



Program Information Document (PID)

Concept Stage | Date Prepared/Updated: 13-Dec-2022 | Report No: PIDC274287

**BASIC INFORMATION****A. Basic Program Data**

Country Chile	Project ID P179117	Parent Project ID (if any)	Program Name Chile's Water Transition
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 06-Mar-2023	Estimated Board Date 08-Aug-2023	Does this operation have an IPF component? No
Financing Instrument Program-for-Results Financing	Borrower(s) Ministerio de Hacienda	Implementing Agency Ministry of Environment (MMA), Ministry of Public Works (MOP)	Practice Area (Lead) Water

Proposed Program Development Objective(s)

To strengthen the Borrower's capacity for WRM and increase water security in targeted areas.

COST & FINANCING**SUMMARY (USD Millions)**

Government program Cost	1,713.00
Total Operation Cost	500.00
Total Program Cost	500.00
Total Financing	500.00
Financing Gap	0.00

FINANCING (USD Millions)

Total World Bank Group Financing	250.00
World Bank Lending	250.00
Total Government Contribution	250.00

Concept Review Decision



The review did authorize the preparation to continue

B. Introduction and Context

Country Context

- 1. Chile experienced inclusive growth for over a decade before the Covid-19 pandemic.** Supported by solid macroeconomic management and high commodity prices, Chile's economic growth averaged 4.4 percent annually between 2006 and 2013. It slowed thereafter to an average of 2 percent in the six years prior to the Covid-19 pandemic, as the commodity boom ended, and reforms stalled. Since 2006, the country experienced a substantial decline in poverty, achieving one of the lowest poverty rates in Latin America. The population living on less than \$US 6.85 a day dropped from 29.9 percent in 2006 to 7.4 percent in 2019;¹ the population at risk of falling into poverty also declined, and Chile's middle class expanded quickly, rising from 31.0 percent to 57.5 percent of the population.² Moreover, income inequality also declined, even if it remains high in comparison to OECD countries. Between 2006 and 2017, the Gini index fell from 47.3 to 44.4 percent. The average Gini coefficient in OECD countries is 33.7.³
- 2. Emergency social protection programs implemented during the Covid-19 pandemic helped cushion income losses of vulnerable families, but these effects are expected to revert as the economy faces short term challenges.** Poverty (US\$6.85 a day in 2017 PPP) increased slightly from 7.4 percent in 2019 to 8 percent in 2020 and dropped sharply to 2.1 percent in 2021 as the government laid out significant fiscal aid in mid-2021. Fueled by a strong fiscal response to COVID-19, Chile experienced one of the fastest economic recoveries worldwide in 2021; and after growing 11.7 percent in 2021, GDP was expected to grow 1.8 percent in 2022. However, emergency cash transfers will recede in 2022 to achieve fiscal consolidation. This, along with the economic slowdown and high inflation, are expected to increase poverty (US\$6.85 a day in 2017 PPP) to 10.5 percent and the Gini index to 47.1. Levels are expected to remain equally high in 2023 without returning to pre-pandemic levels in the short term and the GDP will face a sharp deceleration by contracting 0.5 percent, as both fiscal and monetary policy have tightened significantly. Poverty reduction and sustainable income growth will require boosting job creation, increasing female labor force participation, facilitating access to economic opportunities for the poor and vulnerable, closing gaps in endowments, and making the middle class more resilient to shocks.
- 3. Long term challenges such as climate change are posing an additional threat to Chile's economy.** According to the Global Climate Risk Index 2021, the country is in the top 25 of countries most vulnerable from extreme weather changes⁴. Extreme events such as floods and droughts are already having a significant impact in Chile's economy. Between 1965-2019 four major droughts have been recorded in the country with losses that on average exceeded US\$1 billion. Drought accounted for a 0.69 percent GDP loss in 2019 alone. In addition to droughts during the same

¹ International poverty is measured against income in 2017 purchasing power parity (PPP) US dollars.

