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APPLIED POLITICAL ECONOMY ANALYSIS OF THE WATER SECTOR IN EL SALVADOR

February 2023

Prepared under Contract No.: GS-10F-0033M / Order No. 7200AA18M00016, Tasking N 072

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Prepared under Contract No.: GS-10F-0033M / Order No. 7200AA18M00016, Tasking N072

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DISCLAIMER

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LIST OF ACRONYMS

AECID	Spanish Agency for International Development Cooperation
ANDA	National Administration of Aqueducts and Sewage
ANEP	National Association of Private Enterprises
ARENA	National Republican Alliance
ASA	Salvadorean Water Authority
CAMAGRO	Agricultural and Agro-industrial Chamber of El Salvador
CASALCO	Salvadoran Chamber of Construction
COVID-19	Coronavirus Disease-2019
DOM	National Directorate for Municipal Public Works
ESCO	El Salvador's Agency for International Cooperation
FINET	National Investment Fund for Electrification and Telephony
FODES	Fund for Economic and Social Development
GBV	Gender-based Violence
GoES	Government of El Salvador
IADB	Inter-American Development Bank
IDB	Inter-American Development Bank
LGRH	General Law for Water Resources
MAG	Ministry of Agriculture and Cattle
MARN	Ministry of the Environment and Natural Resources
MINSAL	Ministry of Health
PCN	National Conciliation Party
PEA	Political Economy Analysis
PRISMA	Foundation of El Salvador

EXECUTIVE SUMMARY

The purpose of this Political Economy Analysis (PEA) is to develop a deeper understanding of water governance in El Salvador by examining the key players in the sector, emerging trends, and impediments to consistent and equal access to water by users. The analysis is guided by several research questions that are divided into three themes: 1) water sector governance; 2) gender; and 3) drivers of change. The aim is to provide USAID with findings and recommendations that may guide future programming in the sector.

The evaluation team first conducted an extensive literature review that was submitted to USAID as a separate report in October 2021. Next, in July and August 2022, the research team held two workshops and conducted key informant interviews (KIIs) and focus group discussions (FGDs) with more than 142 individuals from the Government of El Salvador (GoES) agencies, civil society, academia, and citizen groups. The Executive Summary outlines the three priority findings and recommendations from the PEA of the water sector in El Salvador; additional recommendations are presented in the main report.

Finding 1: The passage of the General Law of Water Resources (Spanish acronym LGRH) in December 2021 recognizes access to water and sanitation as a human right and expands the GoES's regulatory authority in the sector. Its main focus is the immediate human uses of water, with a strong anthropocentric perspective, rather than an ecosystemic perspective. While the LGRH strengthened the central government's mandate, the overall regulatory framework remains under-developed, particularly in relation to semi-urban and rural areas, where the central government should play a stronger role in regulating the multiple actors and interests involved.

Priority recommendation: USAID should prioritize assisting the GoES in developing a set of regulatory strategies to enable the central government to increase its ability to manage the four sub-sectors identified by the LGRH: 1) drinking water and sanitation; 2) water for agricultural, aquacultural, and fishing purposes; 3) water for hydroelectric purposes from existing reservoirs; and 4) water for industrial, agro-industrial, recreational, and other purposes. Likewise, USAID should prioritize allocating resources to programs that strengthen the central government's regulatory role (not just formally, but in practice), which would help to mediate tensions between local communities and the private sector.

Finding 2: The capacity of key GoES agencies to provide regulatory oversight, coordination, and capacity-building assistance to other actors is currently insufficient. A critical challenge, particularly in semi-urban and rural areas, is that service providers, including municipal agencies and rural *Juntas de Agua (community-led water management organizations/Water Boards)*), lack the funds and expertise to serve local communities adequately. Access to water and sewage is a particular challenge in rural areas, where more than 2,300 small-scale *Juntas de Agua* currently serve about a quarter of the overall population.

Priority recommendation: USAID should prioritize building the capacity of key GoES agencies, including the National Administration of Aqueducts and Sewage (ANDA) and the newly-created Salvadorean Water Authority (ASA), to more effectively assist these actors in meeting citizen needs. For example, these agencies need to improve their capacities to improve their assistance programs to the *Juntas de Agua* related to technical aspects of supply systems operation that will improve their energy efficiency, institutional aspects related to accountability and gender equity, and administrative

aspects that allow them, among others, to access different sources of financing and to acquire inputs more easily.

Finding 3: Women and girls remain disproportionately responsible for collecting water in households that lack access to piped water. As a result, women and girls are deterred from devoting time to education and employment, and are more frequently subjected to harassment and violence. Gender disparities persist in part because women lack meaningful representation within the national, municipal, and local-level bodies that manage water extraction and distribution.

Priority recommendation: While these gender dynamics may be resistant to change—given that they are embedded in broader social norms that govern intra-household division of labor—USAID should support efforts to address pervasive gender disparities related to water usage. One potentially promising approach would be to encourage gender parity in ANDA, ASA, municipal bodies, and rural *Juntas de Agua* by making access to USAID-funded programs conditional on compliance with gender quotas at all levels.

INTRODUCTION

Access to water and sanitation remains a critical challenge throughout El Salvador and particularly in rural areas. Data from a nationally representative household survey conducted in 2020 show that while 55 percent of urban Salvadoran households have piped water to their homes, only 6% of rural households do[1]. As a result, most Salvadorans rely on public water sources (communal taps) outside their homes. Moreover, more than 1 million people do not have access to improved drinking water or sanitation services,[2] and many of the country's rivers are heavily polluted. In rural areas, people (especially women) risk their lives traveling to collect water from local sources.

Addressing these challenges is made difficult by the complexity of water governance in El Salvador[3]. There is no coherent and coordinated governance structure; rather, there is a multiplicity of authorities linked to the different water uses. For example, the Ministry of the Environment and Natural Resources (MARN) is responsible for monitoring sanitation, while the Ministry of Health (MINSAL) is responsible for water quality, and the Ministry of Agriculture and Cattle (MAG) is responsible for agricultural and livestock water usage. In addition, there are multiple actors operating in urban, semi-urban, and rural areas.

The country's major service provider is the National Administration of Aqueducts and Sewage (ANDA), which provides services in 168 (153 directly and 15 through *sistemas descentralizados* or decentralized systems-) out of the country's 262 municipalities[4], including the three major cities—San Salvador, Santa Ana, and San Miguel. ANDA is unusual in that it has responsibility for both creating national policies and providing services. However, more than one third of the municipalities are not served by ANDA, where local authorities are responsible for water provision and sanitation. Private companies have also created systems to provide the service. Thus, in semi-urban areas, *sistemas autoabastecidos* (self-supply systems) have been built as part of real estate projects[5] . Also, many rural areas are not connected to government water infrastructure. Instead, rural communities have taken on the task of providing the service through self-managed *Juntas de Agua* (Water Boards) Currently, an estimated 2,300 community *Juntas de Agua* in rural areas provide water to an estimated 25-30% of the overall population of El Salvador and 53% of the rural population[6]. ANDA provides limited technical assistance to municipalities and *Juntas de Agua* through its Division for the Attention of Rural Systems and Communities (ANDA Rural). In this context, the private sector has taken advantage of the poor regulation of the sector and has historically prevented the advancement of initiatives to change water sector regulation.[7]

While reform efforts have stagnated in recent years, the Bukele administration, which came to power in 2019, passed a major piece of legislation—the General Law of Water Resources (LGRH) —in December 2021. The LGRH made provision for the creation of a new agency, the Salvadoran Water Authority (ASA), with a general mandate on water resources. ASA´s Board of Directors is composed of

[1] https://www.olasdata.org/en/el-salvador/. In terms of numbers, ANDA's statistical bulletin for 2019 shows that 3,843,499 people have piped water in urban areas and only 324,458 people in rural areas do (see ANDA 2019). This includes the beneficiary population in all sectors (household, commercial, industrial, among others).
[2] See UN Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation 2016
[3] For a more detailed discussion, see the literature review attached as Annex 1 of this report (prepared separately in October 2021. It is restricted to USAID staff only on the DEC: https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTkwMDc4.
[4] See ANDA. 2020.
[5] Centro para la Defensa del Consumidor, 2018.
[6] See AECID 2020.
[7] See Oxfam International 2020.

ASA´s President, representatives from MARN, MAG, the Ministry of Economy, the Ministry of Tourism, the Ministry of Housing, MINSAL, the Ministry of Public Works and Transportation, the Ministry of Government, the University of El Salvador, from each of the three *organismos zonales de cuenca* (Zonal Basin Organizations), and from civil society (this representative is someone dedicated to the protection of natural resources). Coming into operation in July 2022, ASA is responsible for regulating the exploitation and use of water, obtaining information , and monitoring it. ASA is going to be in charge of the four sub-sectors identified by the LGRH: 1) drinking water and sanitation; 2) water for agricultural, aquacultural, and fishing purposes[8]; 3) water for hydroelectric purposes from existing reservoirs; and 4) water for industrial, agro-industrial, recreational, and other purposes While many questions remain about how this new agency will operate, in principle it is expected to oversee the distribution and supply of water throughout El Salvador, and act as the principal regulatory agency for service operators including ANDA, municipalities that operate independently from ANDA, rural *Juntas de Agua*, and private operators. It is important to note that the LGRH did not establish a specific regime for the drinking water and sanitation subsector, which leaves a gap in the regulation of this sector.

The objective of this Political Economy Analysis (PEA) is to develop a deeper understanding of water governance in El Salvador, specifically in the drinking water and sanitation sector, as well as the various impediments to consistent and equal access to water by users across El Salvador. The analysis has been ordered according to three types of delivery areas of the water and sanitation sector in El Salvador: Urban-ANDA, Semi-urban non-ANDA, and Rural. Moreover, this PEA aims to provide information on gender-related gaps and inequalities in water supply and management that can contribute to the application of the gender dimension in the design of future interventions.

One audience for this report is the USAID team, as the PEA is expected to inform the design of future USAID activities. The other audience for this report is the general public wishing to be informed by the analysis of the data collected from their communities and organizations.

[8] According to the General Law on the Promotion of Fishing and Aquaculture (cited by the LGRH to establish the regulation of that subsector), aquaculture refers to the "Activity that consists of the cultivation and production of hydrobiological resources carried out under control in natural or artificial aquatic environments." while fishing purposes refers to various types of fishing (artisanal or small-scale, scientific, subsistence or self-consumption, educational, sports and industrial).

METHODOLOGY

PEA THEMES/RESEARCH QUESTIONS

The questions posed by the USAID team were organized into three themes/sections: (i) water sector governance, (ii) gender issues, and (iii) drivers of change. Below we list the research questions under each of these themes:

WATER SECTOR GOVERNANCE QUESTIONS: 1) What is the overall framework of federal actors (Central or GoES) and municipal government, private sector, and community groups and interests involved in water access services (provision and consumption) in urban, semi-urban and rural areas? 2) What are the principal dynamics and incentives in the sector? 3) How will the new water law change these dynamics and incentives? 4) What shapes the degree of coordination between ANDA managed municipalities and unmanaged municipalities and Water Boards? Who is seeking greater coordination? What are the disincentives to coordination, if any? What are the incentives or impediments to the ability of ANDA to provide technical assistance to the Water Boards or not? How do they interact?

GENDER ISSUES QUESTIONS: 1) What are the gender dynamics related to water access and water use? How does gender-based violence (GBV) relate to water access and water use? 2) What are the household and community gender dynamics related to water access (including possibly GBV or gang violence threats), and the political and economic implications of these costs borne by women? Which institutional factors contribute to greater impacts for women? 3) How are women participating in the management of Water Boards? 4) What are the gender dynamics among employees in ANDA?

DRIVERS OF CHANGE QUESTIONS: 1) What are likely to be key drivers of change and/or continuity in the water sector in the short, medium, and long-term (delineated between urban, semi-urban and rural areas)? 2) What are the dynamics around the private sector interests on water service access? (Corruption, pricing, privatized water provision, among others) 3) What are the main incentives of ANDA to deliver better services and expand the coverage of water in El Salvador (delineated between urban, semi urban, and rural areas) or to maintain the status quo? Which aspects of these incentives are long standing, and which are relatively new and why? 4) What forms of corruption exist in the urban, semi-urban and rural water services?

RESEARCH METHODOLOGY AND DATA SOURCES

The PEA analysis of the water sector in El Salvador consisted of a literature review and fieldwork. The literature review, previously submitted as a standalone report, provides an overview of the water sector in El Salvador. The study uses the PEA framework described by USAID[9], a structured approach for examining power dynamics, economic forces, social forces, and other incentives that influence the form the sector operates and the status of different actors. To respond and adapt the methodology to the realities specific to the sector of interest, the PEA approach guides stakeholders in understanding the inherent challenges for operationalizing the process of political thinking and rigorous collaborating, learning, and adapting (CLA).

[9] See Menocal et al 2018.

Following the literature review, USAID/El Salvador requested that the research team conduct a series of interviews to validate the findings and answer the key research questions presented above. This report presents the findings, conclusions, and recommendations based on fieldwork conducted in El Salvador, as well as through virtual interviews, between 12 July and 18 August 2022.

The research team included eight stakeholder groups for key informant interviews (KIIs), focus group discussions (FDGs) and workshops:

- The central government of El Salvador: ASA, ANDA, MINSAL, MARN, National Directorate for Municipal Public Works (DOM), and El Salvador's Agency for International Cooperation (ESCO).
- Private sector: companies, business associations and organizations such as The National Association of Private Enterprises (ANEP), Salvadoran Chamber of Construction (CASALCO) and Agricultural and Agro-industrial Chamber of El Salvador (CAMAGRO).
- *Juntas de Agua* (community water management organizations) from different areas of the country.
- Municipal authorities of Aguilares and Jayaque (municipalities that accepted our invitation).
- NGOs and other civil society organizations: PRISMA Foundation of El Salvador and other members of the association of organizations and social groups in defense of water "Foro del Agua".
- Academia: *Universidad de El Salvador.*
- United Nations: UNICEF and UNDP.
- International cooperation agencies: Spanish Agency for International Development Cooperation (AECID) and Inter-American Development Bank.

The fieldwork consisted of a launching event on July 8, 2022, KIIs (face-to-face and virtual) from July 12 to August 18, 2022, FGDs (in the municipality of Suchitoto) on July 19, 2022, and two workshops (in San Miguel on July 22, 2022, and in San Salvador on July 29, 2022). In total, the evaluation team received input from 142 individuals (plus the FGD participants). Some of the interviewees (27 in total, 17 women and 10 men) from NGOs, Juntas de Agua, public institutions, UNICEF, and water users were specifically targeted for the gender analysis.

The first workshop (San Miguel) focused on the identification of problems in the water and sanitation sector and possible solutions. The second workshop (San Salvador) focused on the analysis of recent reforms promoted by the government and other actors. This analysis was done through application simulations ("user journey").[10] In addition to obtaining information, the methodology created opportunities for conversations between actors—particularly the private sector and civil society organizations—who have historically had little direct communication regarding water issues in El Salvador.

To analyze the data, the evaluation team transcribed the audio files of interviews and focus groups and triangulated the data with documentary data and the outputs from the workshops. The data was

[10] Annex 3 provides the design thinking methodologies used during both workshops.

segmented into several distinct analytic themes and sub-categories that relate to the study's research questions. After coding the data, the analysis integrated the views of all actors and organizations in sets of findings, conclusions, and recommendations.

