. Gender-blind recruitment/ diverse interview panels/ competency-based hiring. Inclusive job advertisements. Widespread advertisement and recruitment campaign targeting women. Action plan aiming at meeting gender targets.</li> <li>• <b>Retention:</b> <ul style="list-style-type: none"> <li>○ <u>Work-life balance and family friendly policies:</u> flexible work arrangements; policies for allowing break times for nursing mothers; maternity/paternity leaves; policies guaranteeing jobs returning from maternity, etc.</li> <li>○ <u>Facilities:</u> separate toilets and changing rooms; menstrual hygiene management; lactation rooms; etc.</li> <li>○ <u>Sexual harassment:</u> clear anti-sexual harassment policies, codes of conducts, etc.</li> <li>○ <u>Wage:</u> policies for equal and fair wages for equivalent work</li> <li>○ <u>Training:</u> HR trainings to include gender modules: gender sensitization, sexual harassments, etc.</li> <li>○ <u>Gender focal point</u> created within the utility</li> </ul> </li> <li>• <b>Advancement</b> <ul style="list-style-type: none"> <li>○ <u>Equal access to training</u> (leadership, management, public speaking, etc.). Training accessible in terms of schedules and location</li> <li>○ <u>Targets</u> aimed at increasing gender balance in leadership positions</li> <li>○ <u>Mentorship programs</u> and workshops for sharing experiences by women who already hold a leadership position</li> <li>○ <u>Transparent promotion policies, procedures and guidelines</u></li> </ul> </li> </ul>	-% participant UWPs with: <ul style="list-style-type: none"> <li>○ Gender policy elaborated and endorsed</li> <li>○ % increase in share of women in high-level decision-making positions &gt; 10%</li> <li>○ % increase in share of women in medium-level technical positions &gt; 25%</li> </ul> Target: 70% UWPs with more than 20,000 connections
<b>The Project will advocate for:</b>			
Low level of female graduates in STEM fields	<ul style="list-style-type: none"> <li>○ Education and training</li> <li>○ Gender role stereotypes</li> <li>○ Lack of role models of female professionals</li> </ul>	The Project will advocate and foster collaborative efforts between utilities and district-level schools. Example of activities: <ul style="list-style-type: none"> <li>○ Utilities carry out outreach programs to encourage young women to pursue STEM studies that are beneficial to a utility (engineering, hydrology, etc.)</li> <li>○ Female representatives present the work of utilities to schools</li> <li>○ Advocacy for scholarships and internships with balanced participation from men and women (quotas)</li> <li>○ Promotion of technical and vocational education in areas such as meter reading, O&amp;M (e.g. plant and machine operation, plumbing), chemical treatment, etc.</li> </ul>	NA

<sup>54</sup> The specific actions will be detailed in the Project Operation Manual.



## **ANNEX 5: Economic and Financial Analysis<sup>55</sup>**

### **Republic of Honduras**

### **Urban Water Supply Strengthening Project**

#### **Value added of Bank support**

1. The World Bank (WB) is well placed to provide value-added support to the Government of Honduras (GoH) to improve the operational and financial efficiency of UWPs, as demonstrated by its global experience with similar projects. The WB will also bring its expertise in applying and adapting evidence-based technical knowledge at scale to help participating UWPs control their NRW, reduce energy consumption, and adopt commercial management models to help participating UWPs achieve their improved operational and financial objectives. In doing so, the WB will help the GoH to improve WSS services for its population.

#### **Methodology and parametric assumptions**

2. The economic and financial analysis is consistent with the WB guidelines for economic analysis of investment project financing and the guidelines on Carbon Accounting and the Shadow Price of Carbon in Project Appraisal. It includes the assessment of the Project's development impact, the rationale for public sector provision of financing for the Project, and the World Bank's value added. The economic analysis also addresses sustainability of the proposed investments (financial and fiscal). As explained below, a standard cost benefit analysis (CBA) was carried out using 6-year projections of costs and benefits for the infrastructure investment in Components 1 and 2, at 2020 constant prices. The life of the infrastructure assets is assumed to be 20 years and the rate of discount of 6 percent as the Project contributes to CO2 emission reduction and mitigation of climate change. The exchange rate is 24.5 lempiras per US\$1.