² The population at risk of falling into poverty is defined as those with daily per capita income between \$6.85 and \$14 in 2017 PPP. This group declined from 37.6 to 31.1 percent. The middle-class is defined as the population with daily per capita income between \$14 and \$81 in 2017 PPP.

³ World Bank Data, OECD is simple average for 2017 or closest year available

⁴ Kreft, S./ Eckstein, D./ Melchior, I. (2021): Global Climate Risk Index 2021. Available at: https://reliefweb.int/attachments/b6a6928e-214a-3398-bc01-1460f32bb3ad/Global%20Climate%20Risk%20Index%202021_1.pdf



period, the country experiences 37 floods with an estimated loss of over US\$5 billion, of which US\$2 billion, equivalent to 0.62 percent of GDP in 2015. Without adequate management of water extremes, future climate change will only exacerbate these impacts.

Sectoral (or multi-sectoral) and Institutional Context of the Program

4. **Most people and economic activities are located from the Metropolitan region to the north where water scarcity is severe and increasing as a result of climate change and increased water demand.** The area from the Metropolitan region to the north generates most of the country's GDP and exports but is already using practically all naturally occurring water resources in its territory. This is an area where water availability is a clear limitation to further economic growth and where the sustainability of present uses is at risk in several basins, as demonstrated during the last decade drought. This is an area where groundwater is fully exploited, sometimes over-exploited and where surface water storage is fully developed. The area to the South, located between O'Higgins and La Araucanía, presents local water deficits in dry years, however with adequate management of water resources and further development of hydraulic infrastructure, it is possible to increase water use from both ground and surface water and meet future water demands, including to expand irrigated areas. From the Los Rios region to the south, water is plentiful and demand is low. From a water use perspective, as in most countries, agriculture is the main water user accounting for 74 percent of total water withdrawals, followed by mining and industries (14 percent) and domestic water supply (12 percent).
5. **Water has played an important role in Chile's economic growth, particularly due to the importance of mining and irrigated agriculture, as well as hydropower on which was based Chile's industrialization.** The conjunction of goods with water-intensive production processes accounts today for more than 20 percent of GDP and employments and more than 80 percent of national exports. This is without considering the service sector which also requires reliable water supply services for its development.
6. **Water has also played a fundamental part in the improvement of living conditions predominantly in urban areas.** Chile has achieved close to universal access to safe drinking water (99.9 percent of the population) and sanitation (96.7 percent) in urban areas with a rate of wastewater treatment of 99.9 percent. These achievement in urban areas, which are home to 88 percent of the Chilean population, have contributed to significant improvements in the population living conditions, including a reduction of deaths and diseases attributable to water-related diseases and lack of hygiene, particularly among children under the age of 5, the lowest in South America after Uruguay. The expansion of these benefits to rural areas remains a challenge.
7. **The sustainability of these achievements is increasingly at risk.** Competition over water resources, the effects of climate change and gaps in the management of water resources and the provision of basic services are hindering Chile's socio-economic development. Chile's current management system does not consider planning instruments with an integrated water resources management approach, nor with a medium- and long-term vision. The lack of planning at the river basin level, hinders the definition of measures to develop, protect and harness the resources, preventing decision-making over the competing uses and different demands for water resources and associated systems within a basin. This limits the development of initiatives of common interest aimed at improving the resilience of the basin, carrying out multiple-use projects, adequate management of pollution and environmental issues, among others. These challenges are exacerbated by the lack of data and information and lack of compatibility of different data sources, obstructing timely decision making, particularly in the central to the northern provinces, which have seen growing water competition since the early 2000's and are increasingly experiencing growing



conflicts between agricultural users, mining, and water for domestic consumption.⁵