LIMITATIONS

Representativeness of the sample: Regarding the types of actors interviewed, we were only able to interview one municipality in which the service was provided through a *sistema descentralizado* and one *sistema autoabastecido*. In addition, we were not able to conduct interviews with congressmen who were part of the legislative process for the LGHR, with the MINSAL or the Ministry of Economy. Because providers in *sistemas autoabastecidos* are underrepresented, there is not much information about their functioning and relationship with the rest of the actors in the drinking water sector. In addition, in El Salvador there is no clear definition of which areas are semi-urban. Overall, the study focused on interviewing government actors, business associations, and drinking water service providers (ANDA and *Juntas de Agua*), given the difficulty of contacting actors from other sub-sectors.

FINDINGS

From the desk review and the primary data collected from the interviews and focus groups, we extracted a set of findings for each of the three themes summarized below.

THEME I: WATER GOVERNANCE IN EL SALVADOR

A wide range of actors are involved in the water sector, including central and municipal government agencies, community groups, Juntas de Agua, and the private sector. While the passage of the LGHR in 2021 has the potential to increase coordination, there is still a great deal of uncertainty about whether and how the new legislation will affect dynamics in the sector. Respondents identified several barriers to greater coordination, including ANDA's limited resources and capacity to deliver technical assistance, hesitancy by Juntas de Agua to engage ANDA, and lack of awareness about ANDA's capacity-building mandate. These findings suggest several potential opportunities for USAID interventions.

1. What is the overall framework of actors and interests involved in water access services?

Table 1 summarizes the various actors involved in the water sector and the areas (urban, semi-urban, and rural) where they operate. In urban and semi-urban areas, the central government, through ANDA, is the dominant actor responsible for regulating the sector and providing access. In rural areas, the government has limited reach due to financial constraints, and other actors – municipal agencies, *Juntas de Agua*, and the private sector – play a larger role.[11]

Table 1: Framework of actors according to the area of operation

TYPE OF ACTOR	STAKEHOLDERS	URBAN	SEMI-URBAN	RURAL
Central Government	President of the Republic	X	X	X
	The Salvadorian Water Authority (ASA)	X	X	X
	National Administration of Aqueducts and Sewage (ANDA)	X	X	X
	The Ministry of Environment and Natural Resources (MARN)	X	X	X
	The Ministry of Health (MINSAL)	X	X	X
	The Ministry of Economy	X	X	X
	The National Directorate of Municipal Works Public Works (DOM)	X	X	X
	The El Salvador Agency for International Cooperation (ESCO)	X	X	X

[11] While the central government has a presence in semi-urban and rural areas monitoring water quality through MINSAL and MARN, participants said that they rarely impose sanctions, work plans, or follow up processes. They also mentioned the limitations in monitoring water quality due to a shortage of laboratories with the technical capacity to do so.

TYPE OF ACTOR	STAKEHOLDERS	URBAN	SEMI-URBAN	RURAL
Municipal Level	Municipal administration	X	X	X
	Sistemas descentralizados	X		
Private Sector	*Sistemas autoabastecidos*		X	
	Agricultural, livestock, and other industries	X	X	X
Community Groups	*Juntas de Agua* and Cooperatives of *Juntas de Agua*		X	X
Civil Society Organizations [12]	NGOs/ *Foro del Agua*	X		X

Source: Authors

In urban areas, respondents noted that the central government seeks to increase control over all aspects of the water sector, including policy, regulation, infrastructure, and monitoring. The passage of the LGHR, discussed below, represents a significant shift in authority, enhancing the powers of the central government to regulate water usage more fully. However, limited resources and capacity has historically limited the reach of government authorities, particularly in semi-urban and rural areas.

Several types of distribution systems exist in semi-urban and rural areas. Currently, 94 municipalities out of 262 are not served by ANDA[13]. In these localities, municipal authorities are responsible for directly managing water provision. Respondents indicated that authorities in these municipalities have incentives to perform their duties, but struggle with very limited technical and financial capacities. For example, there are municipalities that have to manage local water systems but are currently in bankruptcy. In general, municipalities do not treat the water adequately for human consumption nor afterwards for discharge. Broadly, municipalities need technical assistance and financial support, in part because fiscal transfers have declined in recent years.[14] A key challenge is that because water tariffs typically do not cover operational costs, the municipalities use public funds to cover the difference. Participants highlighted that water tariffs are set by Municipal Councils with no guidance or standards from the central government. Participants also mentioned that municipal authorities in some areas have encouraged the creation of *Juntas de Agua* to benefit from subsidies from the National Investment Fund for Electrification and Telephony (FINET) that are only available to *Juntas de Agua* (specifically to cover energy costs).

A small number of municipalities are provisioned through *sistemas descentralizados* ,water management that involves joint responsibilities for service provision between ANDA and municipal authorities. This program, which started in the 1990s and originally included 24 municipalities, is currently limited to just

[12] These CSOs refer to second level organizations, different from grass-roots organizations which are more community based, that use technical skills to mobilize in different fronts (including the legislative) to pursue different issues related to water.
[13] See ANDA 2019.
[14] In El Salvador, municipalities received 10% of the national current revenues through a fund called FODES. In 2021, that percentage was reduced to 1.5%. See: https://diario.elmundo.sv/Pol%C3%ADtica/reduccion-de-fodes-aprobada-al-1-5-genera-incertidumbre.

15 municipalities; the rest are now administered directly by ANDA or by the municipalities.[15] According to participants, these systems are the result of an initiative by the Inter-American Development Bank (IADB) and the German cooperation agency (KFW). Donors invested in infrastructure and ANDA operated the system with public utilities created by the municipalities. ANDA provided funding for salaries, operation, and maintenance of infrastructure. In general, these *sistemas descentralizados* have better water quality than the systems where municipalities did not have these interventions from ANDA. The sewage system, however, remains of poor quality. Participants mentioned that these *sistemas descentralizados* did not evolve to respond to population growth (in the 15 municipalities where they are still in place). As a result, some of these 15 municipalities have two schemes at work simultaneously:[16] a *sistema descentralizado* for a part of the population and a system where the municipality directly manages water provision for another part of the population.[17]

Community-led *Juntas de Agua* play a critical role in water provision in rural and semi-urban areas, providing services in places where the central government is often absent. Participants noted that *Juntas de Agua* mainly serve communities that are close to water sources (particularly those that are downstream) because costs are lower in these areas. While there is an interest in expanding local water systems at the grassroots level, there are limitations to the reach of *Juntas de Agua* to areas that are more costly to serve.

The private sector plays a role mainly in semi-urban areas. Construction companies in some areas have built *sistemas autoabastecidos* in which they are in charge of building the infrastructure and operating and maintaining the system. Currently there are approximately 107 *sistemas autoabastecidos*.[18] Respondents noted that there is considerable heterogeneity: some systems operate very efficiently, while others use obsolete infrastructure and lack household metering and/or water treatment capabilities. Respondents indicated that these systems do not have regulated tariffs. Unlike most areas serviced by ANDA, some of these systems have a wastewater collection system and a treatment plant for proper discharge.

Participants also noted that agriculture industries, construction enterprises, and bottling companies have important political and economic interests related to water. Several respondents highlighted the potential negative impact of these companies for rural potable water supply. According to participants, these industries seek to maintain low costs for water use and are motivated to regain influence on government policies. Respondents indicated that large-scale industry lost political power when Bukele was elected in 2019, displacing the Nationalist Republican Alliance (ARENA) and the National Coalition Party (PCN), which had historically maintained close ties with the business sector.

2. *What are the principal dynamics and incentives in the sector? How will the new water law change these dynamics and incentives?*

In urban areas, ANDA provides low-cost service, but with low quality and limited coverage. ANDA has been reported to have more than 60% water losses due to several factors such as deterioration and damage to distribution networks due to their age, illegal connections, theft of water from hydrants, unbilled utilities.[19] According to several respondents, the gap between ANDA's tariff revenues and the

[15] See ANDA 2019. We did not obtain data that would allow us to know how many of these systems ended up under ANDA's control and how many under the control of the municipalities.
[16] See ANDA 2019. There is no data regarding the exact number of municipalities with this combination of schemes.
[17] Interviews with central government and international cooperation agency stakeholders.
[18] See ANDA 2020 Memoria Institucional - page 27.
[19] See ANDA 2020

costs of provision and expansion are due in part to low payment culture among citizens and companies (related to low levels of quality) and a political class without sufficient incentives to get out of this trap of poor services. Therefore, ANDA must rely on external resources (government or international cooperation, namely loans with development banks). This situation is aggravated by the fact that water stress is increasing considerably as a result of reduced availability of surface and subsurface aquifer recharge due to urban population growth (the country will be in water stress by 2050, with less than 1,700 cubic meter per capita per year) and water-intensive agriculture (due to toxic waste and industrial heavy metals, poisonous chemicals from agricultural runoff, over 90% of water surfaces in the country is polluted[20]). ANDA's resource constraints produce a high dependence on funding from international donors and development banks. In some instances, initiatives only survive as long as aid agencies and development banks fund them.[21]

In semi-urban and rural areas, ANDA is unable to provide sufficient support to local initiatives. While ANDA Rural provides technical advice to *Juntas de Agua*, it reaches less than 3% of all registered *Juntas de Agua* (only 60 out of 2325).[22] This has led other actors to organize financial and technical support schemes for *Juntas de Agua*. For example, AZURE, a for-profit social enterprise, created a private trust (called FIDEAGUA) to facilitate access to credit and technical advice for the *Juntas de Agua*. The *Juntas de Agua* have also received support from local and international NGOs,e.g., in a joint action platform called the "*Foro del Agua*" (Water Forum), as well as from international cooperation and UN offices.

In some municipalities, several actors are involved in the provision of water, without coordination or planning, and acting according to their own interests and capacities. For example, as participants informed us, one municipality may have a *Juntas de Agua* providing services for communities downstream or close to the water sources, while the municipal government fills the gap for communities that live upstream and require larger investments in infrastructure. Generally, there is no coordination or planning among these actors. According to participants, the central government provides limited and sporadic technical assistance in these areas.

Another important dynamic, relevant to all areas**,** is the struggle between the central government, the private sector, and civil society organizations (some of them connected with grass-roots organizations). Participants believe the central government under President Bukele intends to increase its control over water resources, for which they mentioned President Bukele's intention to seek re-election (or at least his party's re-election) as a relevant factor. By contrast, the private sector seeks to regain control of public policy regarding water use through ARENA and PCN, which have historically represented their interests in government. According to some of the respondents (civil society organizations and former officials), the private sector is interested in maintaining low-cost access to water and limiting the ability of the central government to monitor their water use,particularly regarding wastewater. Lastly, civil society organizations have sought to influence policy with an interest in protecting social and environmental rights. For example, *Foro del Agua* has actively participated in the legislative process by proposing draft laws.

The LGRH has the potential to affect the water sector in several important ways. Respondents noted that the creation of ASA could increase coordination in the regulation and control of different water uses and providers. Second, ASA could increase the enforcement of payments associated with the use

[20] See Oxfam International 2020, 10, 12.
[21] Interviews with internatoinal cooperation agency stakeholders.
[22] Interviews with central government and international cooperation agency stakeholders .

of water, improving the financial situation of key actors. However, if ASA plays a more assertive role, it could increase tensions between the central government and businesses that are accustomed to accessing water at low cost and with little oversight. *Juntas de Agua* are also concerned that they will be forced to make payments to continue to access water[23] and that they could lose the electricity subsidies from the central government that allow them to maintain their operations. However, in our interviews, central government stakeholders argued that, according to their interpretation of the LGRH, there would not be access charges for communities. These stakeholders made no comment regarding the electricity subsidies. Some participants view the LGHR as an opportunity to promote their interests in further regulation, as well as through the bill proposals to regulate the sub-sectors.[24] Stakeholders understand that there may be potential opportunities for citizen and private sector input at the technical level, depending on how the regulation of the LGRH is designed.

According to participants, the LGRH has tools to manage the tensions that emerge between communities and private sector actors over the use of water. For example, the law prioritizes human consumption and sets limits on extraction to avoid water scarcity. Its main focus is the immediate human uses of water, with a strong anthropocentric perspective, rather than an ecosystemic perspective. However, the LGRH also has the potential to increase tensions as it states that new licenses to exploit water can be granted for 15 years. Respondents held opposing views on this clause: businesspeople reported that 15 years was too short, while NGOs and community leaders felt that it was too long.

Respondents also noted that the LGRH could create opportunities for community-based grassroots organizations to move beyond water provision to participate in planning and public policy decision making. The LGRH creates three *organismos zonales de cuenca* (Zonal Basin Organizations) for each of the hydrographic zones identified by the Law, as technical administrative entities attached to the ASA. The hydrographic zones are Lempa (integrated by the Lempa river´s basin), Paz - Jaltepeque (which includes the hydrographic basins that exist in the determined space from the western border limits of the country to the hydrographic zone of the Jaltepeque estuary; corresponding to the following hydrographic regions: Paz, Cara Sucia - San Pedro, Grande de Sonsonate - Banderas, Mandinga - Comalapa and Jiboa - Estero de Jaltepeque.) and Jiquilisco - Goascorán (which includes the geographic space determined from the limits of the Lempa Hydrographic Zone, to the border limits of the East of the country; corresponding to the following hydrographic regions: Bahía de Jiquilisco, Grande de San Miguel, Sirama and Goascorán.).

They are responsible for holding "periodic coordination and consultation meetings with representatives of communities, minority groups, civil society, universities, *Juntas de Agua*s, municipal governments, and public assignees of their water area" (Article 30j). They are responsible for submitting zonal water plans to ASA's Board of Directors for approval, and for ensuring the implementation of the project programs in this plan (Article 30f). They also participate in the national policy and national plan for integrated water resources management (Article 30c).

[23] The LGRH establishes a fee for water exploitation. ANDA had the same prerogative. However, through Decision 14 of 2015, the Board of Directors of ANDA declared that approximately 800 *Juntas de Agua* had a social interest, so they did not have to pay that fee. The situation is now unclear with the new Law.

[24] According to article 35 of the LGRH, the four sub sectors are: drinking water and sanitation; water for agricultural, aquaculture and fishing purposes; water for hydroelectric purposes from existing reservoirs; and water for industrial, agro-industrial, recreational, and other purposes.

Another important provision of the LGHR is that Article 41 recognizes *Juntas de Agua* as legally registered non-profit entities that provide drinking water services, with the technical support of ASA and ANDA. It also mandates that *Juntas de Agua* must guarantee the treatment of their wastewater. Respondents from the central government indicated that the agency will not focus on sanctioning *Juntas de Agua*; instead, it will promote capacity building so that they can comply with applicable regulations.

Finally, it is unclear how the creation of ASA will affect ANDA's role in the water sector. According to participants, ANDA has taken the lead in the design of the new Water and Sanitation Subsector Law. However, the LGRH has already generated important changes that impact this Subsector and provides a framework for the Sub Sectors law. For example, the LGRH already includes the payments for water extraction (including human consumption) and discharges. We were unable to uncover the direction of the dynamics between ASA and ANDA going forward.