#### **Development Impacts**

3. The Project intends to help municipal governments establish UWPs and turn-around their operational and commercial management; it also intends to help improve operational and commercial management of already autonomous UWPs established under previous projects (e.g., the WSSMP). As a result of project interventions, the following development impacts are expected:

- (i) Improved operational (productive) efficiency of autonomous municipal water utilities participating in the Project. As a result of improved productive efficiency, more people will get access to water supply services from the water utilities.
- (ii) Improved financial efficiency of autonomous municipal water utilities participating in the Project. As a result of improved financial efficiency, autonomous water utilities are expected to fully cover their operation and maintenance costs and to contribute to the financing of infrastructure investments. Also, as a result of improved financial efficiency participating water utilities are expected to pay their regulatory fees to ERSAPS, the sector regulatory agency, who will oversee their performance.
- (iii) Improved water supply service continuity in urban areas served by the water utilities participating in the Project. As a result, customers of the participating water utilities will avoid spending time fetching water from other sources, including private vendors, at higher prices.
- (iv) Better health and quality of living standards of beneficiaries will be positively impacted (not counted as part of the development impact).

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<sup>55</sup> The full Economic and Financial analysis of the Project can be found in project files.

## Cost Benefit Analysis

4. The cost benefit analysis is based on cost/benefit methodology using projection of cash flows of UWPs participating in the Project. Since the Project is demand-based, such projections are built using a prototype model of the average utility that may participate in the Project. Such prototype model has been built based on information of historical cash flows and key parametric assumptions of a sample of candidate UWPs visited during project preparation, including, *Aguas de Juticalpa*, *Aguas de La Paz*, *Aguas de Siguatepeque*, and *Aguas de Danlí*. The parametric assumptions for the cash flow projections are set taking into account the sample baseline information and expected milestones to be achieved by the participating UWPs in order to attain the PDO. It is expected that such milestones, on a case by case basis as the UWPs enter into the Project, will be incorporated into an Improvement Agreement signed between each participating UWP and ERSAPS.

## Cash flow projections

5. **Key parametric and operating assumptions for the base case scenario.** For the base case scenario, cash flow projections at constant 2020 market prices are done based on the parametric assumptions included in Table 5.1. The parameters chosen represent the core direct and indirect results the Project intends to help UWPs achieve through its strategic interventions; i.e., investments focused on the control of non-revenue water (NRW), the implementation of volumetric billing to induce rational use of water, improvements in the reliability (number of hours per day) of service provision for the benefit of customers, improved collection efficiency to achieve more financially sustainable UWPs. Achievement of milestones in these key parametric indicators is expected to result in financial sustainability as measured by the operating ratio and on operational sustainability as measured by energy per m<sup>3</sup> of water produced.

**Table 5.1: Key parametric assumptions for projecting the cash flows of the prototype water utility**

	2019	2020	2021	2022	2023	2024	2025	2026
Coverage of water supply service under UWSP	63%	65%	67%	68%	70%	71%	73%	74%
Non revenue water (NRW)	50%	50%	49%	48%	47%	47%	46%	45%
Service continuity (average hours per day)	2	2	3	3	3	3	4	4
Connections under volumetric billing	0%	4%	7%	11%	14%	18%	21%	25%
Collection efficiency	72%	75%	77%	80%	82%	85%	87%	90%
Average tariff for Vol billing (Lempiras/m3)	11.00	11.20	11.40	11.59	11.79	11.99	12.19	12.39
Average monthly fee/connection w/o meter (L/month)	142	142	142	142	142	142	142	142
<b>Key results expected to be attained</b>								
Operating ratio (Revenues/O&M cost)	1.20	0.88	0.94	1.00	1.07	1.14	1.22	1.30
Kwh per m3 water produced	1.32	1.30	1.28	1.26	1.25	1.23	1.21	1.19