8. **In addition, there is still an important hydraulic infrastructure gap, from planning to development, in relation to water resources, flood and drought management, and water supply and sanitation services.** While the government of Chile provides significant funding to the sector and the delivery of hydraulic infrastructure resides under the responsibility of the Ministry of Public Works (Ministerio de Obras Públicas- MOP), the planning of such infrastructure does not follow a river basin planning perspective. Infrastructure projects in irrigation, flood protection, and river sedimentation are planned as separate interventions with limited interaction across technical teams and only basic considerations for resilience or climate change, hampering the results and greater impacts that could be obtained from project investments funded by the government.
9. **Scarcity and climate change are also increasing the risk to meet water service provision particularly in rural areas where service gaps persist. More than half of Chile's 19 million population live in a region with severe water scarcity.** In rural areas of the country, drinking water is provided by small cooperatives or Rural Potable Water Committees (APR). At present, there are 1,902 organizations supplying an estimated population of 1,735 million people, leaving a semi-concentrated rural population of around 150,000 people that do not receive service and an estimated 700,000 people in rural Chile that lack access to adequate drinking water. In addition, only 17 percent of rural households have access to sewerage while 83 percent have diverse in-situ solutions of which the quality conditions are unknown. To bridge the water service gap in water scarce areas, the government has turned to costly solutions as water trucks.
10. **Chile's institutional and legal framework limit the ability of the country to move forward with water-related investments.** The Water Code (Law 1122) enacted in 1981, and amended in 2022, is the main legal basis for the management of water resources (except for water quality). While the water code succeeded in encouraging water-related investments and improved water use efficiency, it gave rise to a number of water management problems. The Water Code assigned a very limited role to the State in the management of water resources mainly through the Directorate-General for Water (Dirección General de Aguas, DGA), housed within the MOP, as the main public agency responsible for water resources management. However, the role, power, and means of the Water Authority (DGA) are facing several challenges: DGA's role and functions are too limited considering the challenges faced today in water resources; DGA lacks a sufficient level of hierarchy and authority, considering that it has to deal and negotiate with ministries, regulatory agencies, local governments, and big private companies; DGA's human and financial resources as well as local-level presence are insufficient to adequately carry out its current functions. Moreover, the Water Code does not foresee River Basin Councils or Committees that would represent public and private basin stakeholders in the planning and management of water resources and play a central role in the implementation of basin-scale, participatory, integrated water management and in strengthening inter-institutional coordination at the basin level. Finally, Ley 20.998 - Servicios Sanitarios Rurales, adopted in January 2017 and regulated in 2019, creates the Sub-Directorate of Rural WSS Services (Subdirección de Servicios Sanitarios Rurales-SSR in its Spanish acronym) within the Ministry of Public Works with role in the planning and implementing of rural WSS investments, formalization of rural WSS service providers through registry and licenses, and by delivering technical assistance to rural WSS service providers is still in its early stages of implementation.

⁵ Regarding the evolution of future demands considering this pattern, the studies of the DGA (2017) project an increase of 4.5% in consumptive demand by 2030, and 9.7% by 2040, with industrial demands being the most dynamic with an increase of 66% by 2040. The increase in domestic demand for that period is estimated at 25.0% and agricultural demand at 3.4%. In addition to the traditional demands, a new demand refers to the water requirements for the production of green hydrogen. Although this demand is insignificant (9kg of H₂O / Kg of hydrogen produced) when compared to the others, it is advisable to take it into account in areas of high scarcity, abiding by the innovative policy of the National Government on Green Hydrogen and avoiding future limitations that may prevent Chile in achieving its decarbonization objectives.



- 11. The current Government is calling for an important shift in water resources management and has placed water security high on the political agenda.** In April 2022, President Boric signed a reform to the 1981 water code that had languished in congress for 11 years. The new water code declares water a public good for human use and acknowledges climate change as a threat to Chile's water availability. The code also establishes the principle of joint management of surface and groundwater resources. In addition to the approval of the Water Code, the government launched a national water strategy called 'Transición Hídrica Justa'. The strategy calls for a paradigm shift moving towards a river basin approach with a strong focus on resilience, ecosystems and integrated planning. The roll-out is led by an Inter-ministerial Committee (Comité Interministerial de Transición Hídrica Justa), led by the Minister of Environment (Ministerio de Medio Ambiente, MMA), and composed by the Minister of Public Works (Ministerio de Obras Publicas, MOP), Minister of Agriculture, Minister of Energy, Minister of Science and Technology, and the Minister of Mining. The Committee not only seeks to address the urgent water crisis, but also to move towards a sustainable and fair management of water. The thematic axes of the national program include human right to water, infrastructure for the transition, food production and farming agriculture, institutions, and ecosystems. Cross-cutting thematic areas include research and information, environmental education, and financing.