3. *What shapes the degree of coordination between ANDA managed municipalities and unmanaged municipalities and Water Boards? Who is seeking greater coordination? What are the disincentives to coordination, if any? What are the incentives or impediments to the ability of ANDA to provide technical assistance to the Water Boards or not? How do they interact?*

There is a high level of coordination between ANDA and the municipalities in which it provides services directly or through *sistemas descentralizados*. ANDA is hierarchically organized and none of the central decisions are taken at the local level. For example, in the case of *sistemas descentralizados*, ANDA signs a management contract with the municipality in which ANDA provides resources for the operation of the system, salaries, and infrastructure investments. In exchange the municipality transfers the profits from the system to ANDA[25]. In contrast, coordination between ANDA and the non-administered municipalities is low. According to participants, ANDA does not have the financial capacity to support these systems on a regular basis (only in emergencies), nor does it exercise any control over them. This is the case of the municipality of Jayaque, in which the two systems (a municipal one and a private-public association one) are completely administered by private individuals or the municipality without any contact from ANDA.[26] Respondents indicated that there is some coordination between municipalities and *Juntas de Agua* regarding efforts to access funds from FINET. In these cases, mayors seek coordination because there is an alignment of the political interests of the mayors with the social interests of communities. Within political interests we are not only understanding electoral interests, but also those of responding to the needs of their voters.

Regarding the incentives and impediments to ANDA's ability to provide technical assistance to the *Juntas de Agua*, there are two key factors. First, while ANDA has a mandate to provide assistance[27], *Juntas de Agua* have to request assistance, which they generally do not do due to the belief that ANDA will take control over their systems if they request assistance. ANDA has serious credibility problems in developing activities with the *Juntas de Agua*, whose members do not trust ANDA's intentions to help communities. Some *Juntas de Agua* have even requested ANDA Rural to leave the area.[28] Others do not know how to request ANDA's support. In some cases, NGOs, such as AQUA, have been able to help bridge the gap. Second, while ANDA does have the capabilities to provide some technical assistance[29]

[25] Interviews with international cooperation agency stakeholders
[26] Interviews with municipal authority stakeholders.
[27] ANDA has technicians and facilities to provide technical assistance and training to the Juntas de Agua. In fact, during fieldwork, we visited a modern specialized center for the training of the staff of Juntas de Agua, built with resources from AECID and the IADB. This center has a rural aqueduct model and classrooms for training, for example in the use of billing software.
[28] Interview with central government stakeholder.
[29] Participants who spoke of this center did not have clarity about the exact number of staff working in the center.

central government stakeholders repeatedly said that the agency has limited funding for this activity. There are no resources to have a decentralized technical assistance scheme (which would reduce access costs for communities that want to access it). This activity depends largely on funding from international cooperation.

THEME II: GENDER AND WOMEN EMPOWERMENT

Men and women face distinct challenges related to water. Because of societal norms, women are often consigned to domestic responsibilities that include traveling to collect water from natural sources or communal pipes in households that are not connected to the water grid, particularly in rural areas. As a result, women devote a disproportionate amount of time to water collection, limiting the time available to employment and education. Women are also subject to discrimination, harassment, and violence, especially in gang-affected areas. While there have been important efforts to increase the representation of women in the management of Juntas de Agua and within ANDA, women typically have less influence than their male counterparts within these bodies.

4. What are the gender dynamics related to water access and water use? How does gender-based violence (GBV) relate to water access and water use?

Respondents noted that women and girls are more likely to experience discrimination in terms of water access and use. In rural areas, in some cases, community water providers discriminate against the women and the LGBTIQ+ community, refusing to provide services because of social stigma or because they doubt their capacity to pay for the services, given that they often perform unskilled informal work. As noted in the interviews,the denial of service by both public and private operators is linked to stigmas and gender roles. The provision of water is limited (especially for female heads of households and the LGBTIQ+ community), using the excuse of non-payment by users.[30]

Participants also noted the disproportionate role of women and girls in water collection and how this exposes them to different types of violence as they walk to and from the water sources.[31] Violence against women and girls tends to occur more frequently in rural areas, where they routinely have to travel to collect water from natural sources or from communal pipes.

The presence and territorial control of gangs in some areas affect these dynamics. Gangs impose dynamics that condition the roles and responsibilities in the community, especially of women and girls, focused on gendered expectations of care and household work. Likewise, in these areas, gangs limit mobility towards water sources, accentuating the difficulties of access and use by the population.

For example, during the interviews, it became clear that, given the dynamics of violence and inequality that exist in some parts of El Salvador, it is possible to identify territorial disputes between gangs (also known as "*Maras"*) for the control of some strategic zones that affect the local population and, in turn, define the dynamics of interaction between civil society and the gang that exercises control through the use of violence. In this sense, the struggle for territory includes the control of water sources and the population's access to them. It can be noted that the disputes between gangs for control of territory have defined new dynamics in terms of access to and use of water, which is controlled by the gangs. Similarly, the division of gender roles between men and women, including caregiving roles, makes

[30] Interviews with civil society stakholers
[31] Interviews with central government and civil society stakholers

women (and in some cases girls) more vulnerable to GBV by gangs, as they have to go to the disputed areas to collect and transport water for their homes, thus meeting their cleaning, food and household needs.[32]

5. *What are the household and community gender dynamics related to water access (including possibly GBV or gang violence threats), and the political and economic implications of these costs borne by women? Which institutional factors contribute to greater impacts for women?*

Participants mentioned that discriminatory and violent practices against women and girls are evident at home just as in the community. They referred to practices in which women are responsible for collecting and transporting water from the supply sites (natural sources or communal pipes) to their homes. They are also in charge of household chores (without economic or social recognition) such as cooking, washing dishes and clothes, washing corn, and cleaning.

It was evident to participants that the demands and needs of women regarding access and water use are different from men. While for men water is key for production processes, especially irrigation activities, for women water is important for domestic and daily activities. This is true in both urban and rural areas, where men continue to assume the role of leaders and bosses, and women are conditioned to the roles of caretakers and providers.[33]

Gender dynamics mean that women and girls must travel long distances outside their communities to fetch water, spending between 1 and 2 hours a day, according to participants. In urban areas the impact of this discrimination is seen in the use of time, given that women and girls must spend more time on these tasks and leave aside activities such as education, leisure, or rest. Participants also pointed out that women and girls are the most affected by household and community dynamics, as they often must cover the costs, both monetary and in time, to supply water to their homes. Women and girls must assume the roles of care and household maintenance, having to allocate more time for these activities, compared to men, who do not participate in the daily activities associated with access to and use of drinking water.

6. *How are women participating in the management of Water Boards?*

Workshop participants pointed out that although women are part of the committees that manage *Juntas de Agua* and hold some positions in the office of the Presidency (the treasury or as secretaries), their participation and influence in decision-making is still limited or non-existent. The participants agree that the representation of women should be 50 percent, as defined by law, to guarantee equal representation between men and women. However, this gender parity is not achieved because of two main reasons: (1) women's inability to manage time to participate in *Juntas de Agua* and (2) cultural norms regarding women's roles in *Juntas de Agua*.

In terms of women's inability to manage time, some participants pointed out that women's role as primary caretaker of their households limits their ability to assume positions or roles such as chairperson of the *Juntas de Agua*, due to the demanding nature of the position. Although women's participation has increased since 2014, as pointed out by feminist collectives[34], there is still no representation in all areas of the *Juntas de Agua*, with women being relegated to perform the role of

[32] Interviews with central government and civil society stakholers
[33] Interviews with civil society stakholers
[34] Interviews with civil society stakholers

spokespersons and not decision-makers. This is related to preconceived norms around gender roles where the perception is that women can be the spokesperson or oversee social issues, such as the protection of natural resources, while men are called upon to participate as decision makers when the issue of water is addressed from the point of view of the delivery system and its economic or financial impacts. Finally, the recognition and respect given to women as water leaders is less than those given to men, discouraging participation further.

It is worth noting that shifts in norms are most evident where NGOs have implemented training and awareness raising campaigns. For example, the Colectiva Feminista water program was conceived in 2013 realizing that women´s water uses were not being considered when *Juntas de Agua* were making decisions. Since then, their program provided gender training, women's empowerment, as well as strengthening of management and administrative capacities for the members and communities with *Juntas de Agua*. The results were evident when comparing Suchitoto *Juntas de Agua* with others interviewed. They were among the most effective, were organized with an Association (Aguasuchi), were active in lobbying (*Foro de Agua* members), and their leaders were introducing innovative practices (i.e., solar panels for operating pumps) to guarantee regular water services at a reasonable cost.

Workshop participants highlighted the actions that have been taken in recent years to strengthen and promote the participation of women in *Juntas de Agua*[35] and argued that the participation of women is key in decision-making processes to guarantee the human right to drinking water and the minimum quality of life conditions for the population. It is women who have spoken out the most about the extraction and contamination of water sources in their territories, through organizations like *Mujeres Ambientalistas* (Environmental Women), calling special attention to the protection of the environment and the sustainability of productive processes[36]. This component is noteworthy, participants argued, since women usually act as spokespersons for civil society and community causes and, on many occasions, they are excluded from decision-making precisely because of their activism.

7. What are the gender dynamics among employees in ANDA?

Participants noted that ANDA has a Gender Unit and a gender policy. Although ANDA's gender policy does not specify rules regarding the organisational composition and structure of the company, they pointed out that in practice ANDA remains an unequal space, where women are less represented (in the institution´s payroll, 78.48% are men and 21.52% are female and at the executive level, there are 48 men and 25 women) and their advocacy capacity is limited or non-existent. Within ANDA, men have a greater role in decision-making, occupying leadership positions, while women are assigned more advisory, spokesperson, technical assistance, or secretarial roles. However, as pointed out by some participants, women have been trained to develop technical tasks related to the provision of water services, such as plumbing, operations, and infrastructure maintenance. This can potentially contribute to reducing the gender gap.

Workshop participants pointed out that despite the institutional efforts that have been made to achieve greater gender parity, there are still scenarios that replicate macho or violent behavior towards women. For example, in the formation of mixed crews for semi-urban areas, there have been cases of sexual and labor harassment, which is why, according to participants, ANDA is rethinking the model and

[35] Internal regulations in the most gender aware *Juntas de Agua* have set participation targets ranging from 30 to 50 percent women and require that they occupy true decision-making posts like presidency, treasury. In more traditional communities they elect women as Secretary and only as regular members of the board (Interviews with municipal authority and civil society stakholers).
[36] Interviews with civil society stakholers

considering women-only technical crews. The Gender Unit has conducted training and workshops on the gender approach, also impacting the policy defined for ANDA in terms of the new masculinities.[37]

Gender parity in ANDA has been materializing in administrative areas, where the gaps have been narrowing. However, in field activities, factors that increase discrimination and gender-based violence persist. Participants pointed out that ANDA's internal dynamics have been oriented towards empowering and strengthening women's skills and knowledge so that they can assume other roles in the teams, especially in field work across urban, semi-urban, and rural areas. Since 2021, the Gender Unit is working jointly with the social workers of the ANDA Rural to mainstream gender and inclusion measures in their projects. The Gender unit also provides training to the staff of the commercial agencies, so they provide better service to users.

THEME III: DRIVERS OF CHANGE

The most important drivers of change are the 2021 passage of the LGHR and the creation of the ASA. Other long-standing factors that affect the sector – private sector interests, ANDA's internal constraints, and corruption – have not shifted appreciably in recent years.

8. What are likely to be key drivers of change and/or continuity in the water sector in the short, medium, and long-term (delineated between urban, semi-urban and rural areas)?

Participants noted that the water sector has functioned with a short-term vision because of the changes of political leadership in the country and limited resources. However, the Bukele administration has the potential to adopt a longer-term perspective, given Bukele's possible re-election in 2024 and the widespread popular support he has garnered during his first term.

According to participants, the recent LGRH issued in 2021 could become a key driver of change in the short-, medium- and long-term, because of the regulatory process that will follow and will make some of the principles and rules in the law more concrete. The current government's focus on demonstrating that it provides quick answers to El Salvador's persistent problems, prevented broad participation in the preparation of the LGHR. However, given the general terms of the LGRH, respondents pointed out that community, civil society, and private sector actors view this regulatory process as an opportunity to have a say in the planning and future of the sector. More participatory regulatory processes could drive positive change not only by improving the quality of problem identification, but also by increasing feedback on alternative solutions prior to implementation, reducing the learning curve. In addition, if stakeholders are more actively involved in shaping regulation, the chances of spontaneous compliance may increase.

According to participants, another key driver of change in the short- and medium-term, particularly in semi-urban and rural areas, is the creation of ASA, which could become a turning point in the sector. ASA has the potential to increase coordination between the different authorities related to the management of water resources, especially in rural areas, which are the agency's primary focus.[38]

[37] The term "new masculinities" refers to the behaviors and attitudes assumed by men in relation to tasks, activities, and work traditionally performed by women due to gender roles (see Boscán Leal, 2008).
[38] Interviews with central government stakeholders suggested ASA will be focusing their efforts in the rural areas directly providing technical support and capacity building for *Juntas de Agua*.

During interviews and focus groups, respondents also highlighted the role that international cooperation agencies can have as drivers of change in semi-urban and rural areas in the short- and medium-term. Donor agencies can exert significant leverage to drive change in the sector, due to the sector's over-reliance on international resources, particularly to innovate and fund programs to improve water resources management. Lastly, some participants fear that the private sector will be a driver for negative change in the medium- and long-term, particularly in semi-urban and rural areas, as they are interested in pushing for less control and monitoring from the central government.

9. *What are the dynamics around the private sector interests on water service access (Corruption, pricing, privatized water provision, among others)?*

According to some respondents (civil society organizations and former officials), the private sector in semi-urban and rural areas has benefited greatly from the limited regulation in the water sector. Sectors such as agriculture extract significant amounts of water. These actions impact society and ecosystems in general, as well as certain actors (e.g., *Juntas de Agua*) more directly. Participants in the focus group conducted in Suchitoto (leaders and users) expressed their fear of water-intensive agricultural companies entering their territories and generating a strain on access and polluting water sources. According to participants, poultry investors have appeared in rural areas with environmental permits from MARN, without local knowledge of previous environmental impact assessments s[39] and without consulting current users.

The business sector, in general, also acts as a user of ANDA by paying very low tariffs (FUSADES 2008, 2015). This is because ANDA has not installed micro-meters on all properties and many people benefit from the lack of metering, paying the lowest tariff when the real consumption is unknown. Also, as noted above, construction companies have been developing *sistemas autoabastecidos* with unregulated tariffs that can be very high. For example, the manager of a *sistema autoabastecido* interviewed explained that they have a base tariff of $8.75 for black water treatment (which is triple of ANDA's base tariff of $2.29 for the consumption of 0 to 10 cubic meters of water) and an additional differential tariff based on the level of household consumption of water. The construction industry has a seat on the board of directors of ANDA, which makes it more complicated to regulate these companies. Participants noted that during prior presidential administrations, the private sector's proximity to ruling parties (ARENA and PCN) allowed them to block attempts at increased regulation and costs through legislation. However, the private sector has less leverage with the current administration. Respondents from the private sector pointed out that they are looking to establish a dialogue with the central government in relation to the tariffs and contributions referred to in the LGRH. Respondents agreed that in general, they also do not have a positive relationship with *Juntas de Agua*, universities, and civil society organizations.

10. *What are the main incentives of ANDA to deliver better services and expand the coverage of water in El Salvador (delineated between urban, semi urban, and rural areas) or to maintain the status quo? Which aspects of these incentives are long standing, and which are relatively new and why?*

The tariffs set by the Ministry of the Economy are not sufficient to allow ANDA to recover its operational costs. ANDA is not a profitable company. From 1994 to 2004, the average cost per cubic meter was $0.64 and the average revenue was $0.27. For the same period, billed revenues represent

[39] An Environmental Impact Assessment is required, although it is only required by the Environmental Law for projects that may have a negative impact on the environment.