- (a) **Coverage of Water Supply Service.** Based on information collected during preparation, it is estimated that coverage by the average UWP is at about 63 percent and the Project expects to increase it up to 74 percent. The cash flow projection assumes that UWPs supported by the Project will gain more economies of scale and lower their production costs, and eventually will reach most customers in the urban areas and cover roughly 74 percent of all household in the urban area at the end of project implementation.
- (b) **Non-revenue water.** The estimated starting value for NRW is 50 percent and it is expected to go down to 45 percent by the end of project implementation. NRW in most urban areas is presumed to be high, as reported by ERSAPS. However, accurate estimates can be done only when bulk water production and connection meters are installed and maintained properly. The Project will include deployment of both bulk meters and connection meters and will have an accurate measure of NRW.
- (c) **Service continuity.** It is assumed that service delivery per day will improve from an average 2 hours per day to an average 4 hours per day at the end of project implementation. Most UWPs that will participate in the Project have a very limited number of hours of service per day, and many offer the service 2 or 3 days a week



for two hours. In extreme cases, water utilities offer 3 hours of service every 12 days. The major challenge to improving number of hours per day is that NRW will normally increase as the number of hours of service goes up; therefore, the Project will have to identify distribution zones with low leakage and simultaneously make targeted interventions (including volumetric billing and rehabilitation of pipe-network) prior to increasing the number of hours of service in the various zones of intervention.

- (d) **Volumetric billing.** Is assumed to increase from zero up to 25 percent by the end of project implementation. Implementation of volumetric billing will require the definition of a two-prong strategy based on (i) the demonstration that those who consume less will pay less; especially poor segments of the customer base; and (ii) prioritize volumetric billing deployment for those who consume more to faster increase utilities' revenues. By choosing to reduce billing to those who consume less, the Project will achieve key intermediate outcomes, savings of water that can then be sold to higher paying customers and support of customer base to the volumetric billing policy. This strategy, at the beginning, will reduce the per connection revenue of the water utility. However, once the volumetric billing is expanded to higher consumption volume, customers revenues will grow vigorously.
- (e) **Collection efficiency.** Starting collection efficiency is assumed to be 72 percent at present and expected to go up to 90 percent by the end of project implementation. Improved collection efficiency is expected to result in the utility's improved cash available at each year of the projection.
- (f) **Average volumetric tariffs and fixed per month fees.** Average volumetric tariff is expected to go gradually from about 11 Lempiras/m<sup>3</sup> (US\$0.45/m<sup>3</sup>) up to 12.39 Lempiras/m<sup>3</sup> (US\$0.51/m<sup>3</sup>) or about 2 percent per year, which will be justified by the improved service provision. Using the above tariffs, low consumption customers will be paying roughly 165 Lempiras/month based on volumetric billing which is about 18 percent less than customers without meters, provided the minimum consumption threshold is set at 15 m<sup>3</sup>/month.
- (g) **Key results expected to be attained.** Upon achieving the milestones embodied in the key parametric assumptions, the prototype water utility is expected to:
  - (i) Achieve an operating ratio equal to 1.30, although during the first three years the operating ratio will deteriorate significantly (Table 5.1).
  - (ii) Achieve a better productive efficiency as measured by the kWh of energy used for each cubic meter of water delivered to customers.

### Projection of cash flows for financial evaluation

6. The results of the cash flow projection for the financial evaluation, based on the parametric assumptions to achieve project objectives, is shown in Table 5.2.



Table 5.2: Cash flow for financial evaluation, prototype water utility (US\$)

	Historical	Projection						
	2019	2020	2021	2022	2023	2024	2025	2026
Total revenues	783,661	879,255	987,061	1,108,265	1,244,094	1,395,811	1,564,715	1,752,143
Total O&M costs	653,608	999,885	1,053,897	1,109,444	1,166,589	1,225,399	1,285,949	1,348,312
<b>Earnings B. Int., Taxes, Depr. &amp; amortization (EBITDA)</b>	<b>130,053</b>	<b>-120,630</b>	<b>-66,837</b>	<b>-1,179</b>	<b>77,506</b>	<b>170,411</b>	<b>278,766</b>	<b>403,831</b>
<b>Cash from operations</b>		<b>-344,212</b>	<b>-292,451</b>	<b>-225,998</b>	<b>-142,877</b>	<b>-40,954</b>	<b>82,059</b>	<b>228,617</b>
Cash from financing for activities (IDA+Mun. Gov.)		-124,859	-377,406	-379,953	-382,500	-385,047	-137,594	-140,141
Salvage value of investments		0	0	0	0	0	0	1,616,941
Net cash, including salvage value		-469,071	-669,857	-605,951	-525,377	-426,001	-55,535	1,705,417
Present value of cash flow from operations		0	0	0	0	0	0	2,023,875
<b>Cash flow for evaluation, incl PV of cash flow from Op.</b>		<b>-469,071</b>	<b>-669,857</b>	<b>-605,951</b>	<b>-525,377</b>	<b>-426,001</b>	<b>-55,535</b>	<b>3,729,292</b>
Financial results for prototype utility								
IRR		7.7%						
NPV (@6% discount rate, US\$)		159,103						