Relationship to CAS/CPF

- 12. The proposed Program is in line with the Chile Country Partnership Framework (CPF) for FY2023-27, which is undergoing revision and expected to be approved in early 2023.** The operation responds directly to CPF objective 4 (to improve institutional framework and investments in the water sector to enhance resilience and ensure equitable access to water and sanitation services) by strengthening institutional capacities for an integrated management of water resources, considering environmental, social, and economic requirements. Institutional strengthening is considered at both the national and basin level and considers the creation of a new water authority and the strengthening of DGA, as well as the creation of councils at the river basin level, to allow for enhanced planning in view of climate change impacts. The operation also addresses climate resilience through the development of gray and green infrastructure in priority river basins. Additionally, the Program is being designed to improve safely managed drinking water and sanitation services in rural areas, thereby contributing towards closing access gaps.
- 13. Considering the above, the PforR will also contribute to both two high level outcomes (HLO), HLO1 and HLO2, which have been identified to address key obstacles to growth and poverty reduction.** It supports HLO1 which focuses on increased access of vulnerable groups to quality social services by contributing towards improving Chile's water security, in an inclusive and sustainable manner. The Program includes an important results area to improve water and sanitation services in rural and disperse areas—home to the most vulnerable population groups. The PforR also contributes towards HLO2 which concentrates on increased mitigation and adaptation to climate change and critical environmental challenges, by contributing towards improving water resources management and planning at the national level and in critical watersheds, thereby improving Chile's resilience to drought and climate change.
- 14. In addition, the Program is aligned with the World Bank's approach to green, resilient, and inclusive (GRID) development approach, by considering environmental, socio-economic, and financial sustainability; building resilience to a variety of shocks; and considering gender and citizen engagement aspects.** It is similarly aligned with the World Bank's Climate Change Action Plan 2016–20 Priority Area III, "Scale-Up Climate Action," and its impact areas of sustainable and resilient cities, and climate-smart land use and water security. Furthermore, the Program contributes to the World's Bank's Twin Goals of reducing poverty and promoting shared prosperity by



sustaining the water environment while providing potable water and sanitation facilities, providing drainage services and water for productive services, and protecting people and property from floods, while placing the poor and most vulnerable people at the center of all efforts.

Rationale for Bank Engagement and Choice of Financing Instrument

15. **Since 2009 the World Bank has provided technical advice to tackle complex issues in the water sector.** A series of non-reimbursable and reimbursable advisory services (RAS) analytical work was developed during the 2009-2015 period.⁶ These advisory services identified the challenges facing the water sector and provided recommendations on how to address them, including the need to reconcile water rights market with environmental and social considerations. These knowledge services also identified the need for a stronger institutional and legal framework and identified the key water management tools that required improvement, such as the national information system, the planning at basin level and the need to advance in the conceptualization and implementation of river basin councils. In 2015 an investment project was prepared to support these recommendations. Nevertheless, as result of limited fiscal space this project was never countersigned by the Government. Today the new water strategy and a revamped budget targeted to improve water resources management, hydraulic infrastructure and rural water supply set a different stage for World Bank engagement.
16. **World Bank engagement and technical support will be key to bring in international best practices into a complex transformational agenda in the water sector that could serve as an example for other countries experiencing water scarcity.** The Boric Administration has embarked on an ambitious agenda to strengthen the resilience of the water sector in the face of drought and climate change, to ensure equitable access for all. Acknowledging the World's Bank long trajectory of collaboration with the Government of Chile, and recognizing its in-depth understanding of Chile's water sector, the Government has requested Bank support to strengthen the role of the State in the administration of water resources, strengthening the institutional capacity to implement water sector reform and particularly the new Water Code approved by Congress in March 2022, and support the creation of River Basin Councils in priority geographical locations and developing and improving their institutional framework, relying on participatory decision-making and conflict resolution mechanisms. Other issues to be addressed include strengthening the efficiency of sector infrastructure investments to improve resilience through the incorporation of new water sources, including wastewater reuse and desalination; and support towards improving water and sanitation services in rural areas of the country to close gaps in access to drinking water and sanitation. Chile's experience in embarking in this transformation agenda could serve other countries currently experiencing water scarcity conditions and increase competition over water resources.
17. **Rationale for the use of the PforR instrument. The rationale for using a PforR includes the following:**
18. **The PforR is the optimal instrument to support a national transformational program.** The government has placed Water Security high on the political agenda and paired it with an ambitious investments and reform programs from the MMA, as well as the DGA, DOH, and the Subdirectorate of Rural WSS Services (Subdirección de Servicios Sanitarios Rurales, SSR) under the MOP. Not only is the government seeking technical knowledge and international experience to refine and implement the government agenda for water, but also support in coordinating inter-ministerial efforts. The PforR is the most suitable instrument to support the implementation of a national program, which will allow the government to focus on results and strengthen country systems.