68.9% of annual expenses[40]. While there was a change in the tariff in 2015, users who consume less than 20 cubic meters per month did not see an increase. Overall, the tariff has increased by only $0.19 since 2004.[41] In fact, the low level of tariffs is even acknowledged by participants from the private sector.[42] As a result, it must rely on public funding and cooperation agencies to function. These sources are not enough to provide quality service or expand the coverage of the water distribution grid in El Salvador[43]. These are long standing issues that have affected the operation of ANDA and indicate a lack of incentive on part of ANDA to deliver better services or expand coverage. Participants pointed to more access to funding, conditional on providing better services, as the main incentive that could push ANDA towards delivering better services and expanding coverage of water in El Salvador, particularly in semi-urban and rural areas.

11. What forms of corruption exist in the urban, semi-urban and rural water services?

Participants focused their comments on corruption in urban areas and mentioned three different types of corruption in ANDA. First, they referenced cases in which Presidents and staff of ANDA received payments from private actors to grant licenses. For example, Carlos Perla, the President of ANDA between 1994-2002, was sentenced to 15 years in prison for this type of corruption.[44] Second, there are instances where ANDA has paid for work that was not delivered.[45] Third, there are cases where ANDA received funding from the central government to improve infrastructure and the work did not occur.[46] In rural settings, participants mentioned how in some *Juntas de Agua* the Presidents have used the funds for their own private purposes.

[40] See FUSADES 2008
[41] See FUSADES 2018
[42] Interview with private sector stakeholders.
[43] According to ANDA's initial 2022 budget data and the 2022 loan budget amendments, cooperation agencies and international banks provide between 10% and 20% of ANDA's total budget, depending on the projects initiated in that year.
[44] See https://www.laprensagrafica.com/elsalvador/Como-el-ingeniero-quimico-Carlos-Perla-termino-condenado-a-15-anos-por-corrupcion-y-hoy-recupero-sus-derechos-20190215-0279.html
[45] See https://www.contrapunto.com.sv/presidente-anda-pide-a-fiscalia-investigar-casos-de-corrupcion/
[46] See https://diarioelsalvador.com/la-anda-estuvo-llena-de-corrupcion-y-de-negocios-oscuros/188530/

CONCLUSIONS

THEME I: WATER GOVERNANCE

- ***The framework of all actors in El Salvador is complex and uncoordinated. In urban areas, while the central government is the main actor involved in regulation, operation and monitoring the systems, there is little coordination between all entities that are involved.*** However, with the LGRH, particularly the creation of ASA, there is an opportunity for increased institutional coordination.
- ***In semi-urban and rural areas, there are also multiple actors involved in the provision of water services, with limited monitoring from the central government.*** Actors include ANDA, municipalities, private-sector actors, and *Juntas de Agua* that participate to solve specific and isolated needs (e.g. the needs of construction companies or of rural communities), but not as the result of a joint effort to systematically fill the gaps left by ANDA. ANDA, municipalities, and*Juntas de Agua*s continue to be underfunded to provide quality services and have prioritized drinking water over sanitation.
- ***Dynamics and incentives in urban areas revolve around the central government's desire to centralize control of water resources.*** Also, one of the most important obstacles of the sector is that it is highly underfunded (this limitation of funds, in turn, creates problems for the efficient use of water resources and energy in the operation of the supply systems). The LGRH can help solve this problem by regulating payments for the use of water resources. However, the LGRH does not address the tariff for water supply and sanitation services, which directly impacts economic incentives in the sector.
- ***In semi-urban and rural areas there are increasing tensions between the private sector and communities over the use of water resources, which are increasingly scarce.*** There is little intervention from the local or central governments to mediate these tensions. The LGRH has included a set of norms to regulate the use of water by the private sector (e.g., establishing that human consumption has preference over other types of uses and setting general rules to regulate the amount that can be directly extracted from water sources), which could help manage these tensions. Expectations of spontaneous compliance with these rules will depend on the credibility of ASA, the familiarity and clarity of the regulation that develops them, the costs and benefits associated with compliance, the acceptance of their purposes and effects by those regulated, and the possibility of social control (see "Table of Eleven", López-Murcia 2022b). Expectations of enforced compliance will also be associated with the risks of reporting, inspection, detection, selection, sanctioning and severity of sanctions (see Table of Eleven).
- ***Coordination between ANDA managed municipalities and unmanaged municipalities and Juntas de Aguadepends on the resources available for ANDA to provide technical support.*** Unmanaged municipalities and *Juntas de Agua* can coordinate their efforts to seek funding or to deliver services to rural communities (e.g., municipalities cover communities living upstream and *Juntas de Agua* cover communities living downstream). Currently, there are no political impediments for ANDA to provide technical support and the financial capacity is the main factor that limits coordination. However, in the interview with the ASA President, he stated that providing technical assistance to community lenders would be one of the priorities of the agency under his leadership. And the LGRH (art. 41) assigned ASA the role of promoting the development of the capacities of urban and rural water boards to comply with the corresponding regulations.

THEME II: GENDER AND WOMEN EMPOWERMENT

- ***Women and girls are more likely to experience discrimination in terms of water access and use because of stigma and doubts about their ability to pay.*** Women and members of the LGBTQI+ communities are sometimes not provided service by local rural and semi-urban (not ANDA) water providers, not only because of their identity, but also because of their perceived inability to pay for the services given their role as caregivers and informal workers. Also, because girls and women are expected to ensure water availability in the household, they sometimes have to travel long distances to water sources, exposing themselves to sexual and other types of violence when they are located in urban or rural areas controlled by gangs.
- ***The Juntas de Agua in rural and semi-urban areas have become more egalitarian spaces. However, women still have limited opportunities to participate in decision-making and implementation of projects.*** Women are left as spokesperson or representatives of collectives focusing on social or environmental causes, and are not involved in project design and implementation. This means that projects are designed and implemented with a purely male perspective of the problem. Although there are regulations that promote equal participation between men and women, cultural practices present in both rural and semi-urban areas contribute to gender gaps.
- ***In ANDA gender gaps and unequal environments continue to exist in the internal dynamics of the organization.*** Women who are part of ANDA continue to face cultural and organizational practices that are sexist and violent. Although women have been trained to assume increasingly important roles in the technical processes related to water access and use, men still control decision-making spaces and define the routes to be followed in the different work fronts. Particularly in semi-rural areas, women in technical mixed teams have been victims of sexual violence and harassment.

THEME III: DRIVERS OF CHANGE

- ***The most important drivers of change are the 2021 passage of the LGHR and the creation of the ASA.*** An additional driver of change is the international cooperation agencies that provide financing and programmatic assistance to resource-constrained local authorities and communities.
- ***The private sector can be a driver of negative change as it often acts as a counterforce to the government's impetus to regulate and control the extraction of water.*** However, private sector actors lost their political force when ARENA and PCN lost to the Bukele administration in 2019, and they do not have a relationship with *Juntas de Agua*, universities, or civil society organizations that have more influence on policy.
- ***Regarding ANDA, the capacity to improve the quality of the service and increase coverage depends on access to funding.*** As it is, funding fluctuates when there is a change of government, and funding from international cooperation is targeted at specific programs and is not consistent over time. There are also challenges in terms of corporate governance that have been addressed through programs such as the IDB's AquaRating, as well as in terms of their capacity to efficiently use financial, water and energy resources.
- ***Corruption in the sector is not systematically tracked.*** However, there are cases in the media that show how some Presidents of ANDA and *Juntas de Agua* have used their positions to appropriate funds or benefit private actors with licenses or permits.

RECOMMENDATIONS

THEME I: WATER GOVERNANCE

- **Strengthen the regulatory role of the national government in semi-urban and rural areas**: The central government should play a stronger role in regulating the multiple actors and interests found in semi-urban and rural areas. Prioritizing the allocation of USAID resources to programs that strengthen the central government's regulatory role (not just formally, but in practice) would help to manage and mediate tensions between communities and the private sector. The LGHR strengthened the central government's mandate, but a set of regulatory strategies should be developed in sub-sector laws to enable the central government to increase its control – for example, through a combination of a command-and-control system, incentives, and information disclosure.

- **Increase technical support provided by ANDA to be widespread, decentralized, and sustainable**: ANDA should have a program to provide timely and consistent technical support to unmanaged municipalities and *Juntas de Agua*. USAID should prioritize programs focused on expanding ANDA's capacity to provide technical support in a decentralized (not forcing stakeholders to travel to the capital) and sustainable manner (building community capacity). In any case, it could also be useful to sponsor pilots developed with private actors such as AZURE, to evaluate different modalities of support to the "Juntas de Agua", and in this way accelerate the learning process about their needs and alternative solutions, and to have more elements to evaluate (compare) ANDA's management of this program.

- **Modify the water regulation design process to be more participatory and proactive**: Incorporating design thinking into the water regulation design process would substantially improve the ability of ASA and the other water regulatory authorities to respond quickly and effectively to the needs and concerns of different stakeholders, as well as to increasing pressures on natural resource use. For example, the regulatory preparation process could adopt the stages of design thinking (problem identification and characterization, solution generation, and prototype evaluation). Regulatory projects could allow for more feedback for different water stakeholders, which in turn, would improve the ability of regulators to anticipate problems that normally only arise during the implementation of regulation. It would also improve the chances of acceptance of the purposes and effects of regulation by the regulated and society at large, thus also improving its legitimacy and the chances of compliance.

THEME II: GENDER AND WOMEN EMPOWERMENT

- **Prioritize the protection of women and the LGBTQI+ population from different forms of discrimination and violence**: Women and the LGBTQI+ population tend to be discriminated against by local rural providers and to suffer disproportionately from different forms of violence associated with the precarious supply of drinking water and sanitation services. USAID should prioritize its resources towards programs that aim to make this situation visible and change behaviors.[47]

[47] USAID's Gender Equity and Equality Action Fund (GEEA) has defined as a priority the expansion of Care Infrastructure and Domestic Work of Value, incentivising government and private sector investment to expand access to care in the care economy, including child, elder and health care, and universal early childhood education; and strengthening protections for care workers in the informal and formal economy. In the case

- **Promote a gender approach and actions against violence in institutional spaces of professionalization**: Training on violence and sexual harassment should be incorporated and prioritized in all training programs aimed at ANDA, municipal agencies, and *Juntas de Agua*. There should also be activities to make visible the associated problems and common practices that should no longer be tolerated.
- **Promote gender parity in decision-making and participation spaces in the sub-sector**: Parity in the *Juntas de Agua* and in ANDA should be guaranteed through gender quotas in decision-making bodies, as well as a gender-inclusive approach to decisions taken by collective bodies. USAID should make access to USAID-funded programs conditional on compliance with these quotas and approaches. ANDA's current gender policy focuses on gender parity, non-discrimination and VBG prevention. Currently, ANDA's actions are related to reduction of inequality gaps, discrimination and gender violence, in order to provide inclusive services to the user population and advance towards equality between women and men within ANDA.

THEME III: DRIVERS OF CHANGE

- **Generate financial self-sustainability of drinking water supply and sanitation**: The development of the sub-sector laws from the LGHR is an important opportunity for the sub-sector to become financially self-sustainable. The LGHR includes a set of principles and tools that could be developed to increase the financial capacity of the system through fees for water extraction directly from sources and regulation of user tariffs, so that the direct and indirect costs of efficient provision can be recovered. USAID should prioritize technical support to the process of preparing regulation on both aspects.[48] This would require collaboration with ASA as well as the Ministry of Economy since ASA is in charge of the fee for the use and development of water, which is charged to those who extract water, while the Ministry of Economy is still in charge of the ANDA tariff.
- **Promote accountability and transparency in sector processes**: The sector needs to incorporate at least two types of mechanisms to enable accountability and transparency in order to reduce acts of corruption and increase willingness to pay by water users. First, USAID should prioritize support for regular political and citizen oversight hearings on sector authorities, as well as programs that familiarize members of the judicial branch and the media with the functioning of the water and sanitation sub-sector. Second, USAID should support the implementation of procedures supported by new technologies that allow community members to easily and securely monitor and report irregularities.
- **Support ASA's coordination role**: To promote better coordination between the different water actors, USAID should prioritize support to the new ASA President, so that the agency can quickly begin fulfilling its coordination role in the water sector.
- **Articulate the work of international aid agencies**: Given the importance of international aid agencies in the sector, USAID should work closely with ESCO to ensure that it articulates its work with other development agencies and donors to increase the impact of its work.

of El Salvador, programs that USAID should prioritize could focus on GBV and women's care roles. USAID Gender Equity Policy: https://www.usaid.gov/geeafund

[48] ASA is in charge of the fee for the use and development of water, which is charged to those who extract water. The Ministry of Economy is still in charge of the ANDA tariff.

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ANNEX 1: LITERATURE REVIEW

DRG LEARNING, EVALUATION, AND RESEARCH ACTIVITY

POLITICAL ECONOMY ANALYSIS OF THE WATER SECTOR IN EL SALVADOR: A LITERATURE REVIEW

October 2021

Prepared under Contract No.: GS-10F-0033M / Order No. 7200AA18M00016, Tasking N035

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DISCLAIMER

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LIST OF ACRONYMS

AECID	Agencia Española de Cooperación Internacional para el Desarrollo
ANDA	Administración Nacional de Acueductos y Alcantarillados
ASIA	Asociación Salvadoreña de Ingenieros y Arquitectos
ANEP	Asociación Nacional de la Empresa Privada
ARENA	Alianza Republicana Nacionalista
CDC	Centro para la Defensa del Consumidor
CEL	Comisión Ejecutiva Hidroeléctrica del Río Lempa
CEPAL	Comisión Económica para América Latina y el Caribe
CMCC	Comisión de Medio Ambiente y Cambio Climático de la Asamblea Legislativa
COVID-19	Corona Virus Disease-2019
FMLN	Frente Farabundo Martí para la Liberación Nacional
FONAES	Fondo Ambiental de El Salvador
FUNDE	Fundación Nacional para el Desarrollo
FUSADES	Fundación para el Desarrollo Económico y Social
GANA	Gran Alianza por la Unidad Nacional
GWP-CA	Global Water Partnership Central America
IANAS	Inter-American Network of the Academies of Sciences
INCAE	Instituto Centroamericano de Administración de Empresas
LGA	Ley General de Agua
LGIA	Ley General Integral de Agua
MAG	Ministerio de Agricultura y Ganadería
MARN	Ministerio de Medio Ambiente y Recursos Naturales
PDC	Partido Democrático Cristiano
PCN	Partido de Concertación Nacional
UCA	Universidad Centroamericana "José Simeón Cañas"
UNES	Unidad Ecológica Salvadoreña

INTRODUCTION

This report aims to answer the question *how does the water sector function in El Salvador and why*? In order to answer this question, following sections will describe: (1) foundational factors, (2) rules of the game, and (3) "here and now" dynamics relate to the water sector in El Salvador.

Nestled between Honduras, Nicaragua, Guatemala, and the Pacific Ocean, El Salvador is Central America's smallest country. The country, which has 14 Departments divided into 262 municipalities, has undergone an important urbanization process starting in the 1980s, whereby currently only 1 of every 6 of the country's 6.4 million residents lives in a rural area.[49] With 313 inhabitants per square kilometer, El Salvador is a densely populated country, with nearly one third of the population (2.2 million) living in metropolitan San Salvador, the country's capital. Although the poverty[50] and extreme poverty[51] rates declined dramatically in 2017, they are expected to increase as a result of the COVID-19 pandemic's impact on the economy.[52] El Salvador has had a steady decrease of inequality over the past decade, with a decline in the Gini coefficient from 0.51 in 2001 to 0.38 in 2019.[53] Some have attributed this trend to the implementation of social programs, mainly in health, education and agriculture (Global Partnerships Central America 2016, 5).