7. Based on the projection of the financial cash flows, the FIRR is 7.7 percent and the FNPRV, at 6 percent rate of discount, is US\$159,103. These results for the prototype water utility will be used to make an estimate on the financial IRR and NPV for the whole Project.

**Projection of cash flows for the economic evaluation**

8. The projection of the cash flow for the economic evaluation has been built based on the financial projection at market prices. Two major corrections to the market prices are done as follows:

- (i) On the revenue side, official tariffs collected by water utilities and paid by customers for water services delivered to customers, do not seem to represent the actual value of water for customers, especially in regard to health and to the comfort of not having to spend time to collect it. This is demonstrated by the actual payments (many times above US\$2-\$4 per m<sup>3</sup>) made by most customers to alternative providers of water services when facing scarcity, which happens regularly. Hence, to take into account health and comfort of not spending time to fetch water, the financial tariffs paid by customers are corrected by a factor of 1.34.
- (ii) On the cost side, there is a major distortion introduced by a law that allows water utilities to pay half the market price for electricity. Since electricity is a major input for water service provision, the subsidy to electricity is key to make water utilities financially viable. However, from an economic perspective, it introduces a distortion that needs to be corrected. Therefore, the value of the input of electricity for water production has been corrected to reflect the economic cost of electricity in Honduras.

9. Table 5.3 shows the cash flows corrected, as per above, for the economic evaluation.





**Table 5.3: Cash flow for economic evaluation, prototype water utility (US\$)**

	Historical	Projection						
	2019	2020	2021	2022	2023	2024	2025	2026
Total revenues	783,661	879,255	987,061	1,108,265	1,244,094	1,395,811	1,564,715	1,752,143
Total O&M costs	653,608	1,501,592	1,584,132	1,668,392	1,754,431	1,842,307	1,932,085	2,023,835
<b>Earnings B. Int., Taxes, Depr. &amp; amortization (EBITDA)</b>	<b>130,053</b>	<b>-622,337</b>	<b>-597,071</b>	<b>-560,127</b>	<b>-510,336</b>	<b>-446,496</b>	<b>-367,370</b>	<b>-271,692</b>
<b>Cash from operations</b>		<b>-340,975</b>	<b>-281,212</b>	<b>-205,482</b>	<b>-112,226</b>	<b>164</b>	<b>133,338</b>	<b>288,994</b>
Cash from financing for activities (IDA+Mun. Gov.)		-124,859	-377,406	-379,953	-382,500	-385,047	-137,594	-140,141
Salvage value of investments		0	0	0	0	0	0	1,616,941
Net cash, including salvage value		-465,835	-658,618	-585,436	-494,726	-384,883	-4,256	1,765,794
Present value of cash flow from operations		0	0	0	0	0	0	2,558,374
<b>Cash flow for evaluation, incl PV of cash flow from Op.</b>		<b>-465,835</b>	<b>-658,618</b>	<b>-585,436</b>	<b>-494,726</b>	<b>-384,883</b>	<b>-4,256</b>	<b>4,324,168</b>
Financial results for prototype utility								
IRR	12.9%							
NPV (@6% discount rate, US\$)	676,165							

10. Based on the projection of the economic cash flows, the economic internal rate of return (IRR) is 12.9 percent and the Economic Net Present Value (NPV), at 6 percent rate of discount, is US\$ 676,165. These results for the prototype water utility will be used to make an estimate of the economic IRR and economic NPV for the whole Project.