⁶ The Bank has provided recommendations on strengthening the legal framework for integrated water resources management (2015), strengthening the institutional framework of Chile's water sector (2014), improving the Institutional Reform Plan for IWRM (2014), enhanced planning of water infrastructure through the development of a prioritization tool for water infrastructure (2014), and a WRM assessment study (2011).



19. **The Ministry of Finance is looking to better target the budget system of its line Ministries towards a results-based approach.** The PforR will help the government demonstrate and showcase clearly defined results and the benefits delivered to all stakeholders. Additionally, the PforR will assist the MOP and MMA continue to foster the needed culture of results and performance when it comes to water matters, while continuing to strengthen accountability and transparency of the sector.
20. **The PforR is the optimal instrument to strengthen the government's own systems.** Since the PforR relies on government systems, it will provide the opportunity to strengthen governance capacity and support the creation of an integrated results-based approach to financial reporting and budgeting in the sector. During project preparation the technical and fiduciary assessments may identify weaknesses in the country systems that could be strengthened through the Program such as financial reporting, budgeting, and adherence or improvement to national public investment or procurement policies. The use of the PforR instrument is explicitly aligned with the government's vision to foster inter-ministerial coordination to achieve the needed water sector reforms, as stated in the government's national strategy: *Transición Hídrica Justa*.

C. Program Development Objective(s) (PDO) and PDO Level Results Indicators

Program Development Objective(s)

To strengthen the Borrower's capacity for WRM and increase water security in targeted areas.

PDO Level Results Indicators

21. The Program has been organized around the following three results areas:
- **Results Area 1:** Fostering a paradigm shift in water resources management through the implementation of integrated water resources management principles at national and basin levels.
 - **Results Area 2:** Enhancing the sustainability and resilience of rural water supply and sanitation service providers, while continuing to close access gaps.
 - **Results Area 3:** Building climate resilience through the development of gray and green hydraulic infrastructure.
22. A preliminary list of PDO-level results indicators have been identified to measure the achievement of the PDO that will be explored during preparation.
- **PDO 1:** Integrated and participatory basin-scale water resources management plans and councils
 - **PDO 2:** Strengthened WRM tools and policy.
 - **PDO 3:** Improved access to safely managed rural drinking water
 - **PDO 4:** Number of people with reduced flood and drought risks



D. Program Description

PforR Program Boundary

23. **Chile’s current water agenda is defined in the recently launched national strategy *Transición Hídrica Justa (2022-2026) on water security*.** The national strategy addresses the following thematic areas (i) water for human needs, encompassing human right to water and sanitation and food security and sovereignty; (ii) multipurpose hydraulic infrastructure for water security; (iii) strong public institutions and stakeholder participation for the management of water, at national and river basin levels; and, (iv) safeguarding the water requirements of ecosystems.