El Salvador has significant levels of water insecurity[54] caused by decreasing levels of water availability and increased pollution. While the regional average access to internal renewable water resources is 23,000 m^3/year, in El Salvador it is only 1,752 m^3/year (Comisión Económica para América Latina y el Caribe 2015). In addition to unequal rainfall distribution throughout El Salvador, there is limited capacity to harness this water (Ministerio de Medio Ambiente y Recursos Naturales 2014). Also, river flows have decreased between 30% and 70% due to, amongst other reasons, overexploitation from the private sector (mainly the sugar cane, beverages, and construction sectors). According to CEPAL, El Salvador has high levels of water scarcity and will be in water stress by 2050, with less than 1,700 m^3 per capita per year (Comisión Económica para América Latina y el Caribe 2015). In addition, pollution is contributing to creating water scarcity—over 90% of the country's surface water sources are polluted by industry and agriculture (Oxfam International 2020, 10, 12). Further, El Salvador has increased access to water supply and sanitation in recent years, a notable gap remains between the urban and rural settings. Of the 624,000 people that have no access to water supply and sanitation, 618,000 are located in rural areas (UN Special Rapporteur on the human right to safe drinking water and sanitation 2016).

Since the 1980s, the Government of El Salvador has conducted at least three general diagnostic studies of water resources with the support of AECID (Spanish Agency for International Development Cooperation in English) and international organizations like UNDP, Inter-American Development Bank, and CEPAL (Economic Commission for Latin America and the Caribbean in English). These studies focused on making an inventory of available water resources, types of existing uses of those resources, and planning steps to move towards a more organized and sustainable use of those resources in the future. El Salvador's MARN (Ministry of the Environment and Natural Resources in English) conducted

[49] See World Bank Data available at https://datos.bancomundial.org/indicator/SP.RUR.TOTL?locations=SV
[50] Defined by the World Bank as anyone living on US $5.50 or less per day
[51] Defined by the World Bank as anyone living on US $3.20 or less per day
[52] See The World Bank Overview available at https://www.worldbank.org/en/country/elsalvador/overview
[53] See https://data.worldbank.org/indicator/SI.POV.GINI?locations=SV
[54] "*The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability*" per the UN *(*https://www.unwater.org/publications/water-security-infographic/*)*

the latest study in 2017 in order to prepare the National Plan for Integrated Water Resource Management.

Like other Latin American countries, El Salvador's surface and underground water resources are mainly state owned, except for rainwater collected in artificial reservoirs built by private individuals. Water governance is organized by sectors and there is no institutional order that facilitates coordination between them. The MARN is charged with taking actions aimed at protecting, improving, or maintaining conditions of availability, but does not have any coordinating functions. On the other hand, ANDA (National Administration of Aqueducts and Sewers in English) is charged with providing water supply and sanitation services.

The water-related risks and limitations in water governance have collectively resulted in different actors attempting to reform the current regulatory framework. Since 2006, there have been at least twelve such proposals including the right to water in the Constitution, regulating the water supply and sanitation services, and the Law for the Management of Water Resources (Ley General de Recursos Hídricos). The proposals have been pursued by four main types of groups: (i) civil society organizations (including environmental CSOs, the Catholic Church, and consumer organizations), (ii) academia, (iii) the government, and (iv) business associations. All initiatives have been rejected in the Congress and the latest initiative, presented by the incumbent government, is currently in legislative debate.

FOUNDATIONAL FACTORS

The foundational factors to consider in El Salvador relate to continued violence, natural resource endowment, relationships between political parties and the private sector, a neglect of the rural areas, and the collective roles of the sugarcane, beverages, and construction sectors in the use of water resources.

Despite the 1992 peace agreements, strong youth gangs (e.g., Mara Salvatrucha, Barrio 18 Sureños, Barrio 18 Revolucionarios) emerged, with reports of 60,000 members. Until 2021, El Salvador was considered the most violent country in the world without an armed conflict, with 20 deaths per day. In 2021, however, there are reports of only 4 deaths per day. Some attribute this change to the security policy of President Bukele, others suggest that there has been a truce between the gangs (García 2021).

Regarding natural resource endowment, there are several documents produced by the MARN, universities and other organizations with diagnostics of the main deficits of the water supply and sanitation sector. A 2013 MARN study produced the National Environmental Strategy. In this diagnostic, the Ministry identified several challenges to formulating a plan (Ministerio de Medio Ambiente y Recursos Naturales 2013). In 2014, the MARN started a participative process to create a National Plan for the Environment and, as a result, the Ministry again highlighted some of the challenges identified for the 2013 Strategy (Ministerio de Medio Ambiente y Recursos Naturales 2014), as listed below.

In 2016, the UN Special Rapporteur on the human rights to safe drinking water and sanitation visited El Salvador and reported that though the country had advanced significantly in water supply and sanitation, "*…more than 600,000 people in El Salvador are without any drinking water or sanitation service. In addition, more than 1 million people have access to only an inadequate water supply, with no guarantee as to quantity or drinking quality*." The report also noted several limitations in terms of access, quality, institutions and regulation (UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).

The following list includes some of the challenges of the water supply and sanitation sector identified in several sources:

- Increased pressure on water resources because of growing population (Ortiz-Gómez, Nuñez-Espinoza, and Mejía-Castillo 2019; Universidad Centroamericana José Simeón Cañas et al. 2019).
- Limited access to potable water and sanitation, particularly in rural areas where 618,000 of the 624,000 people without access to water supply and sanitation are located (Ministerio de Medio Ambiente y Recursos Naturales 2013; UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016; Global Water Partnership Central America 2016).
- Water scarcity and water waste (Ministerio de Medio Ambiente y Recursos Naturales 2013).
- Pollution of rivers and other water sources (Ministerio de Medio Ambiente y Recursos Naturales 2013; 2014; UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- Over-exploitation of water resources (Ministerio de Medio Ambiente y Recursos Naturales 2013; 2014; UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- Shift of river courses (Ministerio de Medio Ambiente y Recursos Naturales 2013).

- Wetland degradation (Ministerio de Medio Ambiente y Recursos Naturales 2013).
- Changing climate conditions (floods and droughts) (Ministerio de Medio Ambiente y Recursos Naturales, 2013, 2014).
- Transboundary basins and aquifers that require more sophisticated systems of governance of resources (Ministerio de Medio Ambiente y Recursos Naturales 2013; 2014; UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- Inadequate use of land and changes in land usages (Ministerio de Medio Ambiente y Recursos Naturales, 2013, 2014).
- Almost total absence of wastewater treatment (Ministerio de Medio Ambiente y Recursos Naturales 2014; UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- Rainfall levels are distributed unevenly throughout the year (Ministerio de Medio Ambiente y Recursos Naturales, 2014).
- Lack of a coherent institutional setting (UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- In rural areas not served by ANDA, the population faces discontinued access because they only have service a few days a week, or a few hours per day. ANDA and other providers also resort to water rationing during dry seasons, particularly affecting consumers who do not have economic means to compensate for these measures (UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016; Oxfam International 2020, 14).
- High tariffs that affect access and lack of transparent and participative process to establish tariffs (UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016).
- The Universidad Centroamericana José Simeón Cañas conducted a survey in 2020 with over 1,500 participants on their experience with water supply and sanitation (Instituto Universitario de Opinión Pública 2020). The main factors that influence the experience of people with these services are the service provider, the method by which they are served (in their household or in public faucets, basins or other means), the quality of the water, and the costs of the water (see also Keough and Vásquez 2019). Some of the factors that impact citizen's experience with the delivery of water services include urban and rural settings, gender, age, ethnicity (Keough and Vásquez 2019).

The provision of quality water services varies in the urban and rural areas. By 2016, there were 2,325 drinking water supply systems at the national level not administered by ANDA (the public water utility in El Salvador), serving nearly 25% of the population. Rural areas are mainly served by these systems (AECID 2020). ANDA has a limited reach in these areas, which restricts the amount of public investment these areas receive. As Navia et al. (2017) argue, limited investment in rural areas is a common issue in Latin America. In rural areas, there are growing marginal costs. Also, Keough and Vásquez (2019) recently found that in El Salvador "*….there is a significant willingness to pay differential between studied communities, and that more educated respondents are willing to pay more for watershed protection than less educated individuals. These estimates have the potential to influence investment decisions regarding watershed conservation in semi-urban areas.*"

El Salvador does not have an open market for private participation in the water supply and sanitation subsector. There is no regulatory framework that makes such investments possible. As there are no private resources, the subsector is confined to public resources and international cooperation. Moreover, despite the efforts to improve ANDA's governance (with programs like the Inter-American Development Bank's AquaRating initiative - see International Water Association 2019), and the possible advantages associated with its economies of scale, this hierarchical approach has limited mobilization capacity in some areas. It could be useful to provide more legal and technical support to community management solutions, particularly considering that community management solutions provide services to 25% of the population, and the main criticism to these solutions are the technical limitations that affect water access and quality (AECID 2020). In Peru, there are programs in place to build capacities, proposing innovative technical and social solutions with sustainable cost-effective results (see Development Bank of Latin America 2021).

El Salvador shares important rivers and basins with other countries, which can generate a dependence on availability, irrigation works, flooding, river transport, and pollution (Comisión Económica para América Latina y el Caribe 2015).

In order to understand the power struggles in El Salvador, it is important to understand how the political and economic powers were distributed after the 1992 Peace Agreement that ended the internal armed conflict. Democratic elections took place in 1994; the right-wing ARENA party won national elections for the next 20 years. With the support of international and regional development agencies, and in line with economic policies in Latin America, four administrations increased the power of local economic elites through privatizations, deregulation, substitution of imports, and a strong focus on strengthening exports (Dada Hirezi 2018). The Government undertook these reforms in alliance with Asociación Nacional de la Empresa Privada (ANEP), Fundación para el Desarrollo Económico y Social (FUSADES), and other business associations and think tanks that helped guide economic policy (Dada Hirezi 2018). Throughout ARENA's 20 years of governing, policymakers oscillated between holding positions in the private sector and with the government (Dada Hirezi 2018). From 2009 until 2019, the FMLN governed without majorities in the Legislative Assembly, thereby limiting its capacity to push for reform (Dada Hirezi 2018). These power dynamics provide the context for the debate around water sector reform and, in this environment, several actors have tried to propose legislative reforms that are described in detail in this section.

The most relevant stakeholders in the country's water sector are the national government, the private sector, academia, communities, cooperation agencies and other civil society organizations (See Table 1). All stakeholders have been engaged in actions that include sector diagnostics, proposing and contributing to public policy through initiatives such as the 2013 National Strategy for the Environment, the 2017 National Plan for the Management of Water Resources, and legislative actions concerning the General Law of Water Resources.

In the private sector, there are three sectors that generally oppose natural resource legislation, such as la Ley General de Agua (LGA), and are predictably interested in controlling access to, and use of, water where they operate (Oxfam International 2020). These sectors are sugarcane, beverages, and construction and urban development.

SUGARCANE

Because sugarcane is a water-intensive crop, overuse of underground and surface waters leaves local communities with insufficient water for consumption. A 2016 Water Forum study reported that 36,400 hectares of sugarcane can consume up to 205 million cubic meters of water during the season between January and May.[55] The study further found that large sugarcane plantations on the coastal region irrigate using pointed wells, which are not registered and therefore are not legal. Other surface water sources are used to fulfil the irrigation demands; however, many are not authorized and therefore not monitored by the MAG to verify compliance with usage permits.

The Salvadoran Ecological Unit (UNES) estimated that in 2016 approximately 81% of the water extracted from the lower portion of the coastal zone's Río Paz was used to irrigate sugarcane plantations. This same report found that droughts in the coastal area was occurring due to widespread sugarcane production. Because their traditional wells are drying up, the affected communities must consume water contaminated by salt infiltration. Moreover, there is no correlation between drought years and sugarcane production; in 2015 El Salvador had a bumper sugar crop while the MARN reported a severe drought between May and August (Oxfam International 2020, 10).

A May 2021 Alianza por la Solidaridad report contextualized sugarcane's burden on the country's aquifers: one hectare of production requires an average of 36 cubic meters (36,000 liters) of water per day, while a five-person family only needs 0.6 cubic meters (600 liters).[56]

BEVERAGES

There are a number of large companies in El Salvador's beverage sector, including Agua Alpina, Las Perlitas, Aquapura, and Salud y Vida. However, the largest is Industrias La Constancia, an Anheuser-Busch subsidiary and the national Coca-Cola products distributor. The enormous amount of water this sector consumes has been the source of national discourse since at least the early 1990s when the Coca Cola bottling plant relocated to Nejapa after the Soyapango aquifers were no longer able to meets it demands. As Alianza por la Solidaridad has documented, the Secretariat of the Environment (SEMA) approved the move to Nejapa – before the Environment Law was enacted – without considering the environmental and social impacts.[57] The long-term implications of the private sector using the Soyapango aquifers – which supply water to nearly half San Salvador's population – without stringent government oversight are of serious concern and a standing debate.[58]

CONSTRUCTION AND URBAN DEVELOPMENT

"CASALCO, which represents companies in the construction and real estate sectors, is another actor with enormous interest in water. According to studies by the Global Water Partnership for Central America, water supply for human consumption (including supply for commercial business projects) represents the second-highest demand for water; forecasts suggest that this trend will hold steady. According to the Water Forum, real estate expansion, especially in the form of luxury residential complexes, has produced particularly high-water consumption. These projects are also large contaminators of water sources: residential developments in the

[55] https://www.diariocolatino.com/foro-del-agua-propone-estudiar-los-efectos-del-cultivo-de-la-cana-en-los-mantos-acuiferos/
[56] https://www.alianzaporlasolidaridad.org/noticias/el-amargo-negocio-de-la-cana-de-azucar
[57] https://www.alianzaporlasolidaridad.org/especiales/tierrra/pdf/Informe_CocaCola_Salvador.pdf
[58] Also see Oxfam International 2020.

country generally do not plan for wastewater treatment facilities, leaving the waste to be dumped into rivers." (Oxfam International 2020, 27).

Table 1: Main stakeholders in El Salvador's water sector

	Main Actors	*Key Priorities / Interests / Demands*
Central Government	MARN; MAG; CMCC; Procuraduría para la Defensa de los Derechos Humanos	The MARN, MAG and CMCC are political entities that respond to the interests of the incumbent government. During the FMLN decade in power, they seemed interested in producing technical regulation with the support of cooperation agencies such as AECID, as well as involving local communities in water governance. The Procuraduría para la Defensa de los Derechos Humanos is a control entity charged with investigating human rights violations. They are interested in the recognition of the human right to water. The Procurador is named by the parliament and the current Procurador has been highly critical of the Bukele administration.
Civil society organizations	Foro del Agua, Alianza Nacional contra la Privatización del Agua en El Salvador; UNES; Arzobispado de San Salvador; Caritas; Global Water Partnership-Central America; Oxfam International. CDC.	In El Salvador there are environmental CSOs who have been pushing for passage of the LGA and focus on preserving water and water governance. There are consumer associations (e.g., CDC) interested in access and quality of water in urban and rural homes.
International Cooperation	AECID; IADB; CEPAL; UNDP; UN Special Rapporteur on the human rights to safe drinking water and sanitation	Increase access to water resources by vulnerable populations
Universities and think tanks	UCA; Universidad Don Bosco; Facultad Latinoamericana de Ciencias Sociales Programa El Salvador (FLACSO El Salvador); Red Interamericana de Academias de Ciencias (IANAS in English); Fundación PRISMA (think tank); Fundación Dr. Guillermo Manuel Ungo (FUNDAUNGO) (think tank).	Increasing public participation and decentralization of the governance scheme. The main university involved is UCA, a public university run by Jesuit priests who have a long history of supporting social causes and empowering local communities.

