THE ROLE OF DECENTRALIZATION IN THE DELIVERY OF WATER AND SANITATION SERVICES IN PERU

- Final Draft -

Consultant: Milton von Hesse La Serna[1]

June, 2017

[1] The author thanks Claudia Zavaleta Jimenez for her assistance with this report.

TABLE OF CONTENTS

1. Introduction: The state of local water and sanitation provision 4
2. The vertical structure of the public sector 10
3. Organizational structure of water and sanitation services 19
4. Assignment of functions and responsibilities 28
5. Effective and responsive local political leadership 35
6. Local control over administration and service delivery 38
7. Local fiscal autonomy and local financial management 44
8. Local participation and accountability 51
9. The vertical composition of water and sanitation expenditures 54
10. Conclusions 57
11. References 59
12. Annexes 61

Table 1. Evolution of Type of Access to Water Services (%) 6
Table 2. Evolution of Type of Access to Sanitation Services (%) 7
Table 3. Vertical Structure of the Public Sector 13
Table 4. Assignment of Functions and Expenditure Responsibilities: Selected Local Functions 18
Table 5. Population with Water and Sanitation Services, by type of provider 22
Table 6. Key Stakeholders in the Water and Sanitation Sector (at each level) 22
Table 7. Commercial Management Indicators, 2014 39
Table 8. Infrastructure Indicators, 2014 40
Table 9. Customer Relationship Indicators, 2014 40
Table 10. Governance and Governability in the EPS 41
Table 11. Operational Profits 2014, by type of EPS 47
Table 12. Vertical Expenditure Profile of Water and Sanitation Services 55

Figure 1. Map of Peru 12
Figure 2. Composition of Funding Source, 2016 15
Figure 3. LG Expenditures financed with Canon Resources (millions of Soles) 16
Figure 4. Key Power Relationships in the Decentralized Delivery of Water and Sanitation Services in Urban Areas 20
Figure 5. Key Power Relationships in the Decentralized Delivery of Water and Sanitation Services in Rural Areas 21
Figure 6. Population in Urban Areas and Number of EPS by Region, 2014 23
Figure 7. Evolution of Sanitation Expenditures, 2008-2016, by level of government 45
Figure 8. Ordinary Resources assigned in the Opening and Final Budget 46

Box 1. History of Decentralization Reforms in Peru 11
Box 2. Mining Canon 16
Box 3. Results-Based Budgeting and the Budgetary Program 083 26
Box 4. The Case of the Water Treatment Plant of Huachipa 32
Box 5. A Case of Wrongful Application of Social Tariffs 32
Box 6. Project Irregularities in Iquitos 37
Box 7. The Role of OTASS 41
Box 8. The evolution of the Technical Municipal Area 42
Box 9. Participatory Budget 52

ACRONYMS

ATM	Technical Municipal Area
CG	Central Government
CGR	General Comptroller of the Republic
CTAR	Transitory Committees of Regional Management
CWE	Chinese company, International Water & Electric Corp
DIGESA	General Department of Health
DIRESA	Regional Department of Health
DISABAR	Department of Basic Rural Sanitation
DRE	Regional Education Department
EPS	Sanitation Service Provider
FONAFE	National Fund for the Financing of State Business Activity
GDP	Gross domestic product
G&S	Goods and services
INEI	National Institute of Statistics and Information
INIA	Agriculture Innovation National Institute
JASS	Sanitation Services Users Association
LAC	Latin America and Caribbean
LG	Local Government
LGSS	Sanitation Services General Law
LMSS	Sanitation Services Modernization Law
MDG	Millennium Development Goals
MEF	Ministry of Economics and Finance
MINAGRI	Ministry of Agriculture and Irrigation
MML	Metropolitan Municipality of Lima
MVCS	Ministry of Housing, Construction and Sanitation
NG	National Government
NGO	Non-Governmental Organization
NHS	National Household Survey
OMA	Organic Municipalities Act
OPIPP	Public Infrastructure for Productivity Agency
OTASS	Technical Agency of the Administration of Sanitation Services
PAPT	Water for everyone
PCM	Ministries Council Presidency
PIM	Incentive Program for the Improvement of Municipal Management
PNSU	National Urban Sanitation Program
PNSR	National Rural Sanitation Program
PMO	Optimized Master Plan
RBB	Results-Based Budget
RG	Regional Government
RAT	Transitional Support Regime
RGOA	Regional Government Organic Act
SDG	Sustainable Development Goal
SDU	Service Delivery Unit
SEDAPAL	Lima Water and Sewerage Services
SENAPA	National Service of Water Supply and Sewerage
SNIP	National Public Investment System
SUNASS	National Superintendence of Sanitation Services
UBN	Unsatisfied Basic Needs
UGEL	Local Education Management Units
WSS	Water Supply and Sanitation

1. INTRODUCTION: THE STATE OF LOCAL WATER AND SANITATION PROVISION

In order to reach the Sustainable Development Goal (SDG) Number 6, namely, to "ensure availability and sustainable management of water and sanitation for all", Peru, like many other countries, has put into practice different strategies to improve the delivery of water and sanitation services. In 2006, the new President, Alan García, announced an ambitious investment plan for the water and sanitation sector called "Water for Everyone" (PAPT, Programa Agua para Todos). It promised water access to all Peruvians – and mainly to the poorest – by the end of his mandate.

In the next period of government, from 2011 to 2016, President Ollanta Humala introduced a strategy called "Social Inclusion" to deliver basic services to the poorest population. The strategy incorporated access to water and sanitation services, among others, especially in rural areas. Finally, current President Pedro Pablo Kuczynski has recently pushed a new reform that seeks to provide access to water to almost all the population by the year 2021. This would be done by increasing provider efficiency. However, there is still a lot of work ahead to achieve improved public service delivery performance in Peru.

The World Bank recognizes that public sector system strengthening can be more readily achieved by understanding the development context of a country or a specific sector. This can be done by identifying binding constraints and working around them. In this context, the World Bank Global Solutions Group on Water Supply and Sanitation (WSS) intends to explore regional experiences in addressing formal and informal dynamics of WSS service delivery incentives, including regulation, financial instruments, decentralization, fiscal transfers, and the role of civil society. The aim is to identify common institutional, policy and regulatory incentive trends/challenges in multiple WSS sectors in several Latin American countries, including Peru.

Therefore, the objective of this work is to provide an in-depth analysis of the role and impact of decentralization and decentralized governance structures in the delivery of WSS services in Peru. The country study on decentralization seeks to present the sector trends and institutional context for WSS services. It also seeks to identify the main underlying constraints that lead to weak service delivery outcomes.

This type of case study ought to provide useful information to policymakers and development practitioners to identify the main structural problems in the delivery of WSS services. This is especially the case in designing specific reform programs. In Peru, there are several issues related to the local provision of water and sanitation services. This research will contribute to identify which of them are associated with the decentralization scheme. This represents a very valuable effort, especially in a country where millions of people lack access to water and sanitation services. Indeed, the country is still far from reaching the sustainable management of such services.

1.1. The State of Local Water and Sanitation Provision in Peru

This section presents two descriptive analyses of water and sanitation provision in Peru. It starts with a short history of the evolution of the sector, and describes the state of the local provision of these services to the population. Ultimately, this section seeks to provide a general framework to contextualize this study.

First, the history of the sector shows that it has not always been decentralized. During the 1980s, urban service delivery was centralized through the National Service of Water Supply and Sewerage (SENAPA, Servicio Nacional de Abastecimiento de Agua potable y Alcantarillado). The rural provision of services was conducted under the responsibility of the Ministry of Health

through the Department of Basic Rural Sanitation (DISABAR, Dirección de Saneamiento Básico Rural).

The decentralization of the sector started in the 1990s with the Sanitation Services General Law (LGSS, Ley General de Servicios de Saneamiento) issued by President Alberto Fujimori. SENAPA was dissolved and its subsidiaries were transferred to local governments in the form of a Sanitation Service Provider (EPS, Empresa Prestadora de Servicios de Saneamiento). Responsibility for rural provision of services was transferred to local governments with the possibility of providing the services itself or delegating the service delivery to communal organizations. During the 2000s, the decentralization reform was strongly pushed through the Bases of Decentralization Act (Ley de Bases de Descentralización). Since 2003, in most cases, the local governments have been working in coordination with the central government.

Second, it is important to understand the state of water and sanitation provision in Peru to complete the general picture. In this part, the definition and degree of access to both services at the national level and in urban and rural areas will be shown, detailing the different types of access in each case. In order to highlight the inequalities and heterogeneity that characterize the country, there is a brief analysis of the regional situation and an estimation of the coverage for both the top 60 percent of the households, as well as the bottom 40 percent. The source of information for this analysis is the National Institute of Statistics and Information (INEI, Instituto Nacional de Estadística e Informática) and the National Superintendence of Sanitation Services (SUNASS, Superintendencia Nacional de Servicios de Saneamiento).

At the national level, 86 percent of the population had access to water services[2] in 2015, an increase of 14 percentage points since 2001. Despite this, the percentage of the population with access to water remains lower than the average of the region. Indeed, it is far below countries such as Argentina, Brazil, Chile and Uruguay, where access is almost universal[3].

Regarding sanitation services[4], the coverage was 78 percent in 2015 and has gradually improved over the last 15 years, since it was 60 percent in 2001. As with water services access, the relative position of sanitation coverage in the region is one of the lowest and is below the Latin America and Caribbean (LAC) regional average. It is important to highlight that 9.3 percent of households are still without sanitation services[5] throughout the whole Peruvian territory. This means that more than 3 million people are still practicing open defecation. This problem especially affects the rural population, where almost one in four people do not have any type of sanitation services.

In general, “water services” in urban areas consist of a public network and the provision of water through a pipe network. “Sanitation services” consist of a public network system (sewerage) for households and businesses. As shown in the table 1, in line with the previous definitions, the majority of the urban population have networked water and sewerage in Peru.

Finally, in urban-marginal areas, ‘water services’ mostly mean access through a tanker truck, meaning water is more expensive than having a public network in the rest of urban areas. Regarding the overcharges, Bonifaz and Aragón (2008) found that the unitary cost per cubic

[2] Following the NHS questionnaire, it includes public water supply network in or outside the household and pylon for public use.

[3] The data of water and sanitation degree of access of other countries of the region was taken from the World Bank’s statistics.

[4] For this case study, following the NHS questionnaire, access to sanitation includes drain service available from public network inside the household, from public network outside the household but in the building and septic tank. Although, other international definitions can include cesspit / latrine to measure the coverage. Even when latrine can be considered as a quality source, in Peru cesspit is not. The NHS used to report both types together and recently they are reported separately. Even though, to be able to see the historical evolution in this analysis, they are reported together.

[5] Following the NHS questionnaire, it includes river, watercourse, canal and does not have sanitation services.

meter of water provided by Lima Water and Sewerage Services (SEDAPAL, Servicio de Agua Potable y Alcantarillado de Lima) was 1.4 Peruvian Soles (US$ 0.48 equivalent), and the same cost by a tanker truck was 6.8 soles (US$ 2.32 equivalent) in Lima, whereas in the provinces the costs were 1 and 5 soles (US$ 0.34 and US$ 1.71 equivalents), respectively.

In rural areas, the arrangement of water and sanitation services is different. With respect to water, there is a traditional culture of thinking that natural water from rivers or similar sources is enough for human consumption and the belief is that it belongs to the population who live in the vicinity. As such, water is valued in cultural terms more than monetary terms. In spite of this, the government has tried to change this traditional conception. By now, public water connections are the most common type of access and have increased relative to rivers and other sources as the main source, as shown in table 1.

Table 1. Evolution of Type of Access to Water Services (%)

TYPE OF ACCESS	2001	2005	2010	2015
TOTAL URBAN AND RURAL				
Public network in household	63.6	62.6	67.9	79.5
Public network outside of household, but in the building	3.2	4.8	7.0	4.2
Pylon for public use	4.6	2.9	1.9	2.0
Tanker truck, or similar	4.0	3.3	2.4	2.0
Water well	5.7	5.0	3.6	2.4
River, or similar	14.4	17.2	13.6	6.1
Other[1/]	4.6	4.1	3.6	3.8
URBAN				
Public network in household	76.6	76.3	78.7	84.9
Public network outside of household, but in the building	4.2	6.4	8.7	5.5
Pylon for public use	3.7	2.7	1.8	2.0
Tanker truck, or similar	5.7	4.4	2.9	2.3
Water well	2.8	2.7	1.9	1.3
River, or similar	2.1	2.4	2.4	0.7
Other[1/]	4.9	5.0	3.7	3.3
RURAL				
Public network in household	35.1	29.1	36.3	62.5
Public network outside household, but in the building	0.9	0.8	2.1	0.4
Pylon for public use	6.5	3.5	2.2	1.9
Tanker truck, or similar	0.3	0.6	0.8	0.8
Water well	11.9	10.7	8.9	6.0
River, or similar	41.5	53.2	46.7	23.0
Other[1/]	3.9	2.1	3.1	5.5

Source: National Institute of Statistics and Information
Note: [1/]Includes rainwater, melted snow water, connection to public network of a neighbor, and so on.

With respect to sanitation services, the majority of the rural population historically did not have access to these services. However, currently, the rural population has some limited access to sanitation services in the form of latrines or septic tanks. This came about as a result of the increased presence of non-governmental organizations (NGOs) and the central government. They are seeking to sensitize rural citizens to install and use better facilities. Gradually, people are migrating to these types of solutions. However, many are still relying on cesspits or simply

continue to have no access. Finally, because of the characteristics of the rural territory, sewerage is only an option where there are large established groups of people.

Disaggregating the data regarding water services, the extent of coverage of water in urban areas is 92 percent and 65 percent in rural areas. In both cases, the main type of access to water is the public network inside the household. However, in rural areas, river and similar sources also represent an important source. In this context, it is important to note two aspects. First, both levels of access have increased since 2001 by 8 and 22 percentage points for urban and rural areas, respectively. This means that there have been significant achievements made in improving water service delivery. Second, despite these improvements, the comparison of the coverage between urban and rural areas demonstrates the existence of a large gap. The gap is greater than 25 percentage points, but has been reduced considerably over the last 5 years.

In the case of sanitation services, the data reveals significant differences between urban and rural areas. In urban areas, 88 percent of households have access to sanitation services. The most common type of source is a drain connected to a public network inside the household. In rural areas, this percentage is only 44 percent, where cesspits or latrines are the main sources of access, followed by septic tanks. Despite the fact that access has increased considerably in the period 2001-2015 in both urban and rural areas, there is still a big difference in sanitation services between the two.

It is important to note that there was a large increase in the level of access to these services from the years 2010 to 2015, especially in the case of water. This is in comparison with previous periods shown in tables 1 and 2. The big improvements during the last five years occurred because of the national policy that was focused on social inclusion through the improvement of public service delivery.

The water and sanitation sector was very committed to this objective. Two specialized programs were created to serve urban and rural areas which, among other important measures, included a large increase in the level of investments to improve the degree of access, giving special attention to rural areas. Fortunately, the current policy of the new government continues with the efforts to reach universal coverage, as well as the sustainability of service provision both in urban and rural areas.

Table 2. Evolution of Type of Access to Sanitation Services (%)

TYPE OF ACCESS	2001	2005	2010	2015
TOTAL URBAN AND RURAL				
Drain from public network in household	48.8	51.1	58.2	64.6
Drain from public network outside of household, but in the building	3.5	4.4	6.6	3.8
Septic tank	7.4	13.3	12.3	9.3
Cesspit/ Latrine	18.1	10.9	10.5	13.0
River, watercourse, canal	2.0	1.4	1.4	1.0
Does not have access[1/]	20.1	19.0	11.1	8.3
URBAN				
Drain from public network in household	69.1	69.6	74.8	79.7
Drain from public network outside of household, but in the building	4.9	6.1	8.4	4.9
Septic tank	5.9	9.1	4.8	3.7

Cesspit/ Latrine	10.6	7.3	6.1	6.8[6]
River, watercourse, canal	2.0	1.1	1.2	1.1
Does not have access [1/]	7.6	6.9	4.7	3.8
RURAL				
Drain from public network in household	4.2	5.9	9.2	16.5
Drain from public network outside of household, but in the building	0.5	0.3	1.3	0.2
Septic tank	10.8	23.5	34.2	26.9
Cesspit/ Latrine	34.7	19.8	23.5	32.9
River, watercourse, canal	2.1	2.3	2.1	1.0
Does not have access[1/]	47.7	48.3	29.7	22.6

Source: National Institute of Statistics and Information
Note: [1/]Includes other type of access and no access.

Regional analysis shows important disparities in socio-economic development, with different indicators revealing the extent of inequality across the country. According to INEI statistics for the year 2015, Gross Domestic Product (GDP) per capita per region varies from 8 thousand soles (US$ 2.5 thousand equivalent) in Apurimac and Huánuco to 40 thousand soles (US$ 12.5 thousand equivalent) in Moquegua.[7] The proportion of the population that lacks at least one basic service in the regions ranges from 9 percent in Lima to 59 percent in Loreto.[8] These general results confirm that there is a high level of heterogeneity through the regions in Peru that must be taken into account.

According to data from the National Household Survey (NHS), there are also regional disparities in the level of access to water and sanitation services. Some regions, such as Apurimac, Arequipa and Callao have a degree of access to water services greater than 93 percent. However, others such as Loreto and Puno, do not even reach 65 percent access. In the case of sanitation services, there are regions such as Loreto, Madre de Dios, Puno and Ucayali that do not exceed 50 percent of household access. Others have coverage greater than 85 percent, such as Callao, Lima, Moquegua and Tacna. These indicators reflect the existence of inequalities resulting from differences in geographic and climate characteristics, levels of governance, the efficiency of providers, financial resources, and political will.

Finally, estimations about access to water services according to income levels show that the top 60 percent of households have a 91 percent rate of access to water, whereas the proportion for the bottom 40 percent is 75 percent. In terms of access to sanitation, the results are 86 percent and 60 percent, respectively.

Access to services is not enough to analyze the performance of the sector in terms of sustainable service management. In this context, other factors must be examined to reveal the quality of the provision of the services. Regarding quality issues, Peru has not performed well. One of the main problems is the continuity of water. In accordance with data from SUNASS (2014), on average, urban households have only 19 hours of water access per day.[9] However, if regional continuity of water is analyzed, there are places where it does not exceed 10 hours per day, such as Amazonas, Ica, La Libertad, Loreto, Pasco and Puno. One possible explanation for these differences is the level of efficiency and commitment of the provider, in combination with

[6] The increase in this type of access is classified as "Cesspit/Latrine". It is related to a sectoral policy focused on the installation of improved latrines in urban-marginal and rural areas.
[7] The high level of income of the Moquegua region is explained by an important mining activity in the territory.
[8] See Annex 1 for detailed information about regional indicators.
[9] This information is not available for rural households.

geographic characteristics and available financial resources. Therefore, it is a common occurrence to have a pipe without water.

Regarding water quality, according to a declaration of the providers in urban areas to the SUNASS, almost 100 percent of the water supply is safe for human consumption (with the percentage of samples with free residual chlorine greater than 0.5 mg/L). However, if this information is compared with that of the NHS, where a sample is taken to measure bacteriological quality in each household interviewed, the same indicator shows that only 33 percent of households receive safe water in urban areas. The same survey found only 1.5 percent of samples in rural areas to be safe for human consumption.

In summary, the general characterization of water services in urban areas is that the coverage is close to universal, and that the water is safe for human consumption in one in three households with water access. By contrast, in rural areas, only two of three households have access to water services. In the vast majority of cases, it is not safe for human consumption.

Finally, the level of wastewater treatment is low. The SUNASS (2016) showed that of the 253 localities in the field of the EPS, 89 did not have a wastewater treatment facility until 2014. The study notes that only 50 percent of the providers had at least one wastewater treatment plant in operation; 32 percent had neither a plant in operation nor under construction.

The situation in which the population lives today reflects the poor performance of historic policies and associated institutions. The next step is to analyze and understand the role of the decentralization arrangements behind these indicators, which is the objective of the remainder of this chapter.

1.2. Overview of Methodology and Case Study

The proposed research methodology about decentralization in Peru consists of three steps, outlined as follows:

- Desk research, which includes a comprehensive review of the available literature, documents and information associated with the water and sanitation sector. This work also includes an analysis of relevant data.
- Interviews with actors representing the main sector, such as the Ministry of Housing, Construction and Sanitation (MVCS), SUNASS and service providers, among others.
- Presentation and validation of results.

The general objective of this study, is to explore the role of decentralization in the provision of water and sanitation services in Peru. As such, this document is structured in 10 sections as follows. Section 2 describes the vertical structure of the national public sector in Peru. Section 3 presents the organizational structure of water supply and sanitation services in rural and urban areas. Section 4 details the assignment of functions and responsibilities at the local level in both areas. Section 5 describes the role of the local political leadership. Section 6 analyzes the local control over administration and service delivery. Section 7 explores the local fiscal autonomy and financial management. Section 8 examines issues of local participation and accountability. Section 9 describes the vertical composition of water and sanitation expenditures. Finally, section 10 presents the conclusion of this case study.

2. THE VERTICAL STRUCTURE OF THE PUBLIC SECTOR

To set the scene for the decentralization of water and sanitation service provision, this section presents an overall description of the vertical structure of the public sector in Peru. This general overview is for background purposes, and is not specific to the situation of water and sanitation. First, it highlights some basic country information to contextualize the subsequent analysis. Second, it describes the vertical structure of the public sector. Third, the organizational structure of subnational governments is presented. Finally, there is a brief description of the basic assignment of functions and responsibilities.

2.1. Basic Country Information

The Republic of Peru is a democratic country that operates on the basis of the political Constitution of 1993. The country has an estimated 31.8 million people spread over a territory of 1.3 million kilometers $(km)^2$ and a population density of 24.8 inhabitants per km^2. It is mainly organized into three traditional natural regions: Costa, with the highest population density, has 12 percent of the territory and 53 percent of the population; Selva has 60 percent of the territory and 9 percent of the population, and Sierra has 28 percent of the territory and 38 percent of the population. These regions are heterogeneous in geographic, socio-economic and political terms, among others. Finally, the country has a high level of urbanization, with 77 percent of Peruvians living in urban areas and 23 percent in rural areas.

According to the Constitution, the nature of the country's political structure can be defined as a unitary government, which is representative and decentralized. The idea of decentralization was introduced in the Constitution as a democratic form of organization. Three levels of government were defined: national, regional and local. Regional Governments (RGs) and Local Governments (LGs) have political, economic and administrative autonomy. Political autonomy means that they have the power to adopt and agree to policies, plans and norms in the subjects of their competence. They also approve and issue norms, make decisions through governing bodies, and develop the functions that are inherent to it. Economic autonomy refers to the power to organize internally, and to determine and regulate the public services under their purview. Finally, administrative autonomy means that they can create, collect and manage their own incomes and revenues. They have the right to approve their institutional budgets in accordance with the laws. This exercise entails recognizing the right to receive the resources assigned to it by the State for the fulfillment of its functions and powers.

A major decentralization reform took place in 2002 through the Constitutional Reform Act and a number of laws released since then, such as the Bases of Decentralization Act, the Regional Government Organic Act and the Municipalities Organic Act. According to the Bases of Decentralization Act, the decentralization process must operate according to the following principles: it has to be permanent, dynamic, irreversible, democratic, integral, gradual, and adhere to the principle of subsidiarity. (See box 1 for details of the history of decentralization reforms in Peru)

However, in practice, the process was not developed according to the laws and reforms. Some issues remained unsettled, such as the lack of financing for local investments, low revenue generation and varying levels of capacity to carry out local functions. The General Comptroller of the Republic (CGR, Contraloría General de la República, 2016) argues that the process was not done in such a way that the law was definitive. There was an inadequate combination of the principles. Also, the process was accelerated without a clear delimitation of functions and responsibilities for an efficient administration at each level of government.

Box 1. History of Decentralization Reforms in Peru

The first steps of decentralization were taken in the 1980s, when the Central Government (CG) established some measures, such as the creation of 12 micro regions among the departments and the transference of some functions, such as civil participation, the creation of public institutions, and development plans. Nevertheless, these micro regions presented internal problems due to the social and cultural differences among departments, as well as the incompatibility with the Central Government's rules.

Due to these issues, in 1992, the CG reformed the structure of the regional governments and included in the Constitution of 1993 the future planning of the decentralization process. During the 1990s, the Government created the Transitory Committees of Regional Management (CTAR), which only had some control over investments and planning. However, most of the control was still in the hands of the CG. Then, the executive took control of the principal functions of the CTAR. As a result, its expenditures were only allocated to investments and wages, resulting in a higher degree of centralization.

The effective start of the decentralization reform was in 2002 with the establishment of democracy after a Transition Period. In this year, the Government and two political parties promulgated the National Agreement, which included 31 objectives to be achieved by 2021. The 8th objective was the implementation of economic and administrative decentralization. It began as a tool for public management with studies on the creation of the regions (25), as well as the application of mechanisms of civil participation. It took as a base the Spanish experience. It also took into account the mistakes made at the end of the 1980s, as well as concerns about the possible economic experiments and subsequent problems in Argentina, Brazil and Colombia.

The normative framework was completed by 2007 with the Organic Law of the Executive Power. The new regional governments would assume CTAR's functions, and promote the integration of departments through a referendum. It would also receive the transfer of powers from the CG. In summary, there would be three levels: (i) the Central Government would be at the head of government because of its role of legislator and policy-maker; (ii) the Regional Governments, including 25 regions, with functions related to infrastructure investments and/or major policies — subject to the rules of the CG; and (iii) Local Governments, that were the closest to the population's demands.

The new structure was defined in the period 2001–2004, with many laws that articulated the political, administrative and economic decentralization. This included changes in: the Regional Electoral Law; the Regional Governments Organic Act; the Modernization of the State Act (2002); the Organic Municipalities Act; Laws on Participative Budget and Public Investment (2003); and the Fiscal Decentralization with the Legislative Decree Nº955 (2004). These policies formed the new structure to ensure economic and fiscal sustainability, capacity building, civil participation and democracy, and territorial organization. To ensure these objectives, some functions, such as central evaluation, public accountability, budget programs, among others, were developed in many sectors.

Source: General Comptroller of the Republic (CGR, 2014).

2.2. Vertical Structure of the Public Sector

This section seeks to capture the main organizational, administrative and governance structures of the public sector in Peru. According to the Constitution, the territorial division of the country includes regions, departments, provinces and districts. The national territory has 24 departments, each of them composed of provinces. Each province, in turn, consists of several districts.

Regarding government levels, the national level has jurisdiction across all of the country's territory. There are 26 regional governments (including 24 departments that are considered regions, and two provinces, Callao and Metropolitan Lima, each with a special regime), as shown

in figure 1. Finally, the local governments are comprised of 196 provincial municipalities and 1,646 district municipalities, as shown in Table 3. The jurisdiction of the provincial municipalities is the province, including the capital district of the province. The district municipalities preside only over their own territory. Each of them has their elected local authorities, but both fall under the scope of the Organic Municipalities Act. This Act calls for both to have the same organizational structure, but some different functions (that will be discussed later). However, district municipalities do not depend on the provincial municipalities hierarchically speaking[10]. There are some exclusive assignments of functions and responsibilities in provincial and district municipalities at time that there are some shared functions between them.

It is important to note that there are no differences between urban and rural organizational structures. It should also be noted that INEI defines urban areas as the territory integrated by urban communities[11], and rural areas as the territory integrated by rural communities[12].

Figure 1. Map of Peru

Source: Maps of World. http://www.mapsofworld.com.

[10] Parliament (2002). Bases of Decentralization Act.

[11] Communities with at least 100 houses grouped continuously together and communities that are capital of a district.

[12] Communities that do not have 100 houses grouped continuously together, in which the houses are generally dispersed, and that are not the capital of a district.

Table 3. Vertical Structure of the Public Sector

SUBNATIONAL LEVEL	N° OF JURISDICTIONS	AVERAGE POPULATION
Central (national) government	1	31.8 million
1. Regional Government	26	1.2 million
2. Local Government		
2.1. Provincial municipality	196	41,000
2.2. District municipality	1646	14,000

Source: INEI (2015).

Lima has an asymmetrical organizational structure and represents a complex governance system. The department of Lima is divided into 11 provinces and 3 regions. First, the Constitutional Province of Callao is the Region of Callao, and it has 6 districts. It works under the scheme of a regional government. Second, the province of Lima, called the Metropolitan Municipality of Lima (MML), has 43 districts. It faces a special regime different from the RG, and combines district, provincial and regional competences. Third, the nine remaining provinces constitute the Region of Lima, but it does not have any type of authority over the MML. Finally, "Metropolitan Lima" includes the districts of Lima province and those of the Constitutional Province of Callao (Martinez-Vasquez2013).

2.3. Organizational Structure

The aim of this section is to clarify the organizational nature of subnational entities. As such, it is important to clarify whether entities at each level are devolved, deconcentrated, or form some type of hybrid local government bodies. This involves a process of confirming whether the local entity under consideration actually meets the minimum definition of a local government. In this case study, local governments are considered corporate bodies. They hold elections of their own political leadership, and have a certain degree of autonomy over the management of their budgets. A summary of these characteristics is presented in Annex 2.

Subnational levels of government, both RGs and LGs, are legal bodies under public law. In other words, they are separate legal entities of the national government (NG), and can be defined as corporate bodies. They can own and transact property in their own name, open and manage accounts, and can sue and be sued in its own name. In addition, they have political, economic and administrative autonomy under the framework of their powers. This information is outlined in the Regional Government Organic Act (RGOA) and in the Organic Municipalities Act (OMA), respectively, and is also true in practice.

In accordance with the RGOA, the organic structure of Regional Governments includes a Regional Council that is the higher decision-making and accountability body formed by provincial counselors. Its main responsibilities are to approve, modify or repeal the norms that regulate the issues of competence and functions of the Regional Government, as well as to approve the annual budget plan and participative regional budget The structure also includes a Regional Presidency that is the executive body and falls under the Regional President, who is the highest authority of its jurisdiction. In addition, there is a Regional Coordination Council that is the consultative and coordinating body of the RG with the municipalities and civil society organization agents. Finally, there are five regional administrative departments, including: economic development; social development; planning, budget and territorial organization; infrastructure; and natural resources and environmental management.

According to the OMA, the basic structure of Local Governments, both provincial and district municipalities, includes a Municipal Council, which serves as the normative and accountability body integrated with the Municipal Mayor and "*Regidors*"[13]. It also includes a Town Hall, which is the executive body of the LG. Its legal representative and the highest administrative authority is the municipal Mayor. Finally, the administrative structure includes five departments: the municipal administration, an internal audit body, the municipal public attorney, a legal advisory office and the planning and budget office.

Finally, MML's organic structure includes the Metropolitan Council, integrated with the Metropolitan Mayor and the elected Regidors. It also has a Metropolitan Mayor that serves as the executive and exercises the powers and functions equivalent to the Regional President. In addition, there is the Lima Metropolitan Assembly with the functions and responsibilities of the Regional Coordination Council, as well as others that the special regime establishes. The MML also has three advisory bodies: the planning board, the metropolitan cooperation board, and the special advisory commissions.

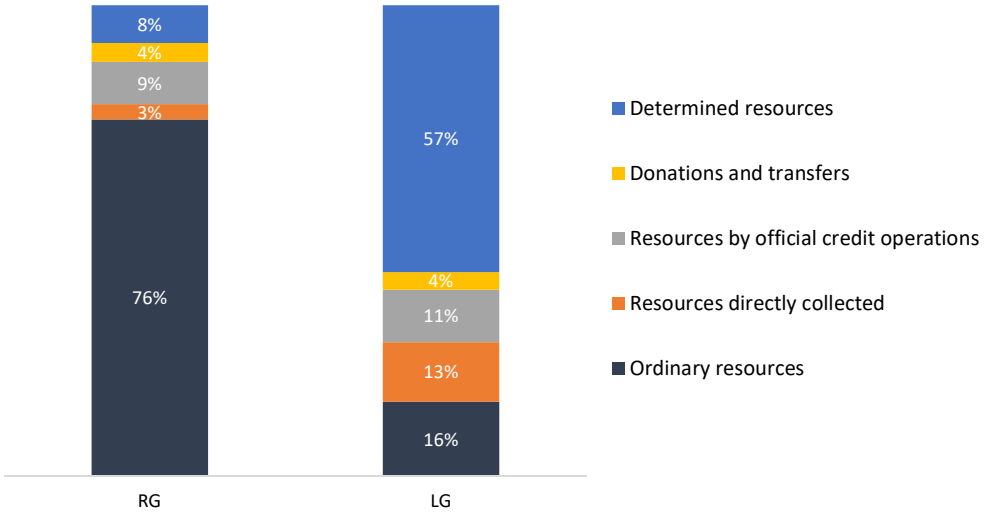
In this context, local entities (provincial and district municipalities) do have their own political leadership. Local leaders have authority and autonomy over deciding the affairs of the local jurisdiction. For example, each of them, independently[14], has to draft Local Concerted Development Plans, Participatory Budgets, Land Use Plans, Urban Development Plans and other types of documents for local planning and budgeting. In most cases, these plans are successfully completed, but not necessarily implemented. The local political leadership is elected by direct suffrage every 4 years. Regarding the RG, elections are held for the President, Vice-president and Regional Council. In the case of LGs, elections are held for the Mayor and the *Regidors* of the Provincial / District Municipal Councils.

With respect to budgetary issues, the RG and provincial and district municipalities prepare, approve and manage their own budgets (both current and capital) separately from the NG. They are also responsible for their own revenue collection. However, the composition of the institutional budget of these entities mainly comes from the Central Government because the resources collected directly by the subnational governments are a small proportion of the total (3 percent of the total budget in the RG and 13 percent in the LG), as shown in figure 2. Then, the Central Government gives the final approval of the grants (ordinary resources) that are one of the most important sources of the regional and local budgets at the province and district levels. These are finally voted on in Parliament. The other important source is 'determined resources', mainly by the canon concept, which is described in Box 2.

[13] The responsibilities of the *Regidors* are to: propose ordinances; formulate motions on agendas; perform by delegation the powers of the mayor; perform functions of control of the municipal management; join, attend and participate in the work meetings; maintain communication with social organizations and neighbors in order to inform the municipal council and propose solutions for problems.

[14] District municipalities do not depend hierarchically on the provincial municipalities. Therefore, their management tools do not need to be approved by them, but have to be aligned to the provincial vision.

Figure 2. Composition of Funding Source, 2016
(% of final institutional budget)



Source: Portal of Economic Transparency, Ministry of Economics and Finance.
Notes: "Determined resources" mainly include the Municipal Compensation Fund, municipal taxes, and canon. "Donations and transfers" include the non-reimbursable financial funds received. "Resources by official credit operations" include the internal and external sources of funds from credit operations carried out by the State. "Resources directly collected" include the revenues generated by the Public Entities and managed directly by them. "Ordinary resources" include the revenue from tax collection.

The Ministry of Economics and Finance (MEF) has an integrated financial management information system to monitor the budget and progress of each entity[15]. With respect to other fiscal characteristics, the Subnational Governments can incur liabilities by borrowing from the National Bank and from international lenders, with the previous approval of the MEF[16]. However, they cannot hold accounts with commercial banks. Finally, they can carry forward, from year to year, a part of the resources not spent, such as the resources from the Canon mining (see box 2), but not the transfers from the CG.

Following the definition of a local government, this first approximation shows that the governance of subnational levels of the government of Peru follows a devolved structure. However, they are very reliant on transfers from the CG.

[15] Available at: https://www.mef.gob.pe/?option=com_content&view=category&id=661&Itemid=100143&lang=es
[16] There have been only a few cases of international borrowing.

Box 2. Mining Canon

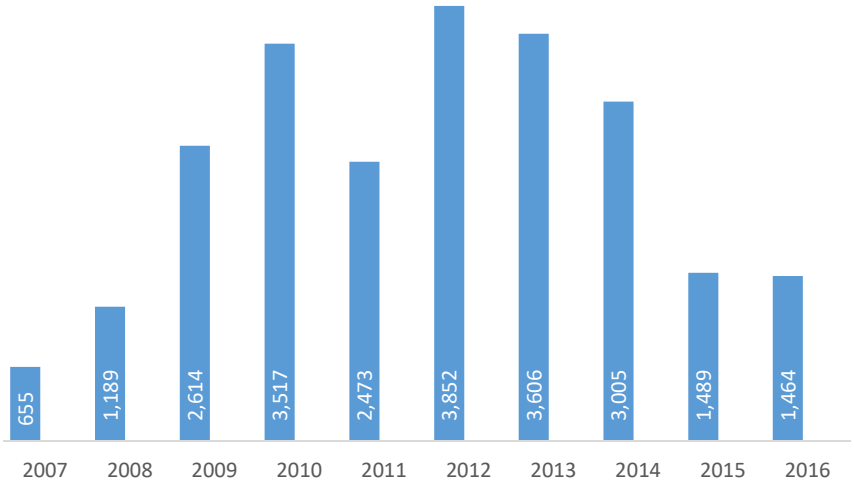
According to the Canon Act, Canon involves the participation of the RG, LG and public universities in the total income obtained by the State for economic exploitation of natural resources. There are several types of canon, but the largest contributor is the mining canon. The Mining Canon is comprised of 50 percent of income tax obtained from mining activities for use of mineral resources, and metallic and nonmetallic substances.

It is distributed as follows: Ten percent is for district municipalities where the natural resource is exploited. Twenty-five percent is for district and provincial municipalities where the natural resource is exploited. Forty percent is for the municipalities of the regions where the natural resource is exploited. Finally, twenty-five percent is for the RG where the natural resource is exploited, of which 20 percent must be transferred to the public universities in its jurisdiction.

The resources can only be used for the financing or co-financing of public investment projects that include public services provisions. However, 20 percent of total resources can be used for the maintenance of the infrastructure.

Resources from the mining canon gained in importance since 2008, following the increase in international commodity prices, as seen in figure 3. It came to represent up to 20 percent of the funding source of expenditures of LGs in 2010. However, because of the evolution of international mineral prices, these revenues have been falling in recent years, affecting the availability of resources for investments at the local level. In the Portal of Economic Transparency of the MEF, canon mining is included under the concept of 'determined resources'.

Figure 3. LG Expenditures financed with Canon Resources (millions of Soles)



Source: Ministry of Economics and Finance.

2.4. Basic Assignment of Functions and Responsibilities

This section seeks to provide a general overview of functional assignments to the subnational level of governments. Functions and responsibilities were assigned through the Regional Government Organic Act and the Organic Municipalities Act. These Acts delineate between Constitutional, exclusive and shared functions. However, the *de jure* and *de facto* practices are not always the same, as the following analysis will detail.

Before proceeding with the specific analysis of water and sanitation services, it is useful to examine first which level of government is responsible for other important public services, such as education, health, agricultural services, solid waste management and local public works

schemes within the decentralized framework. In general, the delivery of public services can be achieved by combining different types of inputs, such as human resources, operations and maintenance, service delivery supplies and capital infrastructure. Table 4 reflects which level of government is responsible for ensuring that these inputs for public services are delivered for each function mentioned, on a *de facto* basis.

First, education services delivery follows a decentralized scheme. Although the Ministry of Education is the governing body and sets the national policy, each RG is responsible for the education management in its own jurisdiction. The one exception is Metropolitan Lima, where the CG through the Ministry of Education is responsible. The decentralized departments are the Regional Education Department (DRE) and its Local Education Management Units (UGEL) operating at the provincial level. The objective of the DRE is to promote education, culture, sports, recreation, science and technology. The UGEL is a decentralized executive body of the RG with autonomy within its competence area. Its territorial jurisdiction is the province and can be modified according to criteria of social dynamics, geography, cultural or economic affinity, and communication facilities. Both departments have specific and shared functions and responsibilities. In *de jure* terms, they are responsible for the payment of teachers and principals, operations and maintenance, supplies and capital infrastructure. In *de facto* terms, the CG is the main funding source of subnational governments for the payment of teachers and principals. The CG also oversees unattended needs, for example, in the maintenance of schools of some regions, as well as providing infrastructure in jungle spaces.

Second, health services functions similarly to education, where the governing body is the CG (through the Ministry of Health). Service delivery is the responsibility of the RGs, with the same exception of Metropolitan Lima. In both cases, each level of government works through the corresponding Regional Health Department (DIRESA). The staffing (including doctors, nurses), operations and maintenance, service delivery supplies (medicine) and capital infrastructure are the responsibility of the RG.

The role of the LG in the health sector is to construct, equip and manage only primary health infrastructure, which is a very small proportion of total sector expenditures. Similar to the education sector, the CG participates in providing capital infrastructure or increasing central grants to the RGs where the population health needs are unmet. The CG is also responsible for the capital infrastructure of the bigger and highly-specialized hospitals, with a shared responsibility of the corresponding RG.

It is important to note that maintenance is not a priority for the RG. Infrastructure for education and health are not always in optimal condition because of the lack of financial resources, skilled human resources and/or political will to provide efficient maintenance. The system does not provide enough incentives to the authorities to properly maintain the infrastructure. Therefore, in most cases, they execute interventions that are the most popular to gain votes for the next election period. The RGs have to then reinvest to recuperate the infrastructure and, in some cases, the CG assists.

Third, agricultural extension services, in practice, are the responsibility of the CG (through the Ministry of Agriculture and Irrigation (MINAGRI). The Agriculture Innovation National Institute (INIA) is a public body attached to the MINAGRI. It is responsible for designing and implementing the national agricultural innovation strategy. Its Agriculture Extension Department is the line body responsible for directing, conducting, coordinating and evaluating the extension services, agricultural technical assistance and technology transfer of the INIA. Its preferred support goes to small and medium-sized agriculture, and the promotion of the organized integration of producers. RGs have to supervise and manage the agricultural information service in the region, as well as promote research and transfer of technology and agricultural extension. However, in

practice, their level of engagement with agricultural extension services is minimal. The LGs do not have the competences related to agricultural extension services.

Fourth, with respect to solid waste management, the service delivery is the exclusive responsibility of the Local Government, both at the provincial and district levels. LGs are responsible for managing, directly or by concession, the personnel, operations and maintenance, supplies and capital for the appropriate solid waste management service. Neither the RGs nor the CG have any type of responsibility related to this public service.

Finally, the construction and maintenance of local public works are the responsibility of LG. However, the RG plays an important role. In the case of local roads, the LGs — including both provincial and district municipalities — oversee construction, and operations and maintenance. However, they do not always have enough financial or human resources to obtain all the inputs for the implementation of these activities. Therefore, a higher-level government participates, mainly the RG. Again, maintenance is one of the pending challenges in subnational governments.

Table 4. Assignment of Functions and Expenditure Responsibilities: Selected Local Functions

FUNCTION	PERSONNEL	O&M	SUPPLIES	CAPITAL
Primary Education (70912)	RG	CG, RG	CG, RG	CG, RG, LG
Public health and outpatient services (7072,7074)	RG	CG, RG	CG, RG	CG, RG
Agricultural extension services (70421)	CG	CG	CG	CG
Solid waste management (70510)	LG	LG	LG	LG
Construction and maintenance of local public works (70451)	LG, RG	LG, RG	LG, RG	LG, RG

Source: Executive Power Organic Act, Regional Government Organic Act and Organic Municipalities Act.
Note: CG= central government; LG= local government; O&M= operations and maintenance; RG= regional government. When the LG is mentioned in this Table, it refers to both the provincial and district municipalities.

As shown in table 4, different services are overseen by different levels of government for each function. The responsibilities for these functions are delegated to different levels of government, depending on the capabilities of the subnational governments. It is clear that the functions and responsibilities set in the legal framework are not always carried out appropriately at the subnational levels, which is why higher-level government intervenes to meet the population's needs.

3. ORGANIZATIONAL STRUCTURE OF WATER AND SANITATION SERVICES

The previous section provided a general description of the vertical structure of the public sector. The remaining sections will now deal more specifically with water and sanitation services. As such, this section presents the organizational structure of local water and sanitation services in Peru.

3.1. Overview of the Organizational Structure of Local WSS

This section seeks to provide an overview of the organizational structure of local water and sanitation services. The aim is to illustrate and understand the relationship among the central and local institutions involved in the delivery of services. In principle, the national government has policy responsibility over the sector, and the actual delivery of services is the responsibility of local governments. Regional sanitation departments provide technical assistance and financing to LGs for the delivery of services.

National-level water and sanitation stakeholders. The governing body of the sector is the Ministry of Housing, Construction and Sanitation[17] (MVCS), which is part of the Central Government. It creates and oversees the national sectoral policy. Its main specific functions are to formulate, regulate, guide, coordinate, implement, monitor and evaluate the national policy of the water and sanitation sector.

Regarding structure, it has two general departments to accomplish its functions, and two specialized programs in urban and rural sanitation services: (i) the General Department of Policies and Regulation in Construction and Sanitation; (ii) the General Department of Programs and Projects in Construction and Sanitation; (iii) the National Urban Sanitation Program (PNSU); and (iv) the National Rural Sanitation Program (PNSR). National programs, as well as similar ones implemented in the past — such as "Water for Everyone" — are used to provide financial resources to subnational governments and service providers for the construction of water and sanitation infrastructure. These programs also provide technical assistance to a lesser extent, following previous coordination with subnational governments and local populations.

The National Superintendence of Sanitation Services (SUNASS, Superintendencia Nacional de Servicios de Saneamiento) regulates the EPS. It is a public specialized body[18]attached to the Ministries Council Presidency (PCM, Presidencia del Consejo de Ministros), with administrative, functional, technical, economic and financial autonomy. Its functions are to regulate, supervise and inspect the provision of sanitation services. In addition to its normative role, it has a regulatory role through which it has the power to conduct the tariff system, which it must also monitor. The scope of the SUNASS covers all of the EPS, and does not interfere in the provision of services when performed by another type of provider.[19]

Since 2013, there is now a Technical Agency of the Administration of Sanitation Services (OTASS, Organismo Técnico de la Administración de los Servicios de Saneamiento), attached to the MVCS. It is a public body that seeks the modernization of the administration of the EPS. Its functions are related to the improvement of the composition of the Boards, and accountability and corporate governance. It also monitors and implements the Transitional Support Regime (RAT, Régimen de Apoyo Transitorio) to assist the EPS into a utility turnaround. In addition, it aims to achieve the consolidation of the providers at a regional level, thereby taking advantage

[17] According to the Sanitation Services General Law, sanitation services include water services, sanitary and pluvial sewer services, and sanitary disposal service of excreta.

[18] This is a legal body of public law and has national competences. It is of a type of regulator body, according to the Law N° 29158, Executive Power Organic Act.

[19] By now, the new law intends to expand the power of the SUNASS also to rural areas, but its implementation will not happen in the short term.

of economies of scale. In practice, the OTASS has introduced a governance vision that was absent in the sector, as well as the RAT in some EPS.

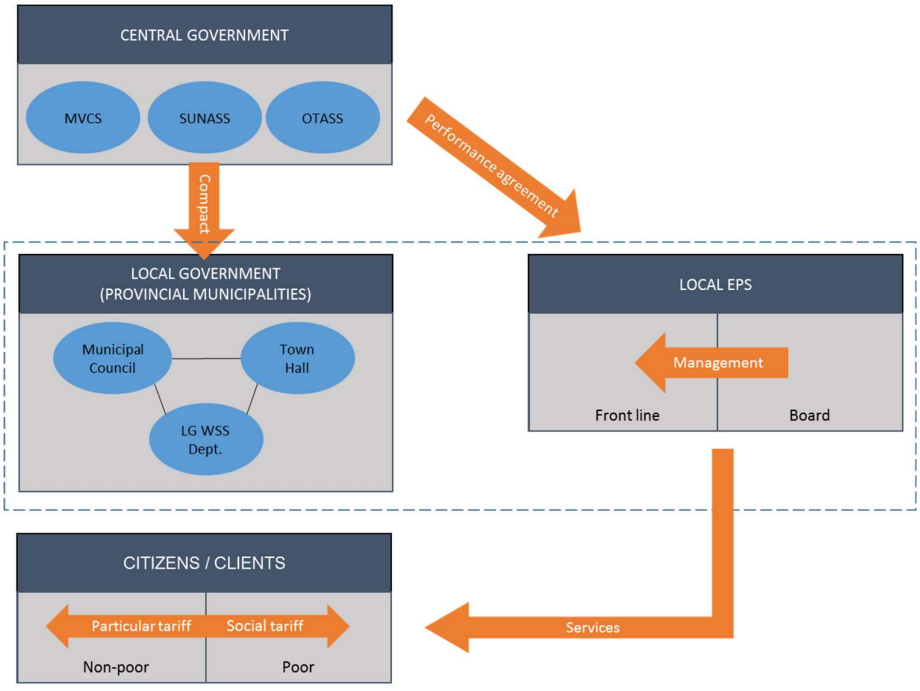
Regional-Level WS stakeholders. According to the LGSS, the main responsibilities of the Regional Governments are to: (i) formulate and approve regional plans and policies for sanitation according to national, sectoral and local development plans; and (ii) provide technical and financial assistance to Local Governments for water and sanitation service delivery. However, in practice, their participation in the sector is reduced and focused on financial transfers. The regional plans they elaborate are not implemented. Also, they do not follow national objectives. Further, the supply of technical assistance is almost null.

Local-Level WS stakeholders. The provision of water and sanitation services is the responsibility of Local Governments. The LGSS allocates responsibility to the provincial municipalities in urban areas and the district municipalities in rural areas. Because of the heterogeneity of capabilities and needs of urban and rural areas, each operates under a different scheme.

First, in urban areas, WSS are delivered by a separate entity known as the Sanitation Services Provider Entity (EPS, Empresa Prestadora de Servicios de Saneamiento). It can be public, private or a mix. However, in fact, they are all public[20]. There is one exception that operates under a Public-Private Partnership scheme. Although it is a municipal water and sanitation utility, it is not part of the LG organization and budget, so its revenues and spending are independent.

With this first overview of the organizational structure of local water and sanitation services in urban areas, the relationship between the provider and the Central and Local Government can be illustrated in the figure 4. A provider (EPS), working under the responsibility of the local government (provincial municipalities), would provide water and sanitation services as follows:

Figure 4. Key Power Relationships in the Decentralized Delivery of Water and Sanitation Services in Urban Areas



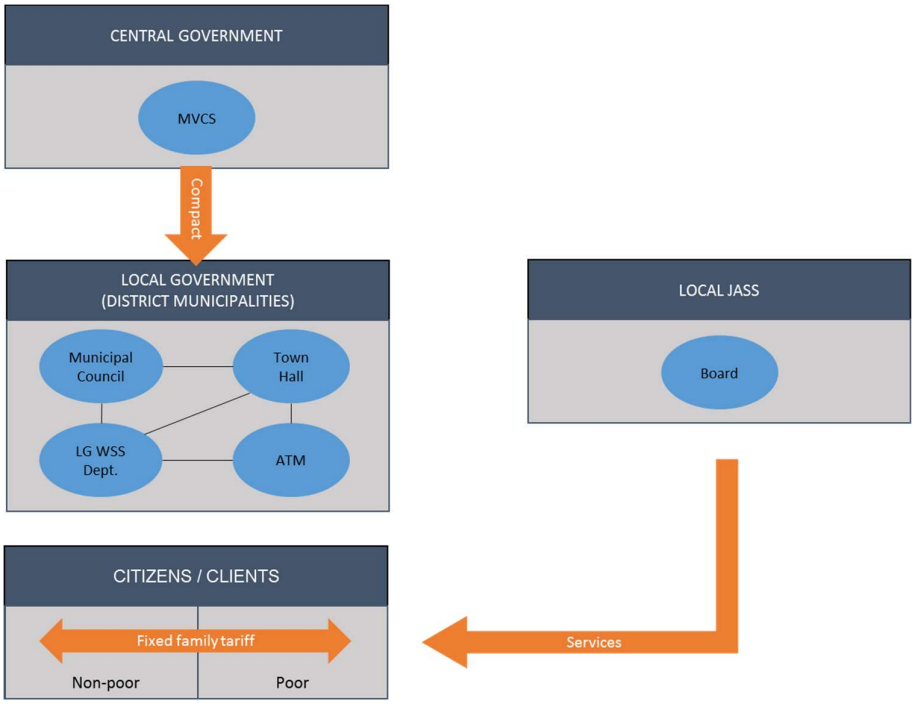
Source: Based on the guidelines for preparing the country assessment of decentralized WSS institutions.

[20] In the creation of the EPS with the LGSS in 1994, previous providers that were under the Central Government through SENAPA were transferred to provincial municipalities that decided to work under the public scheme. After that, most of the attempts to introduce private participation failed.

Note: EPS=Sanitation Services Provider Entity; LG= local government; MVCS= Ministry of Housing, Construction and Sanitation; OTASS= Technical Agency of the Administration of Sanitation Services; SUNASS= National Superintendence of Sanitation Services; WSS= water supply and sanitation.

Second, in rural areas, the responsible party for the provision of water and sanitation services is the district municipality (and the provincial municipality in a supplementary manner). There are different ways to provide the services. According to the LGSS, the municipalities must manage the services through communal organizations, specialized operators or directly. The most common occurrence is the delivery by a communal organization known as Sanitation Services Users Association (JASS, Juntas Administradoras de Servicios de Saneamiento). A JASS has to be registered in the municipality's Communal Organization Record Book, according to the LGSS and MVCS guidelines. They are responsible for the administration, operation and maintenance of water and sanitation services. The municipality has to participate in the financing for the service delivery, considering the available budget. Family fees are established by the JASS, and are supposed to cover the administrative, operations, maintenance and replacement costs. Nevertheless, in practice, these quotas are not enough to cover operational costs in most cases. As these financial resources are not enough to assist the rural population, the Central Government participates in financing capital infrastructure through the PNSR. (See figure 5).

Figure 5. Key Power Relationships in the Decentralized Delivery of Water and Sanitation Services in Rural Areas



Source: Based on the guidelines for preparing the country assessment of decentralized WSS institutions.
Note: ATM= Technical Municipal Area; LG= local government; JASS= Sanitation Services Users Association; MVCS= Ministry of Housing, Construction and Sanitation; WSS= water supply and sanitation.

Where services are not directly provided, the district municipality —and the provincial municipality in a supplementary manner — must create a Municipal Technical Area to supervise, inspect and provide technical assistance for the service delivery to the JASS. The distribution of the number of cities is detailed in Table 5.

Table 5. Population with Water and Sanitation Services, by type of provider

PROVIDER	NUMBER OF CITIES / COMMUNITIES	POPULATION (MILLION)
SEDAPAL	1	10
49 EPS	206	10
Municipal management	400	4
JASS	11,500	4
Without a provider	73,500	3
Total	85,607	31

Source: Dianderas and others (2016).
Note: EPS= Sanitation Services Provider Entity; JASS= Sanitation Services Users Association; SEDAPAL= Lima Water and Sewerage Services.

Table 6 presents the key stakeholders in the water and sanitation sector, with a brief description of their main responsibilities.

Table 6. Key Stakeholders in the Water and Sanitation Sector (at each level)

STAKEHOLDER	LEVEL / TYPE	N° OF ENTITIES	MAIN RESPONSIBILITIES
Ministry of Housing, Construction and Sanitation	Central	1	Oversees urban water and sanitation national policy; constructs W&S infrastructure; offers technical support to the providers and subnational governments.
National Superintendence of Sanitation Services	Central; part of PCM	1	Establishes the regulation framework for WSS services in urban areas; approves tariffs increases and the Optimized Master Plan of the EPS; monitors quality in urban areas.
Technical Agency of the Administration of Sanitation Services	Central; part of the MVCS	1	Agency for the modernization of the administration of the EPS and governance. Implements the Transitional Support Regime.
RG – Sanitation Regional Department	Regional	25	Provides technical assistance and financing to Local Governments for the delivery of services.
LG – Municipal Technical Area	Local	n.d.[1/]	Procures rural W&S infrastructure; supervises, inspects and provides technical assistance to the JASS; implements and monitors performance of W&S projects.
Urban Sanitation Services Provider	Urban areas (Provider)	50	Responsible for providing networked water and sanitation services within urban areas.
Sanitation Services Users Association	Rural areas (Provider)	11,500[1/]	Communal organization responsible for administration, operations and maintenance of rural water and sanitation schemes.

Source: Dianderas and others (2016).
Note: EPS= Sanitation Services Provider Entity; JASS= Sanitation Services Users Association; LG= local government; MVCS=Ministry of Housing, Construction and Sanitation; PCM= Ministries Council Presidency; RG= regional government; W&S= water and sanitation.
[1/] There is no formal data about the number of Municipal Technical Areas in LG.

In both rural and urban areas, there are other institutions which are also involved in the sector, such as the Ministry of Economics and Finance; the Ministry of Health through the General Department of Environmental Health; the Ministry of Education; the Ministry of Environment

through the Environmental Assessment and Inspection Agency; the National Water Authority; the Local Water Authority, as well as the Ministry of Agriculture and Irrigation.

3.2. The Organizational Structure of Local WSS in Urban Areas

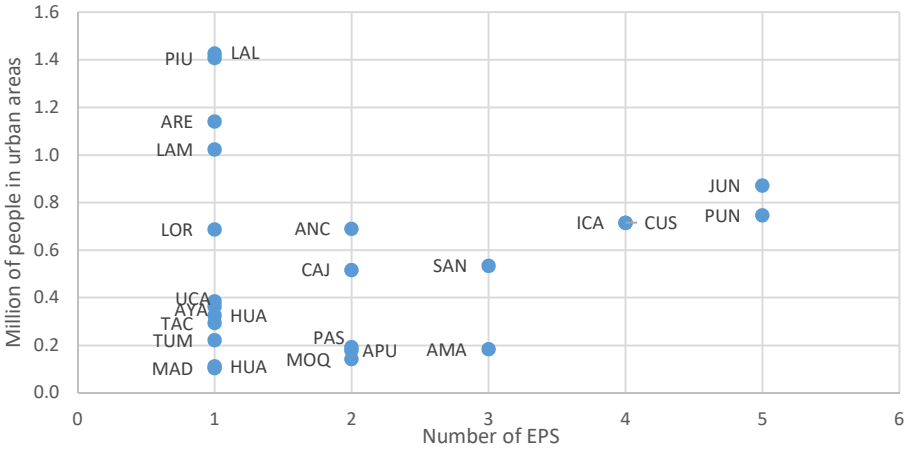
Provincial municipalities are responsible for the provision of water and sanitation services in all the districts throughout their respective provinces. Service provision in urban areas is overseen by the EPS. Provincial municipalities, individually or associated with other provincial municipalities, constitute an EPS[21]. The definition of an urban area for the provision of water and sanitation is established in the LGSS. It determines that the scope of the EPS is the urban population of every district with an urban population greater than 15,000 people. As the minimum scale to constitute an EPS is a province, the number of provinces — and its districts — under the scope of the EPS vary from one to another. The providers are responsible for both water and sanitation services under the same organizational structure. Therefore, it is not necessary to separate the analysis of this section by each type service.

There are 50 providers in the country that the SUNASS (2015) classifies into four groups according to the number of water connections under their administration, including SEDAPAL, big, medium and small providers. According to the following classification, there are 17 big EPS, 12 medium and 20 small ones.[22]

- SEDAPAL (located in Lima): more than 1 million connections
- Big EPS: between 40,000 and 1 million connections
- Medium EPS: between 15,000 and 40,000 connections
- Small EPS: 15,000 connections or less.

Every region in the country has at least one EPS, although some have up to five providers. The law specifies that the minimum level to constitute an EPS is a province, but it does not specify any additional criteria. The scope of each EPS does not correspond to the size of the urban population, but usually to political factors[23]. As shown in figure 6, regions with similar urban population sizes have varying numbers of EPS.

Figure 6. Population in Urban Areas and Number of EPS by Region, 2014



Source: SUNASS and INEI.

[21] Each province and its districts can only be part of one EPS, but an EPS can consist of one or more provinces.

[22] Although, there are other providers that are not classified as an EPS because they do not have all of the requirements established in the LGSS. There is no record about them, but they are characterized for not being under the scope of any EPS. Therefore, they decide to create an entity to meet the population's needs.

[23] There are cases in which the Board of an EPS does not have the political will to increase its scope to other provinces of the same region. Therefore, these provinces have to create their own EPS.

Note: ANC = Ancash; AMA = Amazonas; APU = Apurímac; ARE = Arequipa; AYA = Ayacucho; CAJ = Cajamarca; CUS = Cusco; EPS = Sanitation Services Provider Entity; HUA = Huancayo; JUN = Junín; LAL = La Libertad; LAM = Lambayeque; LOR = Loreto; MAD = Madre de Dios; MOQ = Moquegua; PAS = Pasco; PIU = Piura; PUN = Puno; SAN = San Martín; TAC = Tacna; TUM = Tumbes; UCA = Ucayali.

Apart from the classification of the SUNASS, the LGSS classifies the providers into EPS of greater size (with an urban population greater than 60,000 people) and EPS of smaller size (with an urban population of more than 15,000, but less than 60,000). The social capital is constituted by the contributions made by the provinces, and the shares belong to the municipalities.

First, a Shareholders Board, a Directorate and a General Manager comprise the administrative structure of the EPS of greater size. The Shareholders Board is the highest hierarchical body of the EPS and, in the case of the municipal EPS, a legal agent of each of the provincial or district municipalities of the EPS scope are part of it. This is usually the Mayors themselves. For example, if an EPS serves two provinces with one provincial municipality in each of them and 4 and 5 municipal districts respectively, then there would be 11 members of the Board. The ownership of the EPS is divided according to the percentage of the population that the provincial or district municipality has with respect to the total population of the province[24].

The Directorate has five members: one agent from the RG, who chairs the Directorate and is elected by the Regional Council; an agent from the Professionals Colleges elected by the different Colleges[25]; an agent from the Chamber of Commerce and Industry elected according its statute; and two agents from the municipalities elected directly by the Shareholders Board. The term of service of the Directorate is 3 years, and at least two of its members have to be reelected to provide continuity to the management. Finally, the Directorate appoints the General Manager[26].

The case of SEDAPAL, which covers all of Metropolitan Lima (including Callao), is quite different. It is a public body with private rights and is the property of the State. The shares are issued in the name of the National Fund for the Financing of State Business Activity (FONAFE, Fondo Nacional de Financiamiento de la Actividad Empresarial del Estado). The Shareholders General Board and the Directorate structure follows the Law of State Business Activity — and not the LGSS — as is the case with the other providers.

Second, in the case of an EPS of smaller size, a Shareholders Board and a General Manager comprise the administrative structure. The Shareholders Board has one agent from each of the provincial or district municipalities of the EPS. The assignment of participation follows the same structure as the EPS of larger size. The Board designates the General Manager[27].

In both types of EPS, the General Manager is accountable to the Shareholders Board. The EPS makes the decisions about the budget and staffing. The provider is autonomous and each has its own statutes. However, in some cases, the LG can execute its authority as part of the Shareholders Board to make some decisions about the budget or the staff.

In addition, the Central Government, through the National Urban Sanitation Program, provides subsidies to the EPS. As part of their interventions, the PNSU makes different types of

[24] However, the new law of the sector excludes district municipalities of the Board of the EPS to divide exclusively the urban provision to provincial municipalities and rural provision to district municipalities. Although this scheme is not implemented yet.

[25] Engineer College, Lawyers, Economics, Managers or Accountants, strictly in that order.

[26] Each Director and the General Manager have to have i) high education professional degree in engineering, economics, law, accounting or business management, in this order of priority, and with postgraduate studies in business management and / or management of public projects or services; ii) minimum 5 years of directive experience in public or private corporations, preferable in sanitation sector.

[27] The requirement to be a General Manager is to have a professional degree or minimum 3 years of directive experience.

investments to help the providers to increase the degree of access to services by the urban population. In other cases, it helps with the sustainable management of services. Finally, the SUNASS provides technical supervision and enforcement of water and sanitation services. It is also responsible for performance supervision and enforcement. A summary of these section is presented in Annex 3.

3.3. The Organizational Structure of Local WSS in Rural Areas

While the LGSS defines small cities as separate from rural areas with respect to water and sanitation service provision, this study combines both areas. A rural area is defined as a group of communities with less than 2000 people, and small cities as those with more than 2000 people and less than 15,000 inhabitants[28]. However, this classification is independent of the classification of districts into provincial and district municipalities.

In rural areas, the most common type of management of water and sanitation services is through communal organization, specifically the JASS (85 percent of total systems)[29] that follows a self-managed model. The quantity of communities that are part of a JASS is a result of the discretional organization of them, so that a JASS can attend to one or more communities. There is no formal quantification of them, but the estimation of Dianderas and others (2016) reaches 11,500 JASS across the country. The management model in most cases is one of self-management by the Council, whose members do not receive any type of payment. They practice common rural participatory mechanisms, such as periodic communal assemblies.

The JASS, *de jure,* is responsible for the administration, operation and maintenance of the services, as well as for the determination of the family fee per household. However, in practice, the family fee is very low and, in some cases, it is not even enough for the purchase of inputs for water treatment. This can explain why only 1.5 percent of rural households have access to safe water.

To create a JASS, it must be registered in the district municipality with a General Council comprised of a President, a Secretary and a Treasurer, who are members of the community. They can then receive a "Certificate of Organization Registration" and be recognized as a civil association. The JASS must follow the rules from the MVCS and the Civil Code when corresponding. However, in practice, some of them are still informal because they do not present their case to the municipality, or because the municipality does not have any record of the communal organizations of their jurisdiction. Theoretically, the ones that are recognized as a civil association can have access to bank accounts. However, in practice, almost none have accounts because the banks are located far from their rural communities, and because their characteristics do not meet the requirements of the bank.

Other types of service delivery in rural areas are directly overseen by the LG through a municipal management unit, specialized operators and, in some few cases, they are attended by the closest EPS.

Where the population is more concentrated, as in some small cities, a specialized operator or a management unit of the municipality oversees service delivery. The specialized operators can make different types of arrangements with the district municipality, such as service delivery, construction with operation and financing, participation in an association, management contract, joint venture or any other type of service provision allowed by the law. However, the most common scheme in this area is the direct provision from the municipality.

[28] Although small cities are usually in urban areas, they are included in this section because their structure and general characteristics are more similar to a rural area than to an urban area.

[29] PNSR (2014) on the basis of the baseline developed by the Peruvian Studies Institute.

Apart from the responsibilities of the JASS or other providers, district municipalities in rural areas are responsible for planning and promoting the development of services. They also contribute to financing the provision of the services and providing technical assistance. LGs also have to implement a Municipal Technical Area to monitor, inspect and provide technical assistance to the JASS. This legal requirement has been reinforced with fiscal incentives from the CG to ensure its exercise. However, some municipalities have the capabilities to provide technical support, so the implementation is merely a formality. In parallel, the MVCS, through the PNSR, provides subsidies to district municipalities for the construction of infrastructure, as well as technical assistance for its operation and maintenance to the JASS. Further, it is important to note that there is a budgetary program in the context of the Results-Based Budgeting (RBB) that is called the National Rural Sanitation Program. However, it is independent of the PNSR executive unit of the MVCS (see box 3).

Furthermore, Regional Governments have the function of formulating plans and regional policies in accordance with the national policy in their territories. However, they only fulfill the responsibility of making the plans, and do not always implement them. RGs also have shared power for the investment in sanitation infrastructure, but rarely carry out this function. A summary of these section is presented in Annex 4.

Box 3. Results-Based Budgeting and the Budgetary Program 083

The Results-Based Budgeting (RBB), included in the 2007 General Public Budget Law, is a public management mechanism that establishes the budget for a fiscal year based on the definition of clear objectives. To fulfill its objectives, the RBB defines several instruments for its execution, among which are the Budgetary Programs. These are comprised of budgetary categories defined by the MEF in which certain sectors are prioritized for investment according to their potential benefit to the population and their impact on poverty gaps. This Budgetary Program defines a specific problem, the target population, the goals, the participants, and responsible parties.

One specific program is the Budgetary Program 083, the National Rural Sanitation Program, whose main objective is to address the problem of limited access to quality water and sanitation services within the rural population. It involves the MVCS as well as other entities at different levels of government.

In order to address this issue, it is necessary to have: (i) identified and prioritized interventions - especially based on the level of poverty and the prevalence of diarrheal diseases in children under the age of 5; (ii) trained citizens and local leaders on health education issues; and (iii) provided monitoring and evaluation. The program includes the implementation of investment projects related to infrastructure, the connection of public networks, the organization of the JASS and training.

With respect to the evaluation aspect, the Budgetary Program includes as performance indicators: the percentage of rural households with access to potable water and quality sanitation services; water coverage by the public network; and sewerage coverage.

Source: Ministry of Economics and Finance.

3.4. Assessing the Organizational Structure of Water and Sanitation Services

The general picture of the sector shows that even when there have been important increases in the degree of access to water and sanitation services in urban and rural areas during the last 15 years, a sustainable provision of services is far from being reached. Quality of water, continuity, wastewater treatment and other indicators reveal that the sector faces serious problems to accomplish the SDG 6, especially in rural areas.

The organizational structure of the provision of water and sanitation services shows that it follows a devolved structure. Following the decentralization scheme, Local Governments are the

principal responsible party for the provision of services. In general, provincial municipalities oversee urban provision and district municipalities oversee rural provision. However, it can be said that the management models followed in both urban and rural areas are limited by the constraints of the LGs with respect to financial and human resources.

On the one hand, the structure for the provision of services in urban areas enables intervention by the public authorities in local and regional governments. As the EPS does not have sufficient financial resources to exercise all of its responsibilities, local and higher-level governments provide financial support. The problem is that these activities open the possibility to introduce personal interests in the decision-making process. As these practices were common in the past, several changes have been made to the sectoral laws to reduce the politicization of the EPS. However, an efficient incentives plan is lacking to complete the efforts to increase the institutionalization of providers.

On the other hand, it can be said that rural areas have been historically neglected by the government and are in a worse situation. The communal organizations do not have enough capabilities to meet the specific needs of water and sanitation service delivery, including wastewater treatment that requires a high level of technical knowledge. The people who integrate the JASS usually do not have a high level of education[30]. Therefore, it is not surprising that the infrastructure in rural areas does not run well.

[30] In rural areas, there are few people with a high level of education.

4. ASSIGNMENT OF FUNCTIONS AND RESPONSIBILITIES

This section presents an overview of the arrangements for the provision of water and sanitation to households and businesses. First, it provides an overview of the *de jure* function and responsibilities, and then a comparison with the *de facto* situation. It also analyzes in detail the case of urban and rural areas. Finally, there is a brief assessment of the assignment of functions and responsibilities.

4.1. Overview of the Assignment of Functions and Responsibilities for Local WSS

There is a broad framework for water and sanitation services that includes sector legislation, national and sectoral policies, and strategies. The most important of these will be briefly described.

First, it is important to detail the definition of WSS used for water and sanitation legislation and policy. Under the definition of the LGSS, sanitation services include:

- Water supply service: Capture, storage and transmission of raw water; and treatment, storage, transmission and distribution of drinking water.
- Sanitary sewerage: Collection, treatment and final disposal of wastewater.
- Pluvial sewerage: Collection and evacuation of rainwater.
- Excreta sanitary disposal service: Construction, cleaning and maintenance of latrines, septic tanks, sanitary modules or any other means for the sanitary disposal of domiciliary or communal excreta, other than sewage systems.

Second, national responsibilities are established under the following laws:

- Sanitation Services General Law (LGSS)[31]

  The LGSS issued in 1994 establishes the rules that govern the provision of sanitation services[32]. It determines functions, responsibilities, rights and obligations of the entities associated with WSS, such as the MVCS, Subnational Governments, the regulator, providers and users.

- Sanitation Services Modernization Law (LMSS)[33]

  LMSS issued in 2013, presents the objectives and procedures for the modernization of water and sanitation services in urban and rural areas, as well as the functions, obligations and responsibilities of entities involved in the modernization process.

  One of the main objectives is to improve the integral management of the EPS by implementing measures and instruments for their corporate self-sustainability and supporting them through the Transitional Support Regime (RAT, Régimen de Apoyo Transitorio), or other mechanisms for this purpose. Another objective is to achieve the integration of the provision of services while seeking economies of scale and the economic, financial, technical, environmental and social sustainability of EPS. Finally, other objectives include the strengthening of rural sanitation service providers with technical and financial assistance, as well as incorporating improvements to policies pertaining to tariff regulations and subsidies.

- National Sanitation Plan 2006-2015[34]

[31] Law N° 26338 – Sanitation Services General Law.
[32] In LGSS "Sanitation services" includes water services.
[33] Law N° 30045 - Sanitation Services Modernization Law.
[34] MVCS (2006) *Plan Nacional de Saneamiento 2006-2015 "Agua es vida".*

The Plan was prepared by the MVCS, which leads the national policy. Its aim is to contribute to the expansion of coverage and improvement in the quality and sustainability of drinking water, sewerage, sewage treatment and excreta disposal services. The Plan contained the objectives, goals, strategies and actions to be developed to promote sector development. It presents a medium- and long-term vision in the context of the Millennium Development Goals (MDGs). Specifically, it sought to integrate and harmonize the actions of the different actors involved in the sector. [35]

- National Rural Sanitation Program [36]

  The PNSR was created in 2012 as a department of the Vice Ministry of Construction and Sanitation in order to improve the health of the rural population through comprehensive, quality and sustainable water and sanitation services. As such, it is a fundamental part of the government's social inclusion policy. It also guides and articulates actions of the entities of the three levels of government and communal organizations, generating synergies between different sectors and actors.

  The areas of intervention include: construction, rehabilitation and expansion of the infrastructure; implementation of unconventional technological solutions for water access, installation of excreta sanitary disposal systems; strengthening the capacities of the actors involved in the management, operation and maintenance of the sector, as well as for the formulation and execution of programs and projects; and improvement in health education.

- National Urban Sanitation Program [37]

  The PNSU was created in 2012 as a department of the Vice Ministry of Construction and Sanitation in place of the “Water for Everyone” program. PNSU is the program in charge of improving quality, expanding the level of coverage and promoting the sustainable use of sanitation services in the urban areas of the country. It seeks to contribute to improvements in the quality of life through advances in health and nutrition.

  Its specific objectives are to design, formulate, coordinate, manage, implement and evaluate urban sanitation programs and projects financed with public resources; contribute to the sustainability and quality of urban sanitation services; and coordinate with the subnational governments and other public and private entities, actions to support the development of programs and projects in urban sanitation.

In December 2016, a new national law was issued by the government with respect to the reform of the sector, namely, the Frame Law of the Management and Delivery of Sanitation Service. This law introduces some changes to the LGSS. However, it has not yet been applied because the final arrangements for its application have not been issued. (The development of this case study is based on the LGSS, but will include mention of major relevant changes).

Third, local responsibilities are mainly established in the LGSS. The LGSS notes that the provincial municipality has the responsibility of water and sanitation service delivery in its respective local jurisdiction. The LGSS also indicates the types of administration of the providers, tariff setting, among other issues. Finally, the LG, including both provincial and district municipalities, has to follow sectoral guidelines.

[35] An update of the National Sanitation Plan is being prepared.
[36] Information obtained from the PNSR website: http://pnsr.vivienda.gob.pe/portal/.
[37] Information obtained from the PNSU website: http://www3.vivienda.gob.pe/pnsu/index.html.

4.2. The Assignment of Functions and Responsibilities for Local WSS in Urban Areas

As noted, according to the LGSS that sets the functional assignments, water and sanitation provision is the responsibility of provincial municipalities, which are classified as Local Governments. This devolved power structure follows the subsidiarity principle[38]. In this case, the lowest level (district municipality) is too small to provide WSS efficiently, or to take advantage of economies of scale. However, the provincial municipality has, *de jure*, sufficient size and capability to ensure good performance and efficient service delivery. Nevertheless, *de facto*, the assignment of functions and responsibilities in urban areas do not always meet the general laws and principles of the sector.

The legal framework mentions that the EPS has to own assets and maintain functional and administrative autonomy. It receives the exploitation rights either from the provincial municipality or the Central Government. The Local Government is part of the Board, but the EPS should operate on its own under the tariff system. The quality level of the services is established by the SUNASS. The EPS must have the organization, the resources and the technical and professional personnel necessary to assure its proper management. It should be able to sustain efficient operations and maintenance activities of systems, provide good quality of the services rendered, and expand its coverage in fulfillment of the established regulations. The EPS has to use its income to cover the exploitation costs, infrastructure investment and associated financial expenses.

In order to fulfill all of its functions and responsibilities, each EPS has to elaborate an Optimized Master Plan (PMO, Plan Maestro Optimizado), which is a long-term planning tool with a horizon of thirty years. It contains the investment program and outlines the financial economic projections for the efficient development of operations of the corresponding EPS. Based on the PMO and the tariff study for five years that the SUNASS elaborates for each EPS, it has to present the tariff formula that will sustain the tariff each year, according to the Tariff Regulation General Document. Subsequently, it is the responsibility of the EPS to execute the investments, management goals and tariff increases.

Planning at the national level is the responsibility of the MVCS, as it is the governing body. It is done through the Politics and Regulation of Construction and Sanitation General Department of the Vice-Ministry of Construction and Sanitation. This is reflected in the National Plan of Sanitation and other programs, such as the PNSU. The quality standards are set by the Ministry of Health through the General Department of Health (DIGESA, Dirección General de Salud), which regulates water quality for human consumption. The health authorities are the DIGESA in the case of the CG. The Regional Department of Health (DIRESA, Dirección Regional de Salud) is the health authority in the case of RG. They are responsible for sanitary vigilance and, with the SUNASS and municipalities, have the responsibility of quality supervision. In addition, demand creation and sanitation marketing is the responsibility of households, the provider and the PNSU. Finally, in accordance with the LGSS, Regional Governments should link national plans and local plans.

In practice, in some cases, the urban structure does meet legal framework requirements. The EPS has control over the human resources of the entity; it can hire and fire the personnel and set the level of salaries according to the internal regulations. However, in some cases the personnel do not necessarily hold the minimum qualifications to properly manage or operate the systems. The EPS also has control over the operation and maintenance activities of the systems for water and sanitation provision and production. However, oftentimes, the

[38] Subsidiarity principle means that the public services must be provided by the lowest level of government that can do so efficiently.

maintenance is not always opportunely or properly done. Box 4 shows an example of a wrong management of the implementation of a water treatment plant project.

Since more than half of the total EPS have negative levels of income, according to SUNASS data, they tend to pay more attention to the operation and service delivery than to maintenance. There is also a lack of political will to reverse the situation because of its limited political impact with potential voters. Consequently, several projects for the reposition and rehabilitation of the infrastructure are done every year that increase sector expenditures. These projects could have been avoided or reduced in scale, if the correct and timely maintenance had been done.

Concerning the financing, capital infrastructure construction falls under the responsibility of the providers, namely, the LG and the CG. The EPS must carry out the investments of the PMO, but with the level of fees collected, they do not reach the necessary amount of financial resources (more details about the collection of tariffs in section 8). With the lack of financial resources and the inefficient and insufficient tariff system, the LG and the CG (through the PNSU) assist the EPS with financial resources through projects, programs or direct interventions (an example of a wrong management of the tariff system is shown in box 5). Then, the CG can finance the construction of wastewater treatment facilities or the repositioning of a part of the sewerage that is inoperative because of lack of maintenance. This type of intervention is usually under a completely (or almost completely) subsidy-based scheme.

Finally, in practice, the planning role of the RG is not well developed, and sometimes it is not developed at all. RGs may only fulfill this requirement when making a regional plan, but it is not marketed or implemented. The SUNASS regulates the service delivery of the EPS, but its scope does not reach any other type of water provider[39]. In addition, demand creation and sanitation marketing is done only in some territories. However, it is hardly significant with respect of the total population. A summary of these section is presented in Annex 5.

[39] There are provinces that are not part of any of the 50 EPS. Because of political will, some provinces are not served. Therefore, the corresponding municipality provides the service directly or through an operator that is not supervised by the SUNASS.

Box 4. The Case of the Water Treatment Plant of Huachipa

The project entitled "Part 1, 2 and 3 - Intake, Drinking Water Treatment Plant of Huachipa and Ramal Norte" entered into a tender arrangement in 2007. The objective was to supply drinking water to the highlands of Lima, whose altitude made it difficult to supply from the existing plant of the Atarjea. The project consisted of the construction of the intake and a drinking water treatment plant with an initial capacity of 5 m3 / s (Phase I). In addition, the construction of a driving line (North Branch - Phase II) was planned to provide this service to 2.4 million inhabitants in 6 districts of Lima, including: Carabayllo, Comas, Los Olivos, Puente Piedra, San Juan de Lurigancho, and San Martin de Porres.

Thus, in 2008 the project was assigned to the Huachipa Consortium. The total project cost US$ 304 million, and was implemented by the Brazilian company Camargo Correa and the French company OTV. According to the contract, the consortium had to finish the project in 2011 and then take over its operation and maintenance until 2015. However, at the end of this period the plant was not in optimal condition. According to SEDAPAL, the structure of the intake had experienced a serious deterioration. The quality of the water was also not adequate, and there were leaks in the construction lines. In fact, the General Comptroller of the Republic (CGR) identified that the production level was 1.8 m3 / s — lower than initially proposed.

In addition, the CGR detected alleged irregularities. First, SEDAPAL signed the contract outside the established deadline and despite the fact that the company, OTV, was not registered in the National Registry of Suppliers. This should have immediately led to the annulment of the contract. Likewise, the entity authorized the replacement of the construction of two reservoirs for a single one without technical support, which generated a cost overrun of almost S/ 22 million (US$ 7.5 million equivalent).

However, SEDAPAL did not monitor the execution of the complementary works that were necessary to begin the construction of the northern branch (Phase II) and the reservoir. Thus, the consortium benefitted from the S/ 20 million (US$ 6.8 million equivalent) payment due to the suspension of works. However, the most serious irregularity is that SEDAPAL received the works corresponding to Phase I of the treatment plant without having verified that it operated satisfactorily in accordance with the contract. This, in turn, led to the authorization of the start of the operations stage and maintenance without having the technical conditions to operate. Although the plant could not produce or deliver water for 3 years, SEDAPAL recognized the payment of S/ 50 million (US$ 17.5 million equivalent).

Source: CGR, 2016 (b) and Equilibrium, 2010.

Box 5. A Case of Wrongful Application of Social Tariffs

In 2015, the EPS SEDALIB S.A., located in Trujillo received a penalty fee from SUNASS. It was caused by irregularities in the collection of the tariff of potable water and sewage. Specifically, it was sanctioned because it was applying the social tariff to the workers and ex-workers of the entity. In actuality, the social tariff only applies to certain establishments (nursing homes, children's cribs, among others) due to a subsidized scheme of collection of water fees.

This is outlined in Resolution N° 108-2014-GG-SUNASS, in which the company is penalized with 20 Tributary Tax Units (each TTU was up to 1,850 Soles [US$ 600 equivalent] in 2015) for the irregular collection of tariffs to 300 workers since the year 1994. Since then, the efficiency of the service has improved, due to lower losses registered by the supplier company when collecting the determined tariff after 20 years of irregular charges.

Source: SUNASS, Resolution N°108-2014-GG-SUNASS.

4.3. The Assignment of Functions and Responsibilities for Local WSS in Rural Areas

In rural areas (including small cities), the provision of water and sanitation services is the responsibility of Local Governments at the district level. According to the LGSS, their main functions are to: plan and promote the development of the services; manage water and sanitation services through specialized operators, communal organizations or directly through management units; boost and register communal organizations; monitor rural provider performance; ensure the sustainability of the systems; participate in the financing; and provide technical assistance.

Regarding the providers mentioned, the main functions of the JASS are to: register itself in the district municipality; manage, operate and maintain water and sanitation services; establish the family fee; support and monitor the execution of projects related to service provision; and boost the participation of the community.

Finally, rural areas are required to follow the quality standards set by the Ministry of Health, through the DIGESA. This includes its regulation for water quality for human consumption. It is also responsible for sanitary vigilance. The Central Government's responsibility is to promote programs of technical and financial assistance for the provision of adequate sanitation services to each rural locality and for their implementation, as well as programs to supervise and support the operation of these services.

In practice, in most of the rural areas, the operation of the systems is the responsibility of the JASS. However, their recurrent provision consists almost exclusively in operating water infrastructure from water sources. They establish the family fee in coordination with the population of their respective areas but, in most cases, it is not enough to cover all of their responsibilities. The communal organization is also supposed to manage the wastewater treatment plant, where these exist. Finally, the JASS does not do any type of investment planning. When the service is delivered directly by the municipality, in most cases, it faces similar problems to the JASS but to a smaller degree because it can afford to hire better technicians for water and sanitation systems.

Regarding sanitation services, the district municipalities are responsible for the provision of facilities, in some cases on its own and in others by a communal organization. LGs can assist rural people with capital infrastructure, such as latrines or septic tanks. However, in some cases, it is the PNSR that assists the population. The JASS is supposed to support rural families in the operation of different types of sanitation, such as septic tanks or latrines. However, in actuality, the JASS faces limitations regarding technical issues and its contribution is restricted. There are exceptions, that is, cases in which the JASS has sufficient knowledge and can deliver good performance in sanitation services provision, but this is rare in rural areas. With respect to the management and operation of wastewater treatment plants, in practice, the JASS does not have the financial or human resources to effectively do it. [40]

District municipality functions differ in some aspects from those established by the LGSS. Regarding the planning responsibility, they prepare the Local Development Plan and the participatory budget with the population of their jurisdiction; however, its accomplishment is not assured in most cases. A few years ago, following the Incentive Program for the Improvement of Municipal Management from the Central Government, the municipalities started to create the Municipal Technical Area to provide technical assistance to the JASS. Its creation is being increasingly generalized throughout the municipalities.

With respect to infrastructure, LGs are the main bodies in the spending of rural infrastructure for the provision of services. However, the PNSR plays an important role as well. Finally, there is

[40] This is the reason why there are several wastewater treatment plants around the country that are inoperative.

no entity exclusively dedicated to the regulation of rural tariff settings or performance monitoring. Therefore, the district municipalities retain this responsibility — but rarely do it.

It is important to mention the large and integral presence of non-governmental organizations (NGOs) in rural areas. They participate in providing infrastructure, such as latrines and other sanitation solutions. At the same time, they also provide technical assistance and teach the population how to achieve sustainable management of water and sanitation services. In this context, the municipality is supposed to enforce sanitation regulations. Finally, demand creation and sanitation marketing is the responsibility of households, the JASS and the PNSR.

In conclusion, district municipalities, as well as provincial municipalities in a supplementary manner, are responsible for the water and sanitation outcomes of their jurisdictions in rural areas. Even when some functions are transferred to the JASS, they hold final responsibility for their performance because LGs must provide them with infrastructure, capacity, planning and monitoring. A summary of these section is presented in Annex 6.

4.4. Assessing the Assignment of Functions and Responsibilities

The decentralized structure in Peru means that the policy, regulation and legal framework responsibilities belong to the CG, and the provision of water and sanitation to the LGs. In theory, and following the subsidiarity principle, this should work. However, the output indicators of the sector do not reflect this optimal distribution of responsibilities.

Even in cases when the assignment of functions and responsibilities is clear and based on the subsidiarity principle, the hypothesis of this research is that the main problem arises from a historical scarcity of proper incentives for local authorities to reward better sectoral performance. As the achievement of local goals were not tied to a “reward”, the authorities did not put sufficient effort into improving the capabilities of the providers. Specifically, they did not possess technical knowledge required for an optimal operation of the utilities. Other issues included corrupt activities, low willingness to pay, inefficient procedures, a lack of political will, and insufficient financial resources to deal with the low level of coverage and quality of services. These problems have been a constant within other sectors as well. In the education sector, for example, the qualifications of teachers and/or principals that are hired by Local Governments, are highly correlated with the low outputs achieved on average by the children. In addition, maintenance of school infrastructure is poor. This is also the responsibility of the LGs.

In addition to the incentive problem, there is a gap in the legal framework in rural areas. The functions of district municipalities and communal organizations are not sufficiently clear and frequently do not correspond with their real capabilities. In practice, the system is devolving a high proportion of the responsibilities of service provision to a group of people that, on average, is not characterized by having high levels of education, that rarely receives technical assistance and that is poor. Furthermore, because being part of a JASS does not give members any type of incentive, it is understandable that they do not put more effort into achieving sustainable development.

However, in recent years, some reforms to introduce new incentives for the efficient delivery of the services have been implemented. For example, there is the Municipal Incentives Plans and Budget for Results that links sectoral outputs to financial rewards.

5. EFFECTIVE AND RESPONSIVE LOCAL POLITICAL LEADERSHIP

This section discusses the role of local political leadership in water and sanitation service provision. As Local Governments play a leading role in the provision of these services in Peru, it is important to understand the local political leadership because it can impact the effectiveness, responsiveness and accountability of service delivery. Both provincial and district levels are analyzed in this section, as they have functional administrative control over service provision in urban and rural areas, respectively.

5.1. Overview of the Role of the Local Political Leadership for Local WSS

The political organization of the country also follows a decentralized structure. This means that all political leadership in the subnational governments are elected by suffrage, such as the President and Vice President of Regional Governments, Regional Council members and Mayors and Regidors of Local Governments (in the Provincial and District municipalities). Elections for both levels of government take place simultaneously every 4 years. Each Peruvian citizen over 18 years of age with existing civil rights is obliged to vote; for people over the age of 70, voting is optional.

The recall option is another important vehicle for citizen participation. It consists of an election process in which the citizen directly participates by voting to remove the regional, provincial or district authority from their positions. This can be applied to any of the authorities. As such, the recall represents an important tool in demanding accountability and effectiveness from the political leadership. However, after the recall, there is no additional voting process, and the authorities are replaced by other members of the corresponding level of government.

5.2. The Role of the Local Political Leadership in Local WSS in Urban and Rural Areas

For this analysis, it is not necessary to distinguish between urban and rural areas because the scheme followed is the same for both cases at the political leadership level. Thus, this analysis will focus on the local political leadership as a whole.

In Peru, each level of government has political decision-making space. In fact, all levels have an annual budget that can be managed at their discretion. No confirmation by the CG is required to execute it[41]. However, the CG has different types of incentives to encourage LGs to pay more attention to the areas that are prioritized in the national policy. For example, there is the Budget for Results and Municipality Incentives Plan. These type of instruments seek to give a budgetary reward to the LG that meets some national requirements, such as the reduction of child malnutrition or the implementation of the Municipal Technical Area for the support of the JASS. However, they are not obligated to do what the CG establishes. Rather, they are simply encouraged to do so. As such, they would have more money to spend in the next fiscal year.

LGs can manage their budget as they think convenient, at their own discretion. LGs can formulate and execute any type of project or program under their jurisdiction, following the technical guidelines or minimum requirements in the corresponding sector[42]. In addition,

[41] After the final approval of the budget by the Parliament, each level of government can execute it at their own discretion.

[42] It is important to note that the National Public Investment System (SNIP) in Peru offers guidelines for the identification, formulation and evaluation of a project. There are minimum requirements for each type of project and phase. The SNIP was implemented by the CG, but was decentralized in 2007. However, recently the new Government removed the SNIP to create another system focused on different aspects. Implementation of this system is still in process.

provincial and district municipalities have the power to recruit, appoint and hold human resource authority over the core local administration team.

Electoral aspects also have an influence in the local political decision-making process. As noted, the Mayor and the Municipal Council are elected by suffrage and the CG cannot remove a local executive without judicial intervention. For Mayors, constituents vote directly for the person they want to represent them. For the council members, constituents vote for the political organization of their preference, and the council is then formed according to the percentage of votes each political organization receives. Thus, there is a strong executive system of local governance.

Beyond the local governance arrangement, the local political leadership is influenced by the relationship between the Mayor and the Council. According to the results of the elections, the Council can be of the same political organization as the Mayor or of the opposition. In the former case, the decision-making process is smooth with regard to the creation of ordinances or the distribution of financial resources, for example. In the latter case, if the Council does not solve the political differences with the Mayor, political deadlock can result. The Council can also dispose of the Mayor under the Organic Municipalities Act, but the final decision has to be approved by the National Elections Jury. The type of relationship between both figures can be different from one municipality to another.

Furthermore, the LG election system is competitive. There is no ruling party, or a central party dominance. Any political organization or electoral alliance can participate in the elections if they can register an adherent list of 2.5 percent or more of the total eligible voters of their respective district. The organizations allowed to participate can apply to any Provincial or District Municipality of the region. In this context, it should be stressed that LG political organizations may lack institutionalization because, in most cases, they are created only for one electoral process.

Finally, LGs are effective in achieving results in service delivery of some areas that constituents care about in varying degrees, depending on the municipality and its corresponding population. However, in line with the development of this case study, LGs are not accomplishing their objectives concerning water and sanitation services.

Local constituents can express their voice in a variety of ways, as they do with regard to other public services. For example, there are several cases of strikes or walkouts occurring when a mining company starts the construction or operation of its facilities, or when there is a new toll on the road, or when acts of corruption surface. Indeed, people exercise their right of recall regularly, most frequently for reasons of corruption. A summary of these section is presented in Annex 7.

Box 6. Project Irregularities in Iquitos

Since 2007, a project entitled the "Improvement and Expansion of Drinking Water, Sewer and Wastewater Treatment Systems in the City of Iquitos" was promoted by the regional governor of Loreto, Yván Vásquez Valera. The project objective was to increase the degree of water and sanitation coverage, and reduce the number of diarrheal and skin diseases in the city. The project was divided into two lots: lot 1 consisted of the construction of the Wastewater Treatment Plant and lot 2 consisted of the construction of the sewerage network.

In May 2010, the RG and the Chinese company, International Water & Electric Corp (CWE), signed the contract for the execution of the project corresponding to both lots. The infrastructure was completed in 2014, but its condition was not suitable for operation. According to reports from the Public Infrastructure for Productivity Agency (OPIPP, Organismo Público de la Infraestructura para la Productividad) of the RG of Loreto in 2015, more than 82 percent of the sewage networks installed by CWE had problems, resulting in sewage floods around the city. Also, the Wastewater Treatment Plant was operating at 12 percent of its capacity because the chlorination system did not work.

The megaproject presented serious irregularities both before and after the concession. According to the Feasibility Study, the work would have costed S/ 337 million (US$ 106 million equivalent) increased in cost during the development of the Technical File, eventually reaching S/ 419 million (US$ 130 million equivalent).

Despite the fact that in the first public announcement other big companies were presented, the bidding process was cancelled. A second call was convened in which the project was then assigned to CWE. Regarding the execution of the project, the CGR found that workers and ex-workers of OPIPP were involved in alleged irregularities, making additional provisional payments that caused an overrun of S/ 94 million (US$ 29 million equivalent) — and payments that did not correspond to the amount of S/ 84 million (US$ 26 million equivalent).

Source: Study Center for the Development of Justice.

5.3. Assessing the Effectiveness and Responsiveness of Local Political Leadership

The local political leadership has control over the decision-making process in its jurisdiction, separate from higher-level governments. The execution of the budget and human resources are managed according to the internal regulations. Provincial and district municipalities have discretion with respect to their activities. However, the high level of discretion of the local political leadership does not always lead to the optimal provision in public services, including water and sanitation services.

Although the actual scheme, in a *de jure* sense, should lead to the effectiveness and responsiveness of local political leadership in the context of a competitive electoral system, it also allows the authorities to put their personal interests above the public welfare. As noted in Box 6, there can be cases in which the execution of projects can be used as a channel to introduce corruption — or to implement projects without the minimum standards of quality. Other problems that can arise are hiring unqualified staff, the implementation of unnecessary projects that do not increase the public welfare[43], the politicization of local administration in the decision-making process, and the use of employment hiring for political purposes.

However, each case must be studied separately because behind each political decision there is a wide spectrum of possibilities that explain the positive or negative behavior of the authorities. Thus, the effectiveness and responsiveness of each provincial or district municipality depends on different types of interests.

[43] This is why some LGs are full of central plazas, municipal buildings and swimming pools, and the people around this area do not yet have access to water services.

6. LOCAL CONTROL OVER ADMINISTRATION AND SERVICE DELIVERY

This section examines the degree of local government control over administration and service delivery, and the extent to which the providers have control over their own operations.

6.1. Overview of Local Control over Administration and Service Delivery

Local control over administration and service delivery in a decentralization framework can be viewed from different perspectives. Thus, this analysis considers whether the LG has binding powers to appoint heads of the service delivery units, to approve the budget, determine the organizational structure, and manage human resources or procurement and capital investments. These aspects provide a qualitative assessment of their effectiveness in promoting better water and sanitation results. As the type of service delivery is different in urban and rural areas, the analysis is divided into two sections to describe the relevant administrative arrangements for each case.

6.2. Local Control over Administration and Service Delivery for Local WSS in Urban Areas

The following discussion about local control over the administration and service delivery for local WSS reflects the *de facto* situation in urban areas. It makes a comparison with the *de jure* situation of the organizational structure. As will be shown, there are considerable differences between both situations that directly affect the effectiveness on water and sanitation coverage outcomes. A summary of these section is presented in Annex 8.

The Organic Municipalities Act (OMA) determines a basic organic structure of provincial and district municipalities that includes: an administrative area, municipal management, an internal audit body, the municipal public prosecutor's office, the legal advisory office, and the planning and budget office. Furthermore, each LG establishes different and more line or support units to accomplish all functions assigned under the OMA.

Regarding water and sanitation services, responsibility falls under the Social Development Unit, the Urban/Rural Development Unit or the Local Public Services Unit, among other similar entities. Each sanitation unit should have qualified personnel, such as water engineers, to guide and monitor the performance of the EPS. However, in practice, not all provincial municipalities have an expert in the sector in the corresponding unit. Further, the degree of coordination between the EPS and the municipality varies from one province to another. Finally, the EPS determines the place of work for the development of the corresponding activities, which is part of its assets.

With respect to the administrative structure of the EPS, the legislative framework establishes that the General Manager of the EPS is appointed by the Directorate in the larger EPSs and directly by the Board in the smaller EPSs. In the case of larger EPSs, each Director and the General Manager must have: (i) a higher education professional degree in engineering, economics, law, accounting or business management (in this order of priority), a postgraduate degree in business management and/or management of public projects or services; and (ii) a minimum of 5 years of executive experience in public or private corporations, preferably in the sanitation sector.

The Directorate is appointed by the Shareholders Board, whose members are agents of the Mayors (usually the Mayors themselves). In the case of smaller EPSs, the requirements to be a General Manager include having a professional degree or minimum of 3 years of executive experience.

The Board, Directorate and General Manager are under the mandate of, and protected by, the Societies General Act and the sectoral legal framework. However, in both types of EPSs, the

designation of the General Manager is associated with the Mayors of the municipalities, a scheme that allows for the potential of political interference in the local control over the administration and water and sanitation service delivery. With respect to the administrative structure of the providers, it depends on the internal statutes. Therefore, the staffing is different in each case. However, the main units of a typical organigram are a management and finance unit, commercial, operational and projects units, as well as support offices.

Regarding the budgetary process of the provider, it is the responsibility of the EPS and its General Manager, and is independent from the LG budget. LGs have control over their human resource decisions, but they are not supposed to have any control with respect to the human resource arrangements of the EPS. Staffing decisions of the providers are the responsibility of the General Manager, according to the internal statutes. Finally, the investment plans for EPS water and sanitation services is the Optimized Master Plan. They establish the investments projects for the next 30 years, and the management goals to be committed that support the tariff increases of the tariff formula. Then, the management of the procurement of capital investment should be made by the EPS, according the PMO, its statutes and the legislative framework.

Regarding fee collection, the EPS can only execute the investments established and approved by the PMO. Otherwise, the General Comptroller of the Republic will determine the corresponding administrative, civil or penal responsibility. However, provincial municipalities are not tied to the PMO, so they can implement any type of project independently — whether or not it is included in the Plan. Thus, all administration of water and sanitation services is within the control of the LG and the EPS.

However, according to Von Hesse and Zavaleta (2016), there are several problems with the administration of water providers. First, they have inadequate commercial management, including inadequate micro metering on water consumption. They also have inadequate invoicing of water consumption. Further, slow payments are a major problem, and have led inadequate financial management with negative operative profits. Second, the water and sanitation infrastructure is in poor condition, as reflected in network breakages. Third, communication with clients is not working in an optimal way. Fourth, the governance and governability level of services is poor. In spite of these challenges, during the last decade, the performance of these indicators has improved to increase public welfare. However, there is still a pending agenda regarding the sustainability of service provision.

As shown in table 7, there are a variety of commercial problems. The national level of micro metering is around two-thirds of water connections. Thus, it is not possible to know the exact quantity of water consumption at the household level. Consequently, much of water consumption is not invoiced, thereby adversely affecting the total revenues of the providers. Finally, there are often considerable delays with regard to bill payments, with a two-month delay being the national average.

Table 7. Commercial Management Indicators, 2014

	Micro metering[1/]	Invoiced water[2/]	Slow payments (number of months)
SEDAPAL	83%	71%	2.04
Big EPS	57%	58%	1.45
Medium EPS	47%	54%	2.13
Small EPS	51%	67%	1.66
Total	66%	64%	1.87

Source: SUNASS (2014).
Note: EPS= Sanitation Services Provider Entity; SEDAPAL= Lima Water and Sewerage Services.
1/ Water connections with water meter / total water connections.

2/ Invoiced water / produced water.

The OTASS (2016) evaluated 40 EPSs, analyzing the development of their activities. Regarding the economic and finance section, they found that 58 percent of the EPSs had negative operative profits, and only 28 percent had an operative profit greater than 5 percent. The entity concludes that this picture is a result of a structure of high operating costs, high depreciation expenses, and an inefficient management that is reflected in the excessive personnel expenses and the weak capacity of fee collections.

The infrastructure for the provision of the services is not in an optimal state. As mentioned, maintenance is not one of the main priorities of the providers or municipalities because the low level of income they get is destined to the operation of the utilities. Thus, it can be found that the water and sanitation systems present breakages, as shown in table 8.

Table 8. Infrastructure Indicators, 2014

	Breakages in water systems[1/]	**Breakages in sanitation systems[2/]**
SEDAPAL	0.2	2.8
Big EPS	0.93	6.6
Medium EPS	1.28	3.9
Small EPS	1.71	3.4
Total	0.66	4.3

Source: SUNASS (2014).
Note: EPS= Sanitation Services Provider Entity; SEDAPAL= Lima Water and Sewerage Services.
1/ number of breakages in water systems / length average of water systems
2/ Number of breakages in drainage / length average of drainage.

Customer relationship indicators show that there are complaints regarding WSS services,[44] and that customer satisfaction levels are not high for any type of EPS, as detailed in table 9.

Table 9. Customer Relationship Indicators, 2014

	Complaints[1/]	**Customer satisfaction level[2/]**
SEDAPAL	69	3.6
Big EPS	141	3.2
Medium EPS	150	3.3
Small EPS	117	3.5
Total	111	3.35

Source: SUNASS (2014).
Note: EPS= Sanitation Services Provider Entity; SEDAPAL= Lima Water and Sewerage Services.
1/ Complaints per 1000 connections.
2/ On a scale of 1 to 5.

Finally, OTASS estimated the results of governability and governance of urban providers for the period 2012-2014 (OTASS, 2015). Governability refers to the relationship of the EPS with external actors. It is understood as the balance of its operations in a dynamic environment with different interest groups. The indicators include: management transparency, client attention, and social and institutional management. Governance refers to the internal operations of companies. It includes indicators of financial sustainability, PMO performance, institutional strengthening and labor climate. The results of governability and governance conditions for 2014, shown in table 10, revealed that no EPS scored well in terms of performance; 9 EPSs

[44] The type of complaint is not specified in the report.

achieved an average performance; 12 had a poor performance; and 28 scored very poorly. In summary, 82 percent of the EPSs evaluated had a poor performance rating. (See Box 7 for detailed information about the role of OTASS).

Table 10. Governance and Governability in the EPS

RESULT	Number of EPSs
Good	0
Average	9
Poor	12
Very poor	28
Total	49

Source: OTASS. Results of Governability and Governance 2014.

Box 7. The Role of OTASS

Urban providers had difficulties in sustainably providing water and sanitation services. Therefore, the MVCS created the Technical Agency of the Administration of Sanitation Services (OTASS) in 2012. The objective of the OTASS is to protect the implementation of the governing body's policy in matters of management of the provision of water and sanitation services by the EPS. The main functions of this entity are to: (i) provide technical assistance; (ii) set the normative parameters of its powers; (iii) monitor the EPS; (iv) evaluate the EPS; (v) implement the Transitional Support Regime; (vi) boost the integration of the EPS; (vii) foster Public-Private Partnerships; and (viii) inspect and sanction EPSs, as required.

It is important to highlight some of its functions. First, OTASS set norms that strengthen good corporate governance, the constitution and reconstitution of the Directorate, and the designation, removal and vacancy of the Directors. This is relevant because the aim is to reduce the political interference and local control over the administration and service delivery of the EPS. In this regard, the OTASS prepares a public report ranking the governance and governability of EPSs.

Second, the implementation of the Transitional Support Regime (RAT, Régimen de Apoyo Transitorio) is a management tool for operations offices, by which short, medium and long-term strategies are established. These can lead to a management turnaround of any EPS that may require it. During the RAT, the Directorate is suspended and the administration of the EPS becomes the responsibility of the new members of the Directorate appointed by OTASS. It receives technical assistance for the utility turnaround of the EPS and financial resources for immediate activities of maintenance and replacement of assets. The phases of the RAT include the following:

- Evaluation and prioritization: evaluation of the solvency and sustainability of the EPS that should be prioritized to join the RAT.
- Declaration of the beginning of the regime in an EPS.
- Designation of the new Directors, General Managers and Transitory Managers.
- Utility turnaround: technical assistance for the formulation and execution of the rescue plans.
- Periodic evaluation.

The first EPS introduced in the RAT was in 2015. To date, 11 EPSs have been prioritized. However, the results of this instrument cannot be measured yet because of it was only recently implemented

Source: Institutional website of OTASS.

6.3. Local Control over Administration and Service Delivery of Local WSS in Rural Areas

The following discussion about local control over the administration and service delivery for local WSS reflects the *de facto* and the *de jure* situation in rural areas. Rural areas face different types of problems regarding administration and service delivery in comparison with urban areas. These differences negatively impact water and sanitation outcomes. A summary of these section is presented in Annex 9.

The structure of district municipalities in rural areas is the same as described in the previous section. However, according to the Incentive Program for the Improvement of Municipal Management (PIM, Programa de Incentivos a la Mejora de la Gestión Municipal), they must have in operation a Technical Municipal Area (ATM) for the management of water and sanitation services. The ATM is in charge of promoting the formation of JASS, as well as supervising and providing them with technical assistance to ensure the sustainability of services. This area is within the organic structure of the Municipality. Every year, the goals related to the responsibilities of the ATM in the PIM change, as they seek to attain better sectoral results in rural areas (see box 8).

Box 8. The evolution of the Technical Municipal Area

One of the mechanisms that favors the creation of a Technical Municipal Area (ATM) in rural areas is the Incentives Plan for the Improvement of Municipal Management and Modernization (PIM). Specifically, the PIM is an instrument through which certain goals to be achieved by the municipalities during a fiscal year are defined. Thus, if the municipalities reach them within the given period, monetary transfers are made to the municipalities that obtain good results. The PIM, as part of the Results-Based Budget, focuses on projects that improve revenue collection, execution of public works, provision of public services, and illnesses, such as child chronic malnutrition.

Analyzing the sanitation goals over the last 3 years, goal 11 was achieved. This goal assigns the creation of an ATM for the management of water and sanitation services. Also, goal 40 was achieved. It refers to the operation of the ATM for the management of water, sanitation and information collection services. In this context, the detailed activities included in goal 11 were: elaborate the Organization and Functions Statute (ROF) to create the ATM; develop the job profile for the ATM members; and open the record book for the registration of the JASS; Goal 40 involved technical assistance for the ATM members, as well as the record of the existing JASS (MEF, 2014).

In 2016, goal 42 was defined and stated that the ATM should be created, adapted or reactivated for the management of water and sanitation services. The actions to be carried out included: the formation of a commission to create, adapt or reactivate the ATM; training for the commission; creation of an ATM through the ROF; approval of the required profile; assignment of responsibilities; training for the application, processing and systematization of surveys, as well as planning and implementation (MEF, 2015).

Finally, by 2017, 3 goals were set, including: goal 35, in which the budget is allocated to the ATM for the operation and management of rural sanitation services; goal 41, which establishes the guidelines for the ATM to function; and goal 42 for creating, adapting or reactivating the ATM for the management of water and sanitation services (MEF, 2016).

Source: Ministry of Economics and Finance.

Where service delivery is provided by the municipality, the LG appoints the head of the SDU. In contrast, when there is a JASS responsible for the provision of water and sanitation services, the community members appoint the President of the communal organization and the remaining members.

The district municipality approves the budget of the SDU because its management and operation is the responsibility of the municipality. In this context, the staff establishment for the SDU is determined by the municipality as well. This is usually a municipal building. In the case of rural

areas, the budget of the JASS — where one exists — is formulated and approved by its members, independently of the municipality. Finally, the JASS establishment is a communal place adapted for its operations. However, it can also be determined by the corresponding LG in case it wants to support the JASS operations.

Regarding human resources with respect to WSS, the district municipality has control with respect to the SDU, as the staff are municipal workers. In contrast, in the case of the JASS, the municipality is not supposed to have control over the human resources. The members of the communal organization are elected by the community itself during their communal meetings.

Finally, the district municipality plans and manages the procurement of capital investments and infrastructure required for WSS. This is the case both when the service is delivered through the local SDU or through the JASS because the communal organization is not responsible for the capital investment, only for the operation of the systems. However, the JASS should plan and manage the purchase of the necessary inputs on its own.

With this distribution of local control between the district municipality and the JASS, some problems arise regarding service delivery. As rural areas do not typically have a large proportion of their population with a high-level education, it is difficult to find qualified people to fulfill the minimum requirements for an optimal operation of systems. Even when the district municipality provides technical assistance to the JASS members, there are not enough incentivizes — nor are rural populations sensitized —to improving results. This is in large part because they do not receive any type of payment, and because of their culture of low water usage.

Another problem is the lack of capital infrastructure. As infrastructure is a district municipality responsibility, financial resources for the increase in the level of coverage and the sustainability of these services is insufficient. Further, the political will to meet this need is low. This situation adds to an already difficult environment characterized by a lack of system maintenance and attendant increase for additional financial resources, and the low level of family fees. Thus, the Central Government must step in to provide financial and technical support to rural areas. In this regard, the presence of NGOs is also very important for service delivery improvements.

6.4. Assessing Local Control over Administration and Service Delivery

The analysis of the control of Local Governments over administration and service delivery shows that the management models in urban and rural areas are not working in the most efficient and sustainable manner. Both areas face several problems, such as unqualified personnel, inadequate commercial and financial management and political interference, among others.

The analysis reveals that the providers lack capabilities to ensure the efficient provision of water and sanitation services, especially in rural areas. To ameliorate this situation, OTASS is now working to support the EPS in urban areas in the utility turnaround. To achieve this, the EPS must become more empowered to strengthen the institutionalism, governability, the field of action and the sustainability of the services.

In the case of rural areas, the PIM provides incentives to LGs to facilitate the ATM's support to communal organizations. Although the program related to water and sanitation is only in its third year of operation, it has reached an important proportion of municipalities in rural areas. Its objective is to introduce more activities each year to improve the provision of the services.

In sum, several problems affect the provision of water and sanitation. At the same time, the Central Government, Local Governments and the providers are working together to improve the current situation. Although the road to sustainable provision is long, the main actors are working hard to reach sectoral goals.

7. LOCAL FISCAL AUTONOMY AND LOCAL FINANCIAL MANAGEMENT

This section considers the nature of fiscal decentralization and its relevance to water and sanitation provision. The analysis focusses on four pillars: decentralized expenditures, decentralized revenues, intergovernmental fiscal transfers and local borrowing. As the responsibility for WSS is devolved to Local Governments, attention will focus specifically on the LGs and service providers.

7.1. Overview of Local Fiscal Autonomy and Financial Management

In both urban and rural areas, there are two actors: the municipality (which is responsible for ensuring provision), as well as the EPS or JASS (the service "providers"). Their financial autonomy, how resources flow to them, and how resources flow between them determines a lot about the ability of the public sector to achieve effective performance in WSS.

A systemic imbalance in Peru is the assumption that WSS can be delivered by urban and rural providers on a cost-recovery basis. To the extent that this is *not* the case, implicitly or explicitly, there is at least an assumption that the costs for recurrent operations and maintenance are covered by water fees / tariffs. It means that higher-level government needs to step in to fund infrastructure development. This division of funding responsibilities has led to the repetitive build-neglect-rebuild paradigm that has characterized the provision of WSS in Peru.

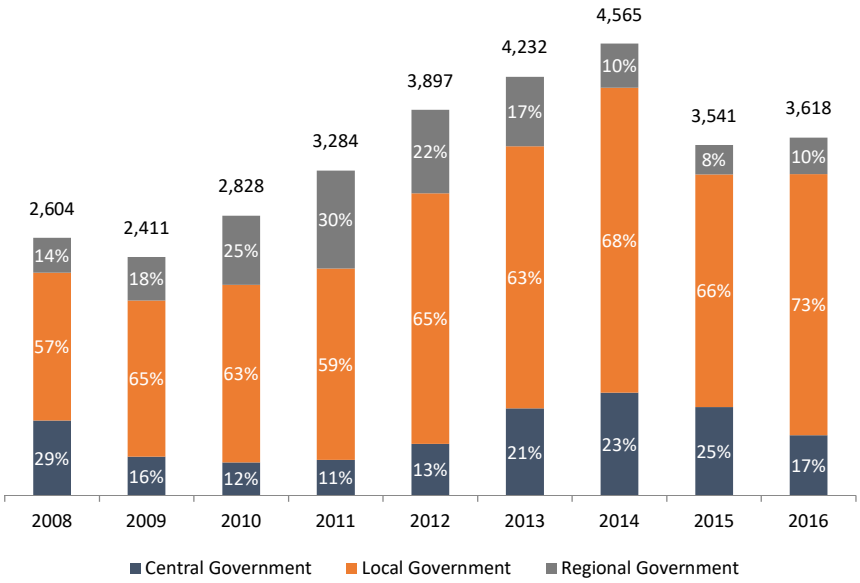
Even cost recovery of recurrent costs is clearly not possible in all local jurisdictions. To the extent that access to clean drinking water and sanitation is a right—even for those who cannot afford it—local water providers do not have a systematic way to cover these costs. This results in a vicious cycle of underfunding, poor services and neglect. This cycle needs to be broken and replaced with a virtuous cycle.

In this context, it is important to analyze the degree of local financial autonomy and the financial role of the Central Government. First, the composition of the total expenditures of the sanitation sector by level of government needs to be examined. Then the revenue sources need to be determined, specifically for local governments, as they are the government entity responsible for water and sanitation provision. However, it is not possible to distinguish the local government's expenditures between urban and rural areas because the data is not reported in sufficient detail[45]. The source of information for this section is the Portal of Economic Transparency of the MEF.

As shown in figure 7, since 2011, the total expenditures in the sanitation sector were greater than S/ 3,000 million (US$ 1,000 million equivalent), and its maximum level was reached in 2014. For the last year available, namely 2016, this expenditure represented 3 percent of total expenditures in the country. Regarding the participation of each level of government, historically LGs have incurred the greater proportion of total sanitation expenditures. It is important to note that until 2012, though, the Regional Governments were more important than the Central Government with respect to the percentage of total spending. However, this trend has changed since then. As expected, Local Governments are the main financial entity contributing to the sector.

[45] Even when they can be identified, the expenditures in provincial and district municipalities are not disaggregated by urban and/or rural areas. Therefore, it is not clear that all the provincial expenditures are allocated exclusively to urban areas because they can execute projects and programs in rural areas as well. District expenditures are done exclusively in rural areas, and district municipalities have different levels of urbanization.

Figure 7. Evolution of Sanitation Expenditures, 2008-2016, by level of government (millions of Soles)



Source: Portal of Economic Transparency of the Ministry of Economics and Finance.

To the extent that the expenditures of a specific level of government can be self-funded or funded by a higher level of government, it is important to analyze the structure of public revenues. There are five different types of sources reported in the Portal of Economic Transparency, including: ordinary resources[46], directly-collected resources[47], official credit operation resources[48], donations and transfers[49], and determined resources[50] (more detail in the Annex 10).

Looking at total local expenditures, and taking into account all functions, the most important source for the whole of LG spending is 'determined resources', which represented 60 percent of total sources in 2016. At the same time this source includes the Municipal Compensation Fund (36 percent), Municipal Taxes (21 percent) and Canon and others (43 percent). 'Ordinary resources' and 'directly-collected resources' accounted for 13 percent each.

Regarding the sanitation sector, LGs both at the provincial and district levels have a different spending structure then the one previously described. Also, in this case, it is important to examine more closely the budgeting structure of the sector, specifically the changes between the first and final approved budgets in order to understand the real role of each level of government. First, analyzing the spending structure of the year 2016, 46 percent of the spending in water and sanitation services by LGs (1,213 million Soles - US$ 360 million equivalent) came from 'ordinary resources', mainly as earmarked grants. The next largest source of funding for services was 'determined resources', comprising 33 percent of the total (865 million Soles - US$ 255 million equivalent).

To the extent that the water tariffs structure is insufficient to cover all the functions and responsibilities of the providers, it is important to analyze capital infrastructure expenditures. In

[46] Mainly include the revenue from tax collection.
[47] Include the revenues generated by the Public Entities and managed directly by them.
[48] Include the internal and external sources of funds from credit operations carried out by the State.
[49] Include the non-reimbursable financial funds received.
[50] Mainly include the Municipal Compensation Fund, municipal taxes, and canon

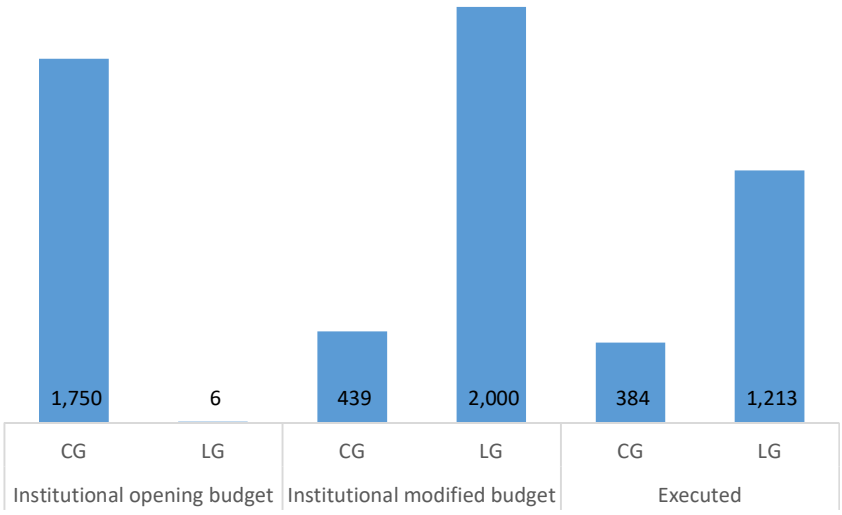
the Portal of Economic Transparency, capital investment resources can be identified as the 'acquisition of non-financial assets' under the "expenditure structure" field. This concept represented 98 percent of total expenditures of LGs in 2016, which means that almost all the spending resources are assigned to increase capital infrastructure. All 'ordinary resources' of LGs for the sanitation sector from the CG are used for investment, and represent 47 percent of all funding sources. This arrangement seems to suggest that LGs are giving too little importance to the allocation of resources for the operation and maintenance of the systems they manage — as well as for the technical assistance and monitoring activities they are supposed to provide.

Although this structure is clear, the detail of the original budget for 'ordinary resources' must be analyzed. In the Institutional Opening Budget, the assignment of this category to LGs is very little. However, the CG, represented by MVCS, has a larger share of the resources, as shown in figure 8 (1,750 million Soles for CG and 6 million Soles for LGs - US$ 520 million and 1.8 million equivalent, respectively).

Subsequently, the budget is modified as a consequence of general budgetary modifications by the MEF, and as a result of direct transfers from the Ministries to LGs or RGs. In other words, each ministry receives additional demands of resources from lower-level governments for the execution of activities, projects and programs. Thus, the Institutional Modified Budget for the CG is much smaller with respect to the opening budget; the inverse is the case for LGs.

This general overview of the structure of municipal spending and the source of finance is very important in identifying the role of each level of government. Regarding the expenditures in the water and sanitation sector, LGs are the entities that spend the highest proportion of the total. However, looking at the initial assignment of the budget, the CG plays a very important role, given its high level of transfers.

Figure 8. Ordinary Resources assigned in the Opening and Final Budget, by level of government (millions of Soles)



Source: Portal of Economic Transparency of the Ministry of Economics and Finance.
Note: CG=Central Government; LG=Local Government.

7.2. Local Fiscal Autonomy and Financial Management for Local WSS in Urban Areas

To the extent that LGs have functional responsibilities for WSS, their local fiscal autonomy must be briefly analyzed. It is important to note that LGs have the autonomy to decide and define how they generate income. As such, they can specify user fees, adopt new local revenue

instruments, or modify the existing instruments at any time of the year, under any circumstance, and for any reason. In the same way, LGs can set the tax rate for all local revenue instruments. However, as noted, directly-collected resources only represented 13 percent of total expenditures of LGs in the WSS sector.

Regarding urban providers, the EPS have different degrees of fiscal autonomy and local financial management. They are so heterogeneous that while some have enough revenues for the operations, maintenance and investment, others do not even have the minimum level of income for the optimal operation of utilities. As shown in table 11, only SEDAPAL has positive operating profits with respect to the level of income, whereas the averages of the other types of EPS are all negative. Individually, there are 22 EPSs that have operating profits greater than zero.

Table 11. Operational Profits 2014, by type of EPS

TYPE OF EPS	OPERATING PROFITS (%)
SEDAPAL	20
Big EPS	-7
Medium EPS	-6
Small EPS	-1
Total	11
Total without SEDAPAL	-7

Source: SUNASS (2015).
Note: EPS= Sanitation Services Provider Entity; SEDAPAL= Lima Water and Sewerage Services.

Regarding the tariff system, the SUNASS establishes a formula for estimating tariff rates that takes into account full-cost recovery and allows for periodical increases. According to the PMO and tariff studies, these are allocated to pay for new investments in capital infrastructure and for operations and maintenance. However, this arrangement does not cover operating costs for more than half of the urban providers. A possible explanation for these results is that the tariffs, even though theoretically well estimated to cover all expenditures, are not applied optimally, or are not fully applied because of the unwillingness of the population to pay — or because of political interference. However, there have been no attempts in Peru to switch to alternative payment arrangements, such as pre-paid water meters. One hypothesis for the lack of alternative tariff systems is that there is not enough technical capacity to measure the real consumption in each household and then cut service delivery according to the payment.

SUNASS and OTASS are the main entities that monitor the performance of the EPS. SUNASS frequently visits the providers to: study the quality of water treatment; to oversee the condition of the infrastructure; and to analyze the tariff implementation strategy, among other related activities. This entity also ask and manage the remittance of information about their main outputs for monitoring the PMO objectives. In this regard, financial statements are remitted every year as a requirement of the SUNASS, along with other management indicators under a sworn declaration — although it's content could be of doubtful quality in some cases. However, each entity can apply any short-term tools to their management procedures.

OTASS also oversees the management of sanitation services and evaluates them to determine if they may be included in the RAT scheme. In addition, with its governance and governability ranking, OTASS promotes the fulfillment of different types of requirements to improve its position in the ranking.

Regarding the annual budgetary process, the EPS develops its own budgets. However, in some cases, it is not done on the basis of a strategic plan. As such, it is not orderly or participatory. It

includes recurrent spending, such as capital infrastructure and debt. Unfortunately, the providers' budget and expenditure levels cannot be identified in the Portal of Economic Transparency.

Concerning the capital budget for urban providers, in practice, it is not always a good practice to increase the level of coverage under their scope because it is too expensive. Currently, the areas that are not yet provided for are located far from the main conglomerates, so the unit cost is very high. Thus, some providers simply wait for the CG or the LG to finance the facilities needed to avoid high expenditures.

With respect to access to borrowing, in theory, all EPS have access to borrowing from financial institutions, but with some restrictions. SEDAPAL is the only provider that can borrow from an international institution because it is part of the Central Government and has its support. The EPS can also occur liabilities by national borrowing, but only for a maximum of one year. It can borrow for more than one year, but only with the MEF's approval[51]. However, in practice, only SEDAPAL can access medium- or long-term loans because of the sustainability of its revenues and CG support. The rest of the EPS have little access to loans because few financial institutions will take the risk of lending money to an entity whose profits are negative. In contrast, LGs have more access to borrowing for the construction of water infrastructure as financial institutions know that LGs will receive revenues from the canon mining concept.

In addition, as is the case of LGs, the EPS receive transfers from the CG to support their investment in capital infrastructure. They are supported by the PNSU with financial transfers, technical assistance and sensitization interventions for the population. It is uncommon for the CG to make financial transfers toward the operations of the facilities, with the majority of funding going to maintenance and capital infrastructure. The support is usually given on the condition that the financial resources have to be spent on the agreed project, and that the formulation and execution of the project should be of high quality.

Also, the CG does not transfer resources as a direct subsidy for the tariff as a pro-poor intervention. The social interventions related to the tariff are applied by the EPS with differentiated pricing strategies (commercial, particular and social tariffs) as a result of a cross subsidy scheme where commercial bodies pay the highest fee to subsidize the social fee for the poorest population.

Finally, there are no formula-based transfers to the EPS being done in a complete and timely manner. The transfers are achieved because the CG has a particular interest in improving the social welfare of a particular community or group of communities. For example, in the case of the Amazon area, which has very low coverage and quality of water and sanitation services. It could also involve a case in which the CG wants to reduce social problems, such as with the operation of a mining corporation. Another way to achieve a transfer is by a direct request of the EPS, or the LG to the CG. In any case, the amount of the transfer depends on the type and size of the project or program to be developed, as well as on the agreements regarding the proportion of the transfers that the CG will assume. A summary of these section is presented in Annex 11.

7.3. Local Fiscal Autonomy and Financial Management for Local WSS in Rural Areas

In rural areas, district municipalities have almost the same fiscal autonomy and financial management as that described in urban areas. As noted, they are free to define their own local revenue instruments and have the right to set the tax base or tax rate for all local revenue instruments.

[51] Regional Governments cannot provide any guarantee for the EPS.

With respect to the providers, the common characteristics of communal organizations for the provision of water and sanitation services in rural areas include the lack of a formal budgetary process, informal finance and an inadequate fee collection system. The JASS rarely has a formal budgetary process and when one exists, it is basic and not orderly or participatory. In the latter case, even when they know what their expenditures are, because they are accountable to the community members, it is difficult to prove if the expenditure is consistent with the budget because it is not an important management tool for them. As such, financial statements do not exist. The very few exceptions involve cases where NGO presence is high.

In the case that there is a SDU in the municipality, its budgetary process is part of the general budget of the LG, so it is orderly and participatory. The SDU does not have financial statements of its own; rather, these are part of the LG.

Regarding the tariff system, the JASS applies a family fee that is established by the community members. The determination of the fee does not follow any technical or economic criteria, other than the willingness of the community members to pay. Castillo (2016), in a study of three Peruvian JASS, found family fees to be between 1 Sol and 9 Soles[52]. Thus, the JASS effectively and equitably collects water and sanitation user fees because in rural communities there is a high degree of communal enforcement and accountability regarding their internal statutes. In contrast, in small cities, the SDU of the municipality establishes a fixed fee as well. However, the collection is not as effective as in the JASS case because it has a municipal intervention and is not the result of a communal agreement. When revenues are insufficient to cover service delivery, the municipality assumes responsibility.

The JASS do not have access to borrowing from financial institutions. Instead, they have access to informal agents. Meanwhile, in small cities, if the SDU needs more financial resources, it asks the authorities for an increment of funds. The request will then be evaluated by the authorities. However, by itself, as a municipal unit, it cannot access financial institutions — although the district municipality does have access to borrowing.

Regarding the transfers from the CG to support water and sanitation services in rural areas, the facts show that the LG is the entity that receives these financial resources to execute projects. Therefore, neither the JASS nor the SDU receive it directly because they are not considered to be “natural” or “legal persons”.

As the transfers are done to increase capital infrastructure in rural areas, LGs should not pass these resources to the JASS because they are only responsible for the operation and maintenance of the systems, and not the execution of investments. In theory, the CG provides conditional transfers to the LGs, such as for the sensitization campaigns, maintenance, among others; however, in practice these commitments are not always accomplished. In other cases, the CG directly invests in rural areas without a previous transfer. A summary of these section is presented in Annex 12.

7.4. Assessing Local Fiscal Autonomy and Financial Management

The assessment of local expenditure management for decentralized water and sanitation expenditures and intergovernmental fiscal arrangements reveals that Local Governments spend the most in this sector. They are also the main focus with regard to capital investment. However, the main source of funding is the Central Government and the canon mining concept.

Furthermore, in urban areas, the tariff system determination improved during the last decade. In the past, the tariffs were settled at discretion, but now they are supported by economic justification. However, there is a problem regarding the effectiveness of the collection of such

[52] Equivalent to US$ 0.37 and US$ 3.5 at the exchange rate during the time of this research.

fees. In recent years, there have been a variety of efforts to increase the amount of invoiced water and micro metering. Yet, in most cases, they have not been enough to improve operating profits.

In contrast, rural areas need a deep reform of the family fees scheme because they have collapsed. Although, in most cases, the collection fees are effective and equitable, revenues are insufficient for the operation and maintenance of water and sanitation services. In addition, the infrastructure is falling into steadily worse condition.

In both cases, for provincial and district municipalities, there is a high degree of dependence on CG transfers with respect to capital infrastructure. This is a consequence of a tariff system that does not work, and that does not reflect the real consumption of households. Thus, an important question becomes: how the country can achieve universal access if it has inadequate user fees, and no systematic way to provide grant funding for operations, maintenance and capital. Therefore, it is critical to introduce institutional reforms so that the providers can improve and expand water and sanitation service provision.

8. LOCAL PARTICIPATION AND ACCOUNTABILITY

This section considers whether appropriate local participation and accountability mechanisms are in place for water and sanitation services to be delivered in an inclusive and responsive manner. This is relevant as it raises the expectation that the social priorities expressed from the population ought to be honored in the local planning and budget prioritization processes. This discussion takes into account not only the existence of participation and accountability mechanisms, but also whether they are effectively used.

8.1. Overview of Local Participation and Accountability for Local WSS

Citizen participation is understood as the right and opportunity, individual or collective, that citizens have to show their interests and demands (JNE 2008). The Constitution of Peru of 1993 recognizes the rights of citizens to participate and control public affairs of the State through different types of mechanisms (Article 31). Along this line, there are several instruments to execute these rights in different areas of the democratic system.

The Constitution establishes the following mechanisms for citizen participation: an initiative for constitutional reform; an initiative in the elaboration of laws; a referendum; an initiative in the elaboration of regional and municipal ordinances, among others and as determined by law. Regarding the control of public affairs, it establishes the recall and removal of the authorities and the demand for accountability, among other control mechanisms as established by law. Furthermore, there are other types of instruments to boost local participation and control, such as prior consultation, a participatory budget, access to public information, regional/local coordination councils, roundtables for combating poverty and regional/provincial/local concerted development plans. (JNE 2008; PCM 2014).

Regarding WSS sector planning, local participation, and demand for accountability, the corresponding mechanisms are not functioning in the most optimal way. The CG is responsible for the national planning and attendant goal setting for the water and sanitation sector. The instruments that have been used include the National Sanitation Plan (2006-2015), which considered the Millennium Development Goals (MDGs) and the Multiannual Sectorial Strategic Plan (2015-2021). However, beyond the long- term vision of having universal coverage (including the MDG and goals), the sector has not established medium- or short-term goals to be accomplished at any level of government, not even at the central level[53]. Thus, without articulated goals, the accountability becomes more complicated.

In addition, the RG has exclusive power over the elaboration of the Regional Development Plan, which is in line with the national plans. This is supposed to be integral, as it sets a performance framework that the LGs must follow and apply in their jurisdictions along with their own local development plans. Even when the regional planning is done, it is only a check in their large checklist of planning instruments required by law and, as the CGR (2016) notes, the plans are not updated. At the local level, in the majority of cases they are also not applied. Thus, there is no local performance framework in place, or being applied for water and sanitation services. The participatory instrument that has to be applied by law is the participatory budget, explained in box 9.

[53] The National Sanitation Plan 2006-2015 established the coverage and management goals for that period. However, there are no medium-term goals established at any level of government.

Box 9. Participatory Budget

Provincial municipalities are the elected body responsible for ensuring the provision of water and sanitation services. Therefore, they have to answer to the demands and requests of the population. The participatory budget process involves the citizens of the community, with the objective of expressing the main needs that the municipality will then seek to meet in the next fiscal year. With this participatory procedure, following the guidelines of the MEF for its elaboration, together they elaborate a sectoral plan. It is important to note that almost all budget allocations have to be sustained through these mechanisms. Subsequently, the vigilance committee has to oversee the execution and results of the participatory budget.

The MEF defines the main objectives of the participatory budget to include: (i) using mechanisms of transparency and citizen oversight; (ii) modernizing and democratizing public management; (iii) strengthening democratic governance in Peru; (iv) building social capital; and (v) promoting citizen participation in public planning and management. Likewise, due to citizen participation, projects can be prioritized according to the local reality. This helps to improve the relationship with citizens. It also adds a new monitoring mechanism when introducing the issue to the local public agenda.

Source: Institutional website of the MEF.

8.2. Local Participation and Accountability for Local WSS in Urban Areas

Provincial municipalities are the elected body responsible for ensuring the provision of water and sanitation services, and are answerable to the population. The main mechanisms used to promote local participation are the development plan and the participatory budget. However, the instruments for monitoring and accountability of those mechanisms do not always work.

With respect to the providers in urban areas, SUNASS is responsible for monitoring the performance of the EPS. Through the Supervision and Inspection Management Unit, it is responsible for enforcing the commitments made by the EPS in relation to the provision of water and sanitation services. In this sense, it must ensure that the services are provided within the established quality and tariff ranges. It also carries out quality control of the water provided to the population, as well as the supervision of other obligations assumed by the EPS. The provincial municipality, in practice, rarely exercises activities to monitor the providers. Currently, OTASS also has a monitoring role in relation to the service management and accountability, with the introduction of a ranking of governability and governance mentioned in Section 6.

Furthermore, the EPS does not have its own participatory planning, nor social accountability requirement. Rather, it has its own internal oversight mechanisms. Each EPS should have its own tools to monitor the quality of water and other outputs as established by the SUNASS. In some cases, they do not exist or are not used in the most efficient way. However, there is no interaction between the EPS and citizens with respect to the planning tools or accountability. It is the municipality that interacts with the community in the preparation of the Local Participatory Budget. However, with this instrument, water and sanitation projects and programs are included according to the results that the community seeks, as well as the prioritization process of the different areas of intervention.

The EPS has mechanisms in place to receive and resolve complaints about services, but it is entirely the responsibility of the EPS. The CG, through the SUNASS or OTASS, does not receive or resolve complaints. The SUNASS only monitors the degree of attention to and resolution of complaints. However, the existence of problem-solving mechanisms does not mean that they are being used in an effective way, or that solutions are implemented to improve service delivery. A summary of these section is presented in Annex 13.

8.3. Local Participation and Accountability for Local WSS in Rural Areas

District municipalities are responsible for the optimal provision of services in rural areas. However, there is no local performance framework in place and being applied to the sector. Even when they must apply national strategies, such as those of the PNSR or the PIM, local mayors do not set goals for the improvement of service delivery with respect to the degree of access or management results.

Furthermore, no independent entity is responsible for the monitoring of communal associations. It is the district municipality that conducts oversight of activities, but this is rarely done. This is why, for example, the quality of water provided by the JASS in rural areas is so poor, as mentioned in section 2. However, rural populations sometimes have an important role in the monitoring of performance. In theory, the municipalities and the PNSR should monitor the performance where they have a presence, but this is not always done and is not significant.

As noted, local budgets and finances are managed in a participatory and transparent manner through the participatory budget, including for water and sanitation services. This is done even though the JASS does not have a planning process. What it does have is social accountability, because in rural areas the communities are very organized and accountable to their own members. As such, the JASS is included in the agenda of the frequent communal meetings that take place every month. For example, they may called upon to explain what they have been doing with the collection of the fees.

In contrast, in small cities, the SDU does not have its own participatory planning or social accountability requirement because this falls under the responsibility of the municipality. Finally, in general, apart from the direct interaction between the JASS and community members, there is no central or local mechanism in place to receive and resolve complaints about water and sanitation services in rural areas. A summary of these section is presented in Annex 14.

8.4. Assessing Local Participation and Accountability Mechanisms

National planning and the setting of goals are some of the first steps to guide the public investments and activities of a country. They provide clear objectives that each entity must follow. However, the analysis of this section shows that there is also an important need to set medium- and short-term goals at each level of government in Peru. These goals should be attached to the accomplishment of national strategies. Without a clear definition of objectives, beyond the allocated budgetary spending, each entity is going their own way. As such, this will not necessarily lead to the accomplishment of a coherent social and economic development vision.

The actual state of local participation and accountability mechanisms shows that, whether effective or not, there is a monitoring and complaints system in urban areas. However, rural areas have been neglected and do not have any tools for monitoring and accountability, besides community engagement. Different tools to empower urban and rural providers need to be established. The population also needs to be empowered to monitor provider outputs.

9. THE VERTICAL COMPOSITION OF WATER AND SANITATION EXPENDITURES

This section seeks an answer to the following question: How much does the public sector spend on water and sanitation services and how is this spending financed? A specific methodology will be developed to focus exclusively on spending by public sector entities at all levels of government. The aim is to illustrate how much each entity spends, as well as the original allocation of the budget.

9.1. Overview of Water and Sanitation Expenditures

The overview of vertical expenditures for water and sanitation services focuses exclusively on expenditures and revenues of public sector entities at all levels of government. As such, it excludes private sector spending on water and sanitation by households because these expenditures are not included in the accounts of public sector entities.

The source of the following information is the Portal of Economic Transparency of the Ministry of Economics and Finance[54] for the year 2015. In spite of the availability of data of the budget for the year 2016, it is not included in the profile because it is still being updated. Therefore, in order to ensure the use of accurate data, the vertical expenditure profile is done on the basis of budget execution information for the year 2015.

The Portal allows for the classification of public expenditures in different ways, such as by level of government, function, category, generic structure, allocation and type of funding. For the construction of the profile, the starting point was the sanitation function, and then a classification by level of government. At the end the search field, the 'generic structure' of expenditures was utilized.

The composition of the profile is divided into four categories defined as follows, according to the Portal:

- *Personnel expenditures and social obligations:*
  Expenses toward the payment of permanent staff in the public sector, and other benefits for the effective exercise of the position and confidence function— with an understanding of the employer's responsibility obligations.
- *Goods and services:*
  Expenses toward the acquisition of goods for the institutional operation and fulfillment of functions, as well as for the payments for services provided by natural persons or legal persons.
- *Acquisition of non-financial assets (Capital):*
  Expenses toward investments in the acquisition of capital that increase the assets of institutions in the public sector. This includes additions and improvements to capital production capacity and studies of investment projects.
- *Other:*
  Includes pensions, other social benefits and other expenditures.

Central expenditures (Row C) shows the expenditures that are strictly central in nature and that have no direct impact of front-line service delivery. The relevant entities of the CG included are the MVCS (general administration), SUNASS, OTASS and the Justice Ministry. Together, they spent 37 million Soles (US$ 11.6 million equivalent) in 2015, primarily