24. **This strategy groups the following existing government programs:**

Government program			Proposed Bank-financed Program	
Government investment programs	Government Agency	Amount government investments (USD)*	Results Area as proposed by Bank Program	Proposed Bank support* and financing (USD)
Basin planning, support the implementation of basin councils, strengthen water Information System	DGA (MOP)	26 million	Results Area 1: Fostering a paradigm shift for water resources management through the implementation of integrated water resources management principles at national and basin levels.	Full support to the government program <i>26 million</i>
Design of the WRM institutional reform at national and basin level (ANA and basin councils)	MMA	3 million		Full support to the government program <i>3 million</i>
		29 million		29 million
Rural water supply and sanitation services	SSR (DOH-MOP)	1,300 million	Results Area 2: Enhancing the sustainability and resilience of rural water supply and sanitation service providers, while continuing to close access gaps.	Support to water systems in priority areas <i>100 million</i>
		1,300 million		100 million
Storage and irrigation canal	DOH (MOP)	195 million	Results Area 3: Building climate resilience through the development of green and gray infrastructure (or solutions?).	Support to low environmental and social risk projects in priority areas



				55 million
Urban flooding	DOH (MOP)	135 million		Support to low environmental and social risk projects in priority areas 40 million
Runoff and sediment management	DOH (MOP)	53 million		Support to low environmental and social risk projects in priority areas 25 million
Green solutions (nature-based solutions)	MMA	850,000		850,000
		384 million		121 million
Estimated Grand Total (USD)		1,713 million		250 million

Note: These are estimated values at today's exchange rate where 1 USD is 900 Chilean pesos.

*Note: The priority areas are currently being identified with the government; preliminary selection parameters include basins where river basin plans and river basin councils will be established, and areas which are highly vulnerable to climate change.

25. **The proposed Bank operation will support key activities under each of the four thematic areas defined by the *Comite Interministerial de Transicion Hidrica Justa*.** The Program will focus on: (i) strengthening institutional capacities for an integrated management of water resources, taking into account environmental, social and economic requirements, and including the implementation of a participatory water resources management approach to reduce conflicts over water; (ii) improving safely managed drinking water and sanitation services in rural areas; and (iii) improving climate resilience through the development of integrated gray and green solutions planned at basin level.

26. **Results area 1. Fostering a paradigm shift in water resources management through the implementation of integrated water resources management principles at national and basin levels.** The government of Chile is looking to transition from a private water-use rights and market-based allocation system with limited public oversight, to a more balanced approach combining water use rights with a basin-scale, participatory, integrated water resources management approach taking into consideration priority usage for human consumption, environmental considerations, inclusiveness and conflict solving mechanisms. This requires strengthening existing national level tools such as information systems and the role and authority of the existing national water authority DGA and setting up new management tools and governance mechanisms for water resources management at basin level such as river basin plans and councils.