	Main Actors	*Key Priorities / Interests / Demands*
Business associations	Asociación Nacional de la Empresa Privada (ANEP); Fundación para el Desarrollo Económico y Social (FUSADES); Fondo Ambiental de El Salvador (FONAES); Fundación Nacional para el Desarrollo (FUNDE); Asociación Salvadoreña de Ingenieros y Arquitectos (ASIA). Among the ANEP members with a substantial interest in the terms of water governance are the Salvadoran Sugarcane Association, the Chamber of Agriculture and Agroindustry of El Salvador, the Association of Sugarcane Producers, the Salvadoran Association of Bottled Water Industries, the Salvadoran Chamber of the Construction Industry, the American Chamber of Commerce in El Salvador, and the Salvadoran Industrial Association (Oxfam International 2020).	Industries with large water use and accused of overexploitation and pollution are interested in capturing the governing bodies in order to avoid more restrictive regulation that could limit their activities or increase the costs of operation a (Oxfam International 2020). If the demands of civil society are put in place, businesses would lose control over the governing bodies (as these are conceived as multi-actor decision bodies) and would presumably face more strict regulation for the use of water resources, increasing costs of operations.

Source: Author

RULES OF THE GAME

MANAGEMENT OF WATER RESOURCES

Currently, water governance in El Salvador – like Chile and Costa Rica – follows a model whereby there are multiple actors at the national level and few local actors charged with implementation (Universidad Centroamericana José Simeón Cañas 2018). MARN's only role is in developing water resource management policy. However, the policy implementation, the regulation, financing, and operations and maintenance functions are conducted by national level authorities for each one of the four sub sectors that have been linked to water resources: water supply and sanitation, agriculture, energy, and health. There are no cooperation or articulation bodies or spaces (Figure 1).

Although there is currently no Law for the Management of Water Resources (only policy documents that contain plans and strategies), there are constitutional provisions and sectoral laws that collectively regulate the water sector. Starting with the Constitution, in El Salvador, like other Latin American countries, water resources – including surface, underground, and maritime - belong to the state (article 84 of the Constitution). Although the state is responsible for the protection and sustainable use of these resources (article 117 of the Constitution), there are no Constitutional provisions to guide management, protection, and conservation of these resources.

The Constitutional norms are developed through a fragmented regulatory framework made up of several sectoral laws. The fragmented approach attaches specific functions to national and regional bodies but does not include a systemic approach to the sector, therefore reducing communication and cooperation between entities. Each one of the subsectors that make up the water sector (water supply and sanitation, agriculture, energy, and health) has a diverse legal framework contained in several laws, with responsibilities scattered between different authorities. There are over 10 laws and policies related to the water sector (Table 2). The institutional framework is included in some of these laws.

The Municipal Code, issued in 1986, charges **municipalities** with the protection of renewable and non-renewable resources, including water. The Environment Law, issued in 1998, charges the **MARN** with monitoring and protecting water resources. In order to oversee water availability and quality, the MARN issued a National Strategy for the Environment in 2013, and a National Plan for the Management of Water Resources in 2017. The **Ministry of Health** (MINSAL in Spanish) is charged by the Health Code with monitoring water quality for human consumption, access to sanitation, water use in agriculture, industry, and recreational uses. MINSAL imposes sanctions for violations of the Health Code related to water pollution. The Drainage and Irrigation Law, issued in 1970, charges the **Ministry of Agriculture and Livestock** (MAG in Spanish) with regulating the use of water resources for irrigation. While MAG is obliged by the Forestry Law (2002) to protect forests, the law does not establish that MAG must care for them in terms of the ecosystem services they provide to maintain underground aquifers. In this sense, there is a disconnection between the role of MARN and MAG. The 1948 Law of the **Hydroelectric Executive Commission of the Lempa River** (CEL in Spanish) establishes CEL as the entity in charge of electricity generation and use. The Law for the Creation of the General **Superintendence of Electricity and Telecommunications** (1996), charges the Superintendence with granting licenses over water resources to produce energy. Lastly, the Internal Regulation of the Executive Branch (1989) charges the **Ministry of Public Works** with all infrastructure works needed to support the sector (Calles and Córdova 2021; United Nations

Development Programme 2010; Quiñónez-Basagoitia 2019). The legal vacuum regarding coordination between the different authorities involved in the management of water resources resulted in the **Technical and Planning Secretariat of the Presidency** fulfilling an *ad hoc* coordinating role. However, the Bukele Administration eliminated this Technical Secretariat in June 2019. This Secretariat existed since 1999, during five of the six post-conflict governments, and was in charge of designing and implementing the Government plan. Instead, Bukele created commissioners (political actors and not technocrats) close to the president.

Regarding the water supply and sanitation subsector, it doesn't have an independent regulatory agency. The National Water Supply and Sanitation Management Law, issued in 1961, centralizes the provision of these services in the National Administration of Water Supply and Sanitation (ANDA in Spanish), and makes ANDA responsible for determining tariffs, in coordination with the Ministry of the Economy (MINEC in Spanish). El Salvador's President names ANDA's President, which therefore attaches it to government planning. The current Director of ANDA supports the Bukele proposal currently being discussed in Congress, and in March 2021 has announced a rigorous analysis of users to more judiciously allocate subsidies and adjust the tariffs system. In 2018, ANDA recorded that 85% of users received subsidies.[59] Despite the centralization of provision in ANDA, situations such as the civil conflict and the limitations in coverage have forced other providers into the market.[60] These include municipalities, community associations, Management Boards of Rural Aqueducts (Juntas Administradoras de Acueductos Rurales), self-supply systems (for new urbanization projects), or systems that are decentralized from ANDA (those that did not devolve the provision to ANDA in 1961). The Management Boards are composed of residents and users of the water services, elected by popular vote in the communities for a two-year period. During that time, they are in charge of managing the provision of services and maintenance of the system in their respective communities.[61] In 2016, ANDA, with the support of AECID, tracked the water supply and sanitation systems that are not managed by ANDA. They found 2,325 such systems that served nearly 25% of the population. Importantly, these systems served 53% of the rural population and nearly half of them (47%) were rated as having poor performance (AECID 2020). Except for 13% of the systems that are informal, the rest of the systems are municipalities or legal entities registered in the chambers of commerce.

DELIVERY OF WATER-RELATED SERVICES

For the water supply and sanitation subsector, ANDA is the governing body of the subsector, but it is also a public utility in charge of the provision of these services. The President of ANDA is appointed by the President of the Republic. In 2017, ANDA was provider of water supply and sanitation in 167 municipalities. In 152 ANDA acted as direct provider, and in 15 it functioned through decentralized systems. In the other 95 municipalities, people were being served by community associations, water committees, municipal administrations, self-provision, foundations and others (Centro para la Defensa del Consumidor 2018). There are also public faucets and direct access to water sources, and such for those who are not connected to the water and sanitation networks. The increasing participation of more local actors in the provision of services has contributed to debates about the decentralization of the sector. As Ortiz-Gómez, Nuñez-Espinoza, and Mejía-Castillo (2019) suggest, citizens and local actors

[59] See https://www.contrapunto.com.sv/anda-prepara-estudio-de-focalizacion-del-subsidio-del-agua-potable/; https://www.elsalvador.com/noticias/nacional/anda-consumo-de-agua-ruben-aleman/814880/2021/

[60] Unfortunately, information regarding the institutional nature of ANDA such as whether it is a completely politicized institution or not and what type of power dynamics exist within the management of the institution is not available in the literature.

[61] For more details about these Management Boards see: https://www.jurisprudencia.gob.sv/DocumentosBoveda/D/2/1980-1989/1986/06/890BE.PDF

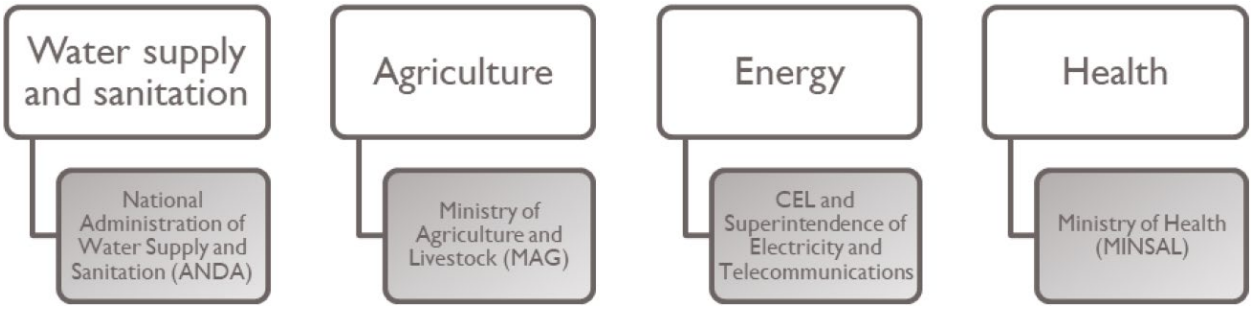
these days are in charge of provision and monitoring in rural areas. There are examples of development projects pursued by the UNDP in El Salvador to strengthen local ownership of processes to guarantee access and protection of water resources in specific basins of the country. These projects have included investments in infrastructure, as well as creating local governance bodies, clarifying the role of national entities involved like the MARN or the MAG, as well as fomenting local leaderships (United Nations Development Program, n.d.). In this same line, in 2019, a group of universities also created a document with recommendations to pursue territorial or a more localized governance of water resources (Universidad Centroamericana José Simeón Cañas et al. 2019). In the legislative debate that started in 2006 and continues today, one of the points of friction in terms of governance includes the existence and role of local decentralized authorities that act as governing bodies at the local level and respond to a national governing body.

Regarding irrigation, the country is divided into irrigation districts. Irrigation districts are technical-administrative units under the MAG. They must be created by legislative decree for their administration and maintenance, in the areas or regions of the territory destined to the use of water resources for agricultural and livestock purposes.[62] The Drainage and Irrigation Law (1970) established that users can organize themselves into irrigation associations and federations, and be authorized by MAG to manage the water resources for agricultural purposes (examples of federations are Atiocoyo Sur, Atiocoyo Norte, Lempa-Acahuapa and Zapotitán) (Universidad Centroamericana José Simeón Cañas 2018, 29).[63] These associations and federations have as their main functions, amongst others, managing and maintaining the resources, and charging a fee for the use of water resources by their members.[64]

The hydroelectric energy market includes a public company (CEL) and several smaller companies that have started to operate since 2010 as a result of legal reforms that created incentives to broaden participation. However, a qualitative study conducted by the Global Water Partnership Central America suggests that the unregulated operation of these smaller companies has produced conflicts around the availability of water resources. The damming of flows or their reduction in sections of the river, has affected the resources available for other uses, which include household use and irrigation (Global Water Partnership Central America 2016, 34).

[62] See art. 29 of the Drainage and Irrigation Law (1970)
[63] For more information about irrigation districts see: https://www.mag.gob.sv/wp-content/uploads/2021/06/2distritos-de-riego-y-avenamiento-de-El-Salvador.pdf
[64] For more information about associations and federations see: https://www.mag.gob.sv/wp-content/uploads/2021/06/56asociaciones-de-regantes-de-El-Salvador.pdf. For a list of associations until 2004 see: https://www.google.com/search?q=asociaciones+de+regantes+el+salvador&rlz=1C5CHFA_enCO925CO925&oq=asociaciones+de+regantes+el+salvador&aqs=chrome..69i57j33i160l3.4369j0j15&sourceid=chrome&ie=UTF-8#

Figure 1: Water governance in El Salvador by sector



Source: The author, with information from Ministerio de Medio Ambiente y Recursos Naturales (2017).

MITIGATION OF WATER-RELATED RISKS

Presidential Decree Number 8 of 2016 created the National Council for Environmental Sustainability and Vulnerability,[65] a consultative dialogue and consensus-building body on environmental sustainability and vulnerability. Its functions include integral risk management, including those related to water resources. The current regulatory framework and the proposed reforms analyzed in this report do not include risk management, despite that one of the causes of water insecurity in El Salvador are floods and droughts.

STALLED LEGISLATIVE CHANGE

Over the past 15 years, different actors have participated in an ongoing legislative debate about the regulation of the water sector. Civil society organizations (including NGOs and churches), universities, the government and business associations have presented proposals to reform the Constitution to include the human right to water (2), proposals to reform the water supply and sanitation sector (2), and proposals to issue a National Water Management Law (8)[66] (see Table 1).

As Figure 2 shows, the process started in 2006 with an attempt by environmental civil society organizations grouped in the Foro del Agua to push for a National Water Management Law (the proposal was known as LA in Spanish). The law proposal was not discussed in Congress and over the next 5 years these actors changed tactics focusing on more targeted reforms to recognize the human right to water and reforming the water supply and sanitation sector. In 2011 and 2012, the focus moved back to a National Water Management Law, with 6 proposals presented by different actors responding to each other's proposals. The main proposal was presented by MARN in 2012 (the proposal – La Ley General de Agua, LGA in Spanish). Eventually this proposal gained the support of the Foro del Agua (Oxfam International 2020).