### Project-wise results

11. Assumptions for project-wise projections and key cost benefit analysis parametric assumptions. Given that the total investment financing for sub-projects under sub-components 1.1 to 1.4 is US\$40.5 million, and assuming that average co-financing from municipalities will be 20 percent, total available funding for these sub-projects will be in the order of US\$50 million. With this financing budget, it is estimated that the Project will finance about 21 sub-projects, each requiring on average US\$2.41 million. As outlined at the introduction for this annex, the CBA is carried out using 6-year projections of costs and benefits for the infrastructure investment in Component 1 at 2020 constant prices. The life of the infrastructure assets is assumed to be 20 years and the rate of discount 6 percent, as the Project contributes to GHG emission reductions and mitigation of climate change. The exchange rate is 24.5 Lempiras/US\$.

### Assessment of contribution to GHG emission reductions

12. Since the Project intends to improve operational efficiency and reduce the kWh to produce each m<sup>3</sup> of water delivered to customers, the estimates of project savings of kWh of energy over a 20-year life of the assets are as presented in Table 5.4.

**Table 5.4: Impact of project activities on GHG emission reduction**

	Projection							
	2021	2022	2023	2024	2025	2030	2035	2040
Millions of KWH without project	69.51	77.71	86.05	94.53	103.16	111.93	111.93	111.93
Millions of KWH with project	69.51	75.68	81.67	87.49	93.16	98.70	98.70	98.70
<b>Saved GwH/year</b>	<b>0.00</b>	<b>2.03</b>	<b>4.38</b>	<b>7.04</b>	<b>9.99</b>	<b>13.24</b>	<b>13.24</b>	<b>13.24</b>
MT CO2 estimate emission reductions	0.00	-960.03	-2072.02	-3329.71	-4727.48	-6260.20	-6260.20	-6260.20

13. To integrate emission reduction into the economic analysis, the monetary valuation of these emissions is estimated using the shadow price of carbon (SPC). SPCs for each year are given as a range defined by shadow price of carbon lower bound (SPC-L) and a shadow price of carbon higher bound (SPC-H). Cash flow projections considering GHG emission reductions and using SPC upper and lower bound resulting in IRRs of 15 percent and 13 percent, as presented in tables 5.5 and 5.6, respectively.

**Table 5.5: Cash flow for economic evaluation including effects of Project on reduction of carbon emissions**

	2020	2021	2022	2023	2024	2025	2026
Cash flow for evaluation, upper bound	(9,624,580)	(13,543,966)	(11,905,327)	(9,883,959)	(7,445,840)	496,826	96,416,544
Cash flow for evaluation, lower bound	(9,664,734)	(13,632,585)	(12,050,950)	(10,095,378)	(7,732,122)	204,084	90,343,688
Upper IRR	15%						
Lower IRR	13%						
NPV upper bound (@ 6% discount, US\$m)	19.9						
NPV lower bound (at 6% discount, US\$m)	15.1						

**Table 5.6: Shadow price of carbon**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SPC-H	80.0	81.8	83.7	85.5	87.5	89.4	91.5	93.5	95.6	97.8	100.0
SPC-L	40.0	40.9	41.8	42.8	43.7	44.7	45.7	46.8	47.8	48.9	50.0

	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
SPC-H	102.3	104.6	106.9	109.3	111.8	114.3	116.9	119.5	122.2	125.0
SPC-L	51.1	52.3	53.5	54.7	55.9	57.2	58.5	59.8	61.1	62.5

### Project-wise results and sensitivity analysis

14. The results obtained for the CBA indicators project-wise, including EIRR, FIRR and range estimates for the EIRR that includes the effects of the Project on the reduction of GHG emissions are presented in Table 5.7. This table also includes the economic, financial and range estimates for the NPVs, project-wise which are used as base case scenario upon which a sensitivity analysis has been carried out.