27. **At the national level, the Program will focus on:** i) the strengthening and modernization of the national water information system, through the implementation of a digital strategy that will include software and hardware applications; the densification and modernization of water quantity and quality monitoring networks and provisions for their adequate maintenance; a flood monitoring, forecasting and alert system (in priority basins) ii) providing support towards the creation of a new high-ranking water authority (ANA), including through the drafting of a new law for its creation; iii) the development of a new Water Security Policy, and the approval hereof; and iv) formulation of a standard definition and methodology to quantify environmental water requirements.
28. **At the local level, the Program will support:** i) the design and implementation of river basin councils in priority basins, ii) the drafting of the Basin Council Law and amendment of the User Organization Law⁷ so both are aligned, iii) the preparation of the Basin Strategic Plans in the same priority basins where the river basin councils will be established (including the development of basin planning guidelines), iv) the compilation of lessons learned on the implementation of the councils and the planning exercise, allowing for scaling-up beyond the selected basins; and v) roll-out of an educational program on water conservation and efficiency. The priority areas are still being identified with the government; preliminary selection parameters include basins where river basin plans and river basin councils will be established, and areas which are highly vulnerable to climate change.
29. **Results area 2. Enhancing the sustainability and climate-resilience of rural water supply and sanitation service providers, while continuing to close access gaps.** The government of Chile has requested support in implementing the Rural Water and Sanitation Law 20.998, which seeks to improve the institutional framework of the rural WSS subsector so rural service providers can be better equipped to provide quality services under scenarios of water scarcity.
30. **The Bank-supported Program will focus on the rural water supply and sanitation investment program implemented by the Subdirectorate of Rural WSS Services (SSR), and will focus on:** i) institutional strengthening of the SSR, supporting the creation of the SSR One Stop Shop (*Ventanilla Unica*), the development of an updated registry of rural WSS service providers, improvement of the evaluation and granting processes of water licenses, as well as provision of technical assistance and advisory services to the Water Committees and Cooperatives, including the formulation of a set of norms to guide system design, use of materials, construction procedures, emergency response measures, among others to promote sustainability and resilience of rural WSS services; ii) development of a Strategic Plan for Rural Water and Sanitation to 2030, providing definitions of investment prioritization criteria, including a catalogue of technological solutions suitable for different realities and with a stronger focus on resilience (reuse, alternative water sources, renewable energy), identification of different rural WSS service provider management models (associativity, sanitation management); iii) identification of bottlenecks and definition of a methodology to reduce project cycle times to improve efficiency and streamline priority investment projects in rural water and sanitation; iv) design of an integrated rural WSS information system, able to compile and report data under SDG6 standard for enhanced investment planning, facilitating monitoring of early warnings and water quality, and facilitate registration of rural WSS service providers and their assets; and v) investments in new rural water supply systems to contribute towards closing the last mile (124 new systems are expected to be built) and roll-out of pilots on rural sanitation solutions, testing different technologies tailored to different geographic context, and where relevant the testing of their respective management models (depending on the sanitation solution) for scaling up.

⁷ This is the law that gives power and responsibility to the user organizations responsible for the distribution of water in the river.



31. **The Government program has not assigned funds to SSR for investments in sanitation.** Additionally, the SSR does not count with a baseline on sanitation, leaving knowledge gaps on what the exact current situation is today regarding rural sanitation. However, the Bank-financed Program contemplates a sanitation diagnostic that will allow proposing sanitation technologies and management models for the diverse cultural and geographic contexts, testing solutions, and design of an integrated rural water and sanitation information system.
32. **Results area 3. Building climate-resilience through the development of gray and green infrastructure.** This line of work, which would mostly support the DOH's hydraulic infrastructure program, would develop green and gray infrastructure to improve climate resilience, particularly to increased droughts, floods and water scarcity risks. The financing of gray infrastructure will only include rehabilitation works and minor new constructions screened to exclude those that may have significant environmental and social risks.
33. **Activities considered under this Results Area include:** i) the formulation of small and medium storage plans; ii) the rehabilitation and construction of small storage reservoirs; iii) the rehabilitation and modernization of primary irrigation canals; iv) basin-scale integrated urban flooding master plans; v) integrated green and grey infrastructure to reduce flood, drought and water scarcity risks exacerbated by climate change in urban and rural areas in selected basins drainage works, by supporting DOH and the MMA integrate and coordinate their different programs to move towards a basin-scale, integrated approach towards the reduction of those risks in line with international good practices. For this last part the Program will support the MMA and DOH to develop a list of potential NBS investments and the implementation of NBS pilots in 4 river basins.