In the meantime, in 2013 and 2017, the MARN issued two plans related to the water sector. The 2013 National Environment Strategy identified the main issues related to the water sector and then identified three main sectors to tackle: (i) water for living, (ii) water and the economy and (iii) water and the territory. In each one, the MARN proposes to focus on activities that include sensibilization, education,

[65] Decree 8 of 2016 is available at: http://extwprlegs1.fao.org/docs/pdf/els186238.pdf

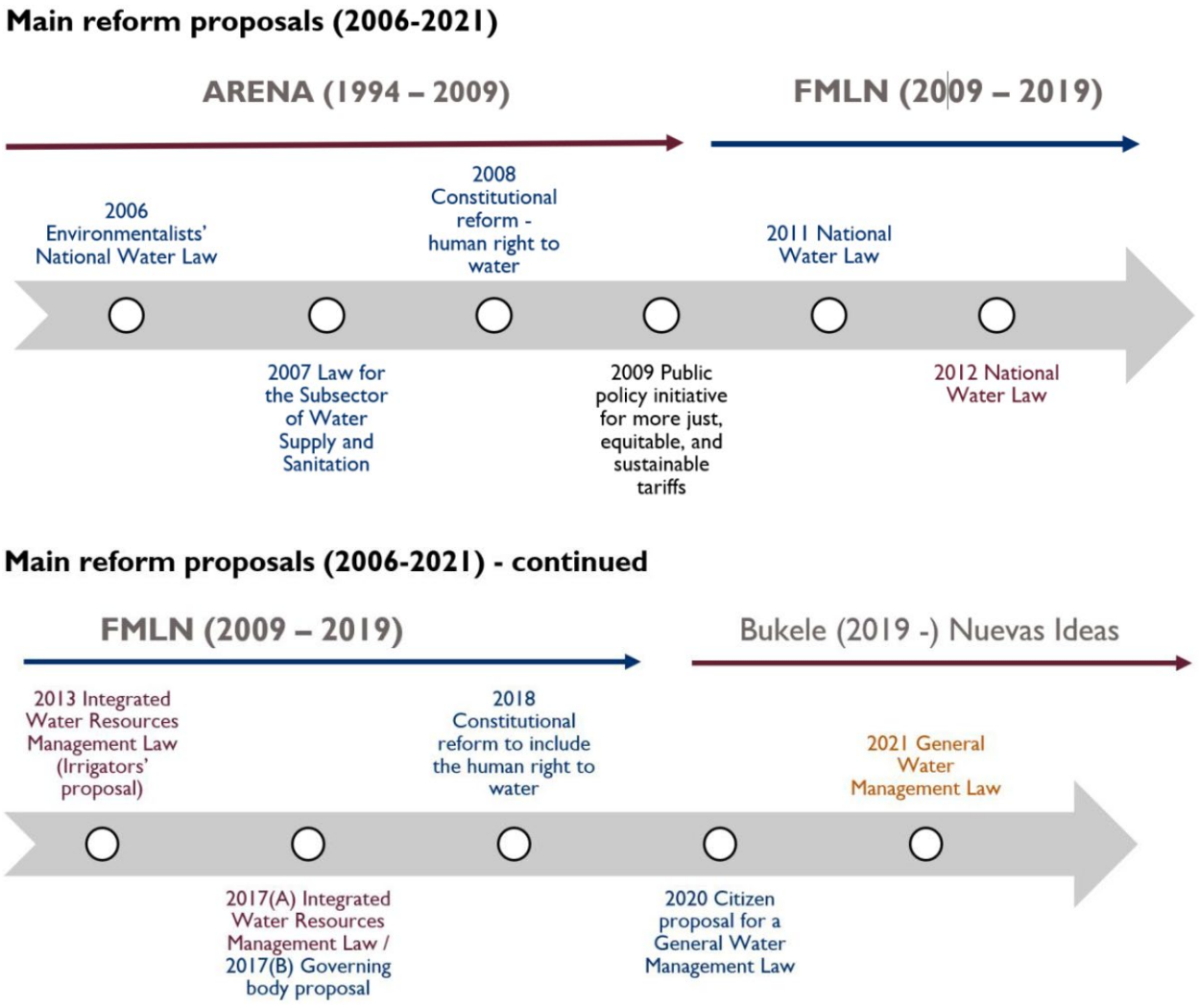
[66] This focus on producing a general water management law is in line with a broader world trend identified by Cullet (2018), which focuses on the efficiency in the use of water. This paradigm has been increasingly criticized because it leaves criteria of justice and equity behind (Cullen 2018, 338-342).

research, technology, and funding. The Ministry also highlights institutional requirements necessary to meet the proposed goals: interinstitutional coordination, institutional strengthening, local governance, and management models, monitoring and control, legislation, and regulation (Ministerio de Medio Ambiente y Recursos Naturales 2013, 21).

In 2017, with AECID's support, MARN made a study of the legal framework, water resources, the quality of water and finances of the sector. It identified certain thematic areas to focus on, including water quality, risks caused by extreme climate phenomena and governance (Ministerio de Medio Ambiente y Recursos Naturales 2017).

A detailed look at the evolution of the legal reform proposals in the Legislative Assembly suggest a power struggle between different actors, with economic actors acting as spoilers stalling the process and trying to capture the governing body of the sector in order to maintain control and limited regulation (Oxfam International 2020). In the three legislative periods of 2012-2015, 2015-2018, and 2018-2021, the Legislative Committee on the Environment and Climate Change (CMCC), the body in charge of debating the proposals in Congress, changed leadership. During the 2012-2015 period, the left-wing party FMLN was in power, which allowed for an attempt to regulate the sector through a proposal from MARN with the support of civil society organizations and broad community consultations. However, in 2013 a business association (Asociación de Regantes El Cacao) presented the first reform proposal that came from the private sector (known as LGIA in Spanish), and in 2017, right-wing parties in Congress, presented a proposal more aligned with the interests of the private sector, particularly the sugarcane, beverages, and construction sectors (Oxfam International 2020). According to Oxfam International, "*the main aspect driving the conflict in the debate is the composition of the regulatory body,* […] [since this determines] *who would have the power to decide over water management, national water policy, national and local plans, regulations, permits, and rates for water use, among other issues.*" (Oxfam International 2020, 22). In that sense, the economic elite want to have a voice in this governance body, while other actors are pushing for more multi-actor participation. This proposal was called by environmental CSOs as an attempt to privatize the sector because its purpose was to guarantee control over the water sector governing body (Oxfam 2020).

Figure 2: Main reform proposals (2006-2021)



Source: The Author: **blue text** (civil society and universities), **dark red**: business associations, **orange text**: government, **black text:** Undetermined sources.

The reform proposals, presented by different actors, present some similarities and differences:

- They all prioritize household water use.
- They all use basins, sub-basins, and micro basins as management units.

- They all create a national water authority, though some imagined it to be autonomous from the executive (2006[67] and 2007[68]), others attached to the MARN (2013[69], 2017(A)[70], 2021[71]) and others to the Presidency (2011[72], 2012[73], 2017(B)[74], 2020[75]). The 2021 reform, currently under debate, links the national water authority to the MARN, but provides that the President of the Republic appoints the President of this authority.[76] There are, however, important differences regarding the composition of the governing body of this authority (described in this document), which confirm that "*water is an eminently political issue and cannot be turned easily into a technocratic and economic one*." (Cullet 2018, 337).
- One of the most contested points of debate in the reforms is the control of the proposed national governing body.[77] Civil society organizations have pushed for public participation, proposing that the Board of Directors include not only representatives from the ministries, but representatives from different social sectors, including universities, local organizations, women's organizations, users, and consumers' associations, amongst others. The most comprehensive list of social groups is included in the 2017(B) reform proposed by the Universidad Centroamericana José Simeón Cañas (UCA). On the contrary, proposals by business associations excluded all civil society groups and only included public entities and representatives of business associations in the Board of Directors. The Government included consumer organizations, civil society organizations and universities, but with a minority vote.
- All proposals, except for the current 2021 reform, recognize the importance of having local bodies in certain hydrographic zones that represent and act on behalf of the national authority. The 2021 proposal centralizes all authority at the national level, with no local authorities.
- The proposals of 2006, 2011, 2012 and 2021 propose to divide the water sector in four sub-sectors with their own governing bodies. They also include norms on the relationships between these governing bodies and the national water authority.
    - Water supply and sanitation
    - Water for agriculture and fishing purposes
    - Water for hydroelectric and geothermal purposes
    - Water for industrial, recreational, and other purposes

[67] Environmentalists' National Water Law, available at https://coin.fao.org/coin-static/cms/media/5/12784326694920/fao_els_anteprotecto_leyaguas_unes.pdf
[68] Law for the Subsector of Water Supply and Sanitation, available at https://cidoc.marn.gob.sv/documentos/propuesta-ciudadana-de-ley-del-subsector-agua-potable-y-saneamiento/
[69] Integrated Water Resources Management Law (Irrigators' proposal), available at: https://www.asamblea.gob.sv/sites/default/files/2018-06/Propuesta-REGANTES.pdf
[70] Integrated Water Resources Management Law, available at: http://forodelagua.org.sv/wp-content/uploads/2019/04/Ley-de-Gesti%C3%B3n-Integral-de-Recursos-H%C3%ADdricos-jun-2017-partidos-de-derecha.pdf
[71] General Water Management Law, available at: https://www.asamblea.gob.sv/sites/default/files/2021-07/Iniciativa%20de%20Ley%20General%20de%20Recursos%20Hidricos.pdf
[72] National Water Law, available at: https://www.asamblea.gob.sv/sites/default/files/2018-07/Propuesta-Foro-del-Agua.pdf
[73] National Water Law, available at: http://forodelagua.org.sv/wp-content/uploads/2019/04/AnteproyectoLeyGeneralAguas-MARN.pdf
[74] Governing body proposal, available at: http://forodelagua.org.sv/wp-content/uploads/2019/04/propuesta-de-ente-rector-UCA.pdf
[75] Constitutional reform to include the human right to water, available at: http://forodelagua.org.sv/wp-content/uploads/2019/04/propuesta-de-reforma-constitucional-UCA.pdf
[76] This focus on introducing a water authority is in line with other reforms in the water sector around the world, which focuses on institutional reform (Cullet 2018).
[77] Ballinas (2013) argues that the structure and degree of autonomy in autonomous government agencies, in general, are not the result of systematic design, but of political struggles between bureaucratic and political actors, who try to shape them in their own interest (Ballinas Valdés 2013).

- The 2017(A) proposal drafted by civil society organizations is the only one that includes instances of coordination at the regional and national level (Zonal Networks of Basin Committees and National Networks of Basin Committees).
- Most proposals, except for the 2021 reform, include national and subnational consultive or advisory committees that include broad participation of social groups involved in water use and management of the basins. These committees participate in discussions of policy development and implementation, as well as operation and maintenance of water sources.
- Before 2011, the proposals did not include accountability mechanisms. Starting in 2011, proposals included a vertical system of accountability where users, providers and consumers would be held accountable through one of two systems: (i) a Water tribunal attached or independent from the national authority with the possibility of an Appeals tribunal and (ii) administrative sanctions by the national authority with an Appeals tribunal. None of the proposals considered other types of accountability, like the "vocales de control" in Colombia (representatives of the users in charge of control and monitoring the public utilities).
- Some of the proposals include a national fund to support vulnerable groups and community providers (2007) and others a national fund for the development of the sector (2006, 2012, 2013, 2017(A), 2020).
- While all proposals refer to fees, rates, or tariffs, some of them make a particular emphasis on these issues. The 2017 reform promoted by the business sector includes details to determine rates and fees for water use. This would limit the discretion of the Government to establish the tariffs, considering that in 2017 the FMLN was in power.
- An important absence in all bill proposals is a system of mitigation of water-related risks. While the national water authority would be charged with identifying risks and taking action to avoid them, there is no coherent and comprehensive system.
- All reforms propose the creation of a national information system, which suggests the recognition of the importance of evidence-based public policy.
- Only the 2013 and 2017 proposals by business associations introduced periodical and random audits to providers and users.

HERE AND NOW DYNAMICS

The current reform under debate in Congress (2021) was presented by the incumbent government. It was presented in a context where the Bukele administration has been accused of seeking to concentrate all power in the Presidency. In the 2021 parliament elections, the President obtained a strong majority (with 56 of the 84 parliamentarians), which allows him to pass reforms with no need for coalitions or the support of the opposition[78] (FUSADES 2021, 21). In May 2021, with the support of the parliament, he removed and replaced the judges of the Constitutional Chamber of the Supreme Court of Justice and the Attorney General of the Republic. Apparently, the judges had declared unconstitutional measures taken by the Government to manage the COVID-19 crisis, and the Attorney General was investigating some of the officials from the administration for corruption. He now has control over the judiciary, therefore weakening some of the most important control mechanisms. This move has received significant criticism from citizens who have actively protested, calling for the respect of the Constitution and suggesting that these steps are leading El Salvador to a dictatorship. International governmental organizations view these attacks to the separation of powers as a setback in the protection of human rights and democracy (Chamorro Tovar 2021). A social movement called "Citizen Resistance No to the Coup" emerged and has protested on several occasions. The Principal of the UCA attended a protest in June 2020.[79]

Regarding subnational politics, the President, according to the Constitution, appoints the Governors for the 14 Departments. Bukele is critical of the role of the Governors saying that they are merely decorative (FUSADES 2021, 34). In September, he appointed some of the 14 Governors and through the Press Office stated that: "The governors will have the function of articulating policies, programs and projects of the different agencies of the Salvadoran government in the department they represent." (FUSADES 2021, 34). While Mayors are publicly elected, Bukele's party, Nuevas Ideas, gained the most strategic municipalities, including San Salvador (Zemmouche 2021).

Over 30 years the ARENA and FMLN governments had maintained close or at least diplomatic relationships with ANEP and FUSADES, a business association and think tank with veto power in the country. These two organizations lobbied for the LGIA proposal, which was criticized for privatizing water in El Salvador by giving power to ANEP over the water governing body. Bukele's government plan (Plan Cuscatlan[80]) regarding water governance explicitly says that he would include the right to water supply and sanitation in the Constitution and avoid the privatization of the sector. Subsequently, he has attacked ANEP and FUSADES on several occasions, therefore rupturing the government's relationship with the more traditional associations of businesses. For example, in June 2014, with the support of the parliament, he excluded ANEP from the boards of directors of all public entities (instituted by previous governments). While businesspeople retained a seat in these boards, the President argued that these seats should not be exclusively held by ANEP. The President will now select a representative of the private sector to take the seat in each institution (Romero 2021).

Tensions between the government and the private sector increased because of the strict confinement measures taken by the Bukele administration regarding the COVID-19 pandemic, which had costly effects to the economy (FUSADES 2021, 79). The President wanted the private sector to contribute significantly (economically) to the COVID-19 recuperation plan. The sector refused and Bukele rejected the authority of the President of ANEP (FUSADES 2021, 81) to represent the private sector. He then

[78] ARENA 14 parlamentarians, GANA (6), FMLN (4), PC (2), Nuestro Tiempo (1), VAMOS (1), PDC (1).
[79] See: https://www.laprensagrafica.com/elsalvador/FOTOS-Salvadorenos-protestan-contra-el-gobierno-por-vulnerar-la-democracia-en-El-Salvador-20210606-0041.html
[80] See: https://plancuscatlan.com/home.php

proceeded to meet with businesspeople that did not belong to ANEP (non-guilded businesspeople) and drafted a Roadmap to Economic Recovery with the support of the Escuela Superior de Economía y Negocios and the INCAE (Instituto Centroamericano de Administración de Empresas) Business School. The last confrontation occurred this past August 17, 2021, when FUSADES issued a public statement opposing a call from the President to different social actors, including FUSADES, to discuss a proposal to reform several articles of the Constitution. The proposal was drafted by an Ad Hoc team created by the President.[81]

The 2021 Bukele reform mainly responds to the President's Government Plan, which calls for intervention of the state in the economy and avoiding the privatization of water resources. The proposal takes up the division of the sector in four sub-sectors led by their own governing bodies, and it also regulates the relationship between the sub-sector authorities with the national authority. It is, however, an import setback in terms of decentralization and public participation, as recognized by Foro del Agua[82]. This approach ignores the recommendations of the UN Rapporteur on the human right to water supply and sanitation in 2016 (UN Special Rapporteur on the human rights to safe drinking water and sanitation 2016). Local water authorities were removed, and all functions are concentrated in the national water authority, and the President of the Republic appoints the President of the national water authority. Universities and civil society organizations have a minority vote in the governing body of the national water authority, and there are no consultive or advisory committees at the national or local levels with the participation of social groups. The proposal, however, does tackle a pressing issue regarding the governance of transborder water resources which are particularly important in El Salvador. It grants powers to negotiate bilateral or international treaties and creates a Committee for the Management of International Water Resources.