**Table 5.7: Cost benefit indicators, base case scenario project-wise and results for sensitivity analysis**

	Economic	Financial	Range estimate, incl SPC	
			SPC (L)	SPC (H)
IRR, base case scenario	12.9%	7.7%	14.2%	15.5%
IRR, Ten percent cost overrun	12.1%	7.1%	13.4%	14.7%
IRR, NRW 46%	10.8%	6.5%	12.1%	13.5%
IRR, Continuity 3.5 hours	15.9%	9.1%	17.1%	18.4%
NPV (@6% discount, US\$m), base case	14.09	3.31	17.02	19.95
NPV (@6% discount, US\$m), 10% cost overrun	13.09	2.32	16.02	18.95
NPV (@6% discount, US\$m), NRW 46%	9.56	1.05	12.50	15.43
NPV (@6% discount, US\$m), Continuity 3.5 hours	20.91	6.06	23.85	26.78

15. **The Project is economically and financially viable and contributes to global benefits.** The EIRR is 12.9 percent and the FIRR is 7.7 percent, both indicators above the 6 percent rate of discount used for projects that have impacts on the reduction of carbon emission and positive climate change effects. These results mean that compared with other similar projects in Honduras that deliver a 6 percent rate of return, this Project will deliver economic benefits in excess of 6.9 percentage points above what the other projects can deliver. When the effects of project activities on carbon emissions are taken into account, the Project's EIRR will be in the range of 14.2 and 15.5 percent, also above the 6 percent rate of discount. All considered, according to the IRR indicators, the Project is economically and financially viable and when the effects of project activities on carbon emissions are taken into account, the Project is assessed to contribute to social global benefits.

16. **The estimates of the NPV at a six percent rate of discount confirm the assessment done using the IRR;** i.e., from



an economic perspective, the Project will deliver a US\$14.09 million on top of recovering the present value of investments and operation and maintenance costs and, from a financial perspective, it will recover US\$3.31 million on top of recovering investment and operations and maintenance costs. When the Project's effects on carbon emissions are considered, it will deliver an excess NPV between US\$17.02 million and US\$19.95 million. Hence, again, the Project is economically and financially viable, and it contributes to global social benefits.

17. **Sensitivity analysis.** A sensitivity analysis of project outcomes due to cost overruns, changes of targets for NRW, and changes of targets for continuity of service provision has been performed around the results obtained for the base case scenario. The sensitivity results are presented in summary form in Table 5.5.

18. **Sensitivity to cost overruns.** A 10 percent cost overrun results in 0.8 percentage points loss in relation to the EIRR; i.e., it falls from 12.9 percent to 12.1 percent. In the case of the FIRR, it decreases in about 0.6 percentage points, from 7.7 percent to 7.1 percent. Based on such calculations, it seems that the Project might be resilient to cost overruns of as much a 20 to 30 percent before becoming economically and financially not viable. However, if the rate of discount were not that for a project dealing with climate change (i.e., 6 percent), the Project's economic and financial viability would be compromised at 10 percent cost overrun.

19. **Sensitivity to not achieving NRW targets.** In relation to the base case scenario, which assumes a target of 45 percent for NRW, not achieving such target and instead achieving only 46 percent NRW would result on reducing the EIRR in 2.1 percentage points, from 12.9 down to 10.8 percent, while the financial internal rate of return falls 1.2 percentage points from 7.7 down to 6.5 percent. So, each percentage point of under-achievement has a big impact on economic viability; and while the Project remains economically viable if the NRW target is slightly missed, it will become financially not viable if that happens. This only shows the importance that the Improvement Agreements to be signed between the participating water utilities and ERSAPS include such targets for the Project to achieve its development objectives that include sustainable water service provision.

20. **Sensitivity to continuity of service provision.** Service continuity target for the base case scenario has been set at 4 hours per day. If the water utility would want to increase service provision in one additional hour (i.e., 5 hours per day rather than 4) the economic IRR would fall from 12.9 to 5.6 percent making the Project economically non-viable. Going in the other direction, i.e., lowering the target of continuity to 3.5 hours (rather than 4), would make the EIRR jump from 12.9 percent up to 15.9, while the financial IRR goes from 7.7 percent up to 9.1 percent. These results indicate that although continuity of service is key to consumer welfare, increasing the number of hours of service might increase losses in distributions systems that will eventually be reflected in economic and financial losses, while decreasing number of hours of service might be the least cost option to decrease losses.