E. Initial Environmental and Social Screening

34. **Potential activities with environmental risks include the following:** the construction of new 124 rural water supply systems, pilots in rural sanitation solutions as well as the development of gray and green infrastructure, including rehabilitation and construction of small storage reservoirs⁸, rehabilitation and modernization of irrigation canals, drainage works, runoff and sedimentation control works and canal works, and NBS for flood management and sedimentation control. The Program will also support the development of a national water information system that will include new monitoring networks and maintenance of the existing ones. The scale of the infrastructures is expected to be medium or small and they will be located in both rural and urban areas. Potential environmental risks and impacts may derive from the construction and operation of the above-mentioned infrastructures, and include: (i) nuisances related to dust generation, vibration, noise, and odors; (ii) generation and inadequate management and disposal of non-hazardous and hazardous solid waste (including electronic waste management); (iii) generation and discharge of wastewater from civil works; (iv) sludge generation and disposal from potential water and sanitation works; (v) health and safety risks to the project workforce and local communities, including from exposure to hazardous materials/wastes and COVID-19; (vi) inadequate management of cultural chance finds; and (vii) risks associated with the operation of the infrastructures to be built or rehabilitated, such as community safety and labor

⁸ According to national law (Decree No. 50), a "small reservoir" is defined as having a maximum wall height greater than 5 m and less than 15 m, or a capacity greater than 50,000 m³ and less than 1,500,000 m³.



health and safety. These risks and impacts are envisaged to be mainly temporary and site-specific and are expected to be mitigated with readily available measures.

35. **Potential social risks and adverse impacts include the following:** (i) the incorporation of new low-income users, mostly vulnerable population groups in rural and dispersed areas, who would not be able to afford some of the new water and sanitation services or tariffs; (ii) temporary disruptions to pedestrian transit and local traffic during the construction phase; (iii) impacts on economic activities caused by Program-related works; (iv) labor management-related issues, considering management of impacts and community risks associated with labor influx, including sexual exploitation and abuse, and sexual harassment (SEA/SH), and the transmission of COVID-19; (v) possible increases in social conflict due to changes in the management of water resources supported by the Program; and (vi) insufficient capacity to implement participatory and consultation processes with all the stakeholders, considering not only the physical interventions but also the activities that involve the design of plans, policies and water management councils, in a manner that is accessible, culturally appropriate and inclusive, ensuring adequate participation and consultation with indigenous peoples and members of other minority and marginalized social groups. Land acquisition leading to temporary or permanent physical and/or economic displacement, or restrictions on land or resource use having adverse impacts on local livelihoods will be specifically analyzed during the preparation phase as interventions are defined.
36. **An Environmental and Social System Assessment (ESSA) will be developed by the Bank for the PforR Program during preparation, for which the support and inputs from the Borrower will be required.** The ESSA will examine the scope, context, and potential impacts (including direct, indirect, induced, and cumulative effects as relevant) of the Program from an environmental and social (E&S) perspective. The ESSA will describe the extent to which the Government has the capacity (legal framework, regulatory authority, organizational capacity, and performance) to manage those effects, with an emphasis on the national E&S policies, legislation, procedures, and institutional systems. The content of the ESSA will include, but not be limited to: (i) a brief description of the Program, including the objectives, relationships between Government's program and the PforR; (ii) activities that cannot be financed by the Program; (iii) potential E&S effects, including risks, adverse impacts and benefits; (iv) institutional arrangements and mechanisms in place to deal with the potential E&S risks; and (v) identification of areas in which the implementing entities should improve procedures and performance (which may be expressed through the Program Action Plan (PAP) and the DLIs, as necessary). The ESSA will provide specific recommendations to enhance social inclusion and E&S management capacity and performance, which will be discussed and agreed with the Borrower. Additionally, the ESSA will determine specific barriers to access related to each project activity for women, persons with disabilities, migrants, LGBTI+9 people and indigenous peoples, among other vulnerable groups. If required, based on the ESSA's recommendations, an action plan for strengthening Borrower systems on E&S issues will be developed and included within the ESSA report. During the preparation of the ESSA, the Bank team, with support of the Borrower, will carry out a consultation and information process with the main Program stakeholders. The consultation and disclosure of the draft ESSA report will be done on the World Bank website before the Appraisal phase of the Program, in English.

⁹ An acronym for "lesbian, gay, bisexual, transgender and intersex" persons that is also used as shorthand for persons of diverse sexual orientation, gender identity, gender expressions or sex characteristics.



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