When analyzing the bill proposal promoted by the current national government from the framework of the cultural theory of risk (see Hood 1998) for the identification of the perspective of a response to a public policy problem, it is possible to conclude that it is a predominantly hierarchical project. That is, the bill proposal is one in which group interest prevails over individual interest and the general rule over case-by-case negotiation. From this perspective, the bill:

- Establishes that water is a public good whose use will have priority for human consumption.
- Allocates much of the power to a new regulator called Autoridad Salvadoreña del Agua (identified with the acronym "ASA"), with many powers over the other authorities (national and subnational and of all subsectors) and actors of society (it centralizes the planning of water resource management). It also authorizes ASA to be the entity responsible for managing international cooperation.
- States that the president of ASA would be appointed by the President of the Republic, most of the members of the Board would be representatives of the ministries, and that there would be a quota for a representative of the civil society, and another for the universities; there will be no representation from private businesses nor from the holders of authorizations and permits (see article 14, d).
- Includes principles with different criteria or regulatory rationales, including integrated water management, sustainability, climate change action, and also human rights. It is somewhat aligned with the shift from the MDGs to the SDGs in terms of recognizing the water resource as the

[81] See: https://www.anep.org.sv/com_17agos/
[82] See https://www.facebook.com/watch/?v=333435691625033

central scarce good in policies to expand access to safe drinking water and basic sanitation (see Sadoff et al 2019).

- Mentions the criterion of legal security, but the law is very general and grants many powers to ASA over the holders of authorizations or permits (which it limits to a period of 10 years), for example, in terms of developing "water audits" and in defining the fees they must pay. It also includes a new Tribunal, whose members are also appointed by the President of the Republic. And it allocates the approval of tariffs to the "Executive Body in the Treasury Branch".
- Refers to "international instruments" on water (see article 8). This could serve as a basis for a broader understanding of the human right to water than that contemplated in the law, based on its content in international human rights law. A very important factor within that content is access to information and participation (see López-Murcia 2021).
- Does not include any important regulatory innovations, particularly in relation to pollution abatement. It is a very simple "command and control" system.

Given the above, the main winner if/when the bill is approved is undoubtedly the national government (particularly, there would be a significant increase in presidential power) and the main losers would be (i) ANEP because they had been promoting an active and key role of the business sector in the water governing body. ANEP includes the associations of the three economic sectors that Oxfam International (2020) identified as the main private stakeholders in the debate around water governance: sugarcane, beverages and construction, and (ii) CSOs like the Foro del Agua, and the Alianza Nacional contra la Privatización del Agua which advocate for local participation through basin committees and more stringent control over water licenses,[83] as well as a focus should be in the preservation of ecosystems to guarantee sustainability.[84] On 24 August 2021, the Alianza Nacional contra la Privatización del Agua introduced changes to the 2021-22 Bukele reform and submitted a track changes version to Parliament with suggestions including increased participation of local actors as consultative committees, a gender and human rights approach, decentralization of water governance, and specific rules on collective permits for communal use of water resources.[85] However, it is unlikely that the Bukele administration will include any changes as it has not been responsive to any of the criticism from civil society on any front.

In January 2020, Bukele launched a National Water Plan, which seeks to resolve the water crisis in the country. This Plan is managed by ANDA, MARN, Ministry of Public Works, FONAES, Ministry of Finances, Presidential Commissioner for Strategic Projects, the Armed Forces, and the Ministry of the Interior (Ministerio de Gobernación). It is an ambitious plan that seeks to cover the environmental issues, water catchment, sanitation, supply and quality of water.[86] It seems, however, that they have focused during the first year of the plan on infrastructure to improve access to drinking water in homes in urban settings.[87] In September 2020, Bukele named Rubén Alemán as President of ANDA (formerly working in USAID), emphasizing the government's plan to increase access and quality of drinking water.[88] In October 2020, Bukele named Frederick Benítez (former President of ANDA) as Presidential Commissioner for Water. Through the Commissioner, the President would directly define strategies in

[83] See: https://www.facebook.com/watch/?v=3334356916250 33

[84] See: https://www.balsamoradiotv.com/post/el-foro-del-agua-se-pronuncia-ante-la-propuesta-de-ley-del-agua-presentada-por-el-presidente-bukele

[85] See: La Mesa Nacional Frente a la Minería Metálica de El Salvador's edits to the Ley de Recursos Hidricos dated 24 August 2021

[86] See: https://diariolahuella.com/presidente-nayib-bukele-lanza-plan-nacional-de-agua/

[87] See: https://www.anda.gob.sv/category/plan-nacional-de-agua/; https://www.anda.gob.sv/plan-nacional-del-agua-2019-2020/

[88] See: https://www.presidencia.gob.sv/presidente-nayib-bukele-nombra-a-nuevo-presidente-de-la-anda-y-a-embajadora-de-el-salvador-ante-estados-unidos/

the water sector, with a view to guaranteeing that future generations have access to water.[89] However, in June 2021, the Government, without much explanation, eliminated the position.[90]

CONCLUSION

In El Salvador there is limited governance and regulation for the entire water sector. Each sector has its own structure and there is very limited communication between sectors (on the relevance of communication between regulators see Prosser 2010). In addition, responsibility, resources, and authority are concentrated at the national level. There are community schemes without a legal basis or permanent technical support to strengthen them (on the support that the central government could give to community schemes for the management of common resources, see Ostrom 1990). Conditions are also not conducive to attract private resources or providers, such as a "credible commitment" (see Baldwin, Cave, and Lodge 2012). And there is not much clarity on the tools for crisis management such as those associated with climate change.

There have been several attempts to produce coherent regulation for the water sector as a whole with a National Water Management Law, but no version presented so far by different stakeholders has passed in Congress, though it is highly likely that the proposal submitted by the incumbent government in 2021 will be approved. In order to explain the current status of the debate in the country and introduce the suggested actions for USAID in this context, the following sections describe the Foundational factors, Rules of the game, Here and now and Dynamics elements of USAID's Applied PEA Framework.

Foundational factors include water stress that comes from natural and human-led phenomenon, described in this document, as well as national, regional, and international economic and political structures that have tended to rely on privatization, exports, and substitution of imports to push for development. Another factor is the importance of transboundary water sources that are important to guarantee access and sustainable use by different communities. In addition, the COVID-19 pandemic has led to increasing inequality and levels of poverty, reversing a trend of improving economic equality. A highly centralized institutional design also restricts the formal role that local state and non-state actors have in the sector (see Hooghe 2016, 160–61). Lastly, the increased veto power of businesses, gained by their prominent role in state affairs since 1994, limits the actions of the state.

Rules of the game in the water sector in El Salvador include a series of laws and public policies that attribute responsibilities to national authorities. However, these authorities have a sectoral approach (water supply and sanitation, agriculture, energy, and health) and have no coordination among themselves. This lack of coordination created large gaps in regulation, which have opened the opportunity for users and consumers to informally regulate use and monitoring. There are also important information gaps regarding the way these informal rules work regarding the different uses of water resources in the rural and urban areas. Finally, there is also a wide gender gap in terms of issues related to access and use of these resources. Fieldwork, therefore, should focus on filling these gaps.

From a political point of view, it is clear that in the water sector in El Salvador: (i) there is a vacuum of authority in relation to water resources management, (ii) this vacuum has been sustained (through

[89] See: https://www.presidencia.gob.sv/presidente-nayib-bukele-juramenta-a-comisionado-presidencial-para-el-agua/
[90] See: https://www.laprensagrafica.com/elsalvador/Ejecutivo-derogo-decreto-que-creo-al-Comisionado-Presidencial-para-el-Agua-20210604-0064.html

government capture during ARENA rule, as well as its revolving door with ANEP, or blockades in the legislative body during FMLN governments) and historically exploited by the sugarcane, beverages and construction sector i (iii) civil society has been promoting projects to address the main challenges of water security without receiving the necessary political support for their approval, and (iv) in the face of pressure to regulate the management of water resources, industrial users have prepared projects that allow them to dominate their governance. Despite multiple attempts by different actors, no proposal for a comprehensive water resources management regime has been approved. However, the incumbent government's proposal is likely to be approved in the coming months as he holds a majority in the parliament.

From the regulatory literature, there are four main explanations for the absence of a general water regime in El Salvador: (1) conflict between different understandings of the public interest, (2) disputes between groups with particular interests, (3) institutional factors in the legislative process or in judicial review, and (4) the role of assimilation of external models (see Baldwin et al 2012).

In the case of El Salvador, the evidence tends to support toward the explanation of blockages by groups who are promoting particular interests (explanation number 2), particularly from business groups in sugarcane, beverages, and real estate development (Oxfam 2020). In contrast, in some ways, the understanding of how to serve the public interest of some other actors has been converging because of the development of this debate over several years, a fact against explanation number 1. Also, the assimilation of external models has been less strong because there has been no significant pressure towards the assimilation or adoption of models promoted by organizations such as the World Bank, the OECD, or the Inter-American Court of Human Rights. There has not been a body of Salvadoran technocrats with sufficient political strength to promote this type of "best practices" in their country (with exceptions, such as ANDA's participation in international initiatives such as the IDB's AquaRating and others of the International Water Association).

Here and now. The Bukele administration has taken control of the different branches of power (executive, legislative and judicial), as well as subnational politics. It has had confrontations with the private sector and with civil society organizations, as well as international organizations, but has showed to have little capacity of dialogue and change. It presented a proposal for a general water law which is likely to pass in the coming months, centralizing decisions and implementation in the Presidency, and excluding important stakeholders (local communities and businesses). Bukele also produced a National Water Plan with a broad scope. However, its focus has been on working with ANDA to increase access to potable water for urban communities that had intermittent service. In the National Water Plan there is no mention of the systems not administered by ANDA, which serve a high proportion of the rural population.

Dynamics and action points. In the abovementioned context, considering that USAID would not be interested in a proposal with a top-down approach, it could develop other types of actions, in line with the PEA model, that seek to take advantage of the windows of opportunity that could arise from three important factors: (i) a president with a lot of political power, willingness, and capacity for change (see Hood 1996), (ii) the need for state action and consensus in the face of the Covid-19 pandemic and the consequent economic crisis, and (iii) a progressive recognition of the need for adaptation in the face of climate change.

But it should be noted that these shocks alone do not guarantee success in changing the current structure of the water sector. There are factors against the possibilities of change. For example, the president's confrontations with businessmen, which already include the management of resources for the pandemic measures, as well as the limited role that the national government recognizes for subnational governments, communities, and the private sector, could be a hindrance for innovation in the sector. In addition, with an increasingly authoritarian president (Amnesty International) and a judiciary without the capacity to restrain presidential powers, it could be challenging to guarantee human rights linked to access and availability of water resources (the president dismissed the Justices of the constitutional chamber of the Supreme Court of Justice and the Attorney General).

In this context, a possible entry point for USAID may be the drinking water supply and basic sanitation subsector. On the one hand, there is an important window of opportunity caused by Covid-19—it is necessary that all people have access to drinking water for hand washing as one of the main actions to reduce contagion. On the other hand, there is already an important state body with regulatory and provision roles such as ANDA, with national presence and responsiveness to international organizations (such as the IDB - AquaRating initiative - and the IWA). Supporting ANDA would be aligned with the government's interest in not privatizing water resources. And it is possible that the ANDA team would have greater continuity than the rest of the national government, facilitating learning processes (see Hood 1996). From this sub-sector, USAID could start working with a more limited number of regulators (see Prosser 2010). And an important aspect of facilitating social dialogue would be to build consensus based on medium and long-term perspectives regarding this sub-sector.

It would be important for USAID to not limit itself to the technical aspects and it should offer support for the development of a much more horizontal relationship between ANDA and the municipal and community providers. This in fact will increase their participation in the SDG goals. This strategy would not only allow the inclusion of subnational voices that the government wants to ignore in its bill, but the experience would also allow USAID to learn about the vision of the problems and possible solutions of these types of actors and promote changes in a bottom-up way. AECID could be an important ally that has been working in the sector for years. Another advantage of starting with this sub-sector is that it would not generate direct confrontations with businessmen. This would facilitate the construction of a relationship that would allow linking them to other post-pandemic recovery processes in the country. In terms of timing, it would be important to take the first steps in this process before the beginning of the electoral period in which polarized debate could prevail without much consensus building on water strategies.

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APPENDIX 1. LAWS AND POLICY RELATED TO THE WATER SECTOR IN EL SALVADOR

Constitution (1983)	Declares the protection and use of water resources of public interest.
Municipal Code (1986)	Charges municipalities with the increase and protection of renewable and non-renewable resources.
Criminal Code (1997)	Includes penalties for those who pollute, poison, adulterates, or corrupts water resources in a dangerous way.
Health Code (1988)	Determines water quality standards, discharge control and protection zones. It grants the Ministry of Health the authority to develop environmental sanitation programs, drinking water supply for communities, proper disposal of excreta and sewage, as well as the elimination and control of water pollution.
Drainage and Irrigation Law (1970)	Establishes that surface water and groundwater are the property of the State. It charges the Ministry of Agriculture and Livestock (MAG in Spanish) with regulating the use of water resources for irrigation. It regulates the extraction of water for irrigation. However, it does not clarify how the use of water is planned, regulated and adjudicated for competing demands between drinking water and irrigation water, for both for public and private use.
Forestry Law (1973)	Declares the conservation and increase of forest resources of public utility, recognizing the importance of these resources for the protection of hydrographic basins.
National Water Supply and Sanitation Management Law (1961)	Creates ANDA as the main authority of this subsector, and publicly owned provider
Law of the Hydroelectric Executive Commission of the Lempa River (1948)	Creates CEL and grants it rights over the use of water for power generation, conceived without regard to the rights of other users conferred by law.

Internal Regulations of the Executive Branch (1989)	Charges the MAG and the Ministry of Public Works, with the creation of legal mechanisms for the protection, conservation and rational use of water resources, as well as research on geological, hydrological and seismological conditions of the national territory. The Ministry of Agriculture has been in charge of the normative aspects of water as a natural resource, mainly oriented to the protection, conservation and rational use of water resources. The Ministry of Public Works is in charge of the development of flow regulation infrastructure for flood control.
Law for the Creation of the General Superintendence of Electricity and Telecommunications (1996)	The Superintendence is charged with allocating water concessions for hydropower water concessions for hydroelectricity, without taking into account other users. The application of this regulation is practically suspended, but it adds another confusing factor to the management of the resource.
Environment law (1998)	Grants competence in the prevention and control of contamination to the MARN, together with the MINSAL. According to the law, in order to protect water resources, the integrated management of hydrographic basins and the protection of the coastal-marine environment from all kinds of spills and spills must be promoted. It is the responsibility of the Ministry of the Environment to elaborate and propose to the Presidency of the Republic the necessary regulations for the management, use, protection and management of watersheds, use, protection and management of waters and ecosystems.
Special Wastewater Regulation (a norm of inferior hierarchy to laws) (2000)	Aims to ensure that wastewater does not alter the quality of the receiving environments. Seeks to contribute to the recovery, protection and sustainable use of water resources.

National Strategy for the Environment (2013)	Strategy structured around three fundamental pillars: water for life, water and economy, water and territory. These three closely linked axes express three views of the water problem: from people and ecosystems, from the economy and its water requirements, and from the territory, including the transboundary dimension that is so critical for El Salvador. The water for life pillar includes actions to recognize the human rights to water and sanitation, food security, and reducing risks in the sector. The water and economy pillar focuses on actions related to agriculture, energy and other uses of water resources. The water and territory pillar focuses on actions to protect rivers and basins, with particular emphasis on transboundary water resources.[91]
National Plan for the Management of Water Resources (2017)	This Plan contains a diagnostic analysis of the hydrographic regions of the country and sets out technical and socially viable measures to tackle the problems identified in the diagnostic.

Source: Calles and Córdova 2021

[91] For more details on this strategy see: https://cidoc.marn.gob.sv/documentos/estrategia-nacional-de-recursos-hidricos-2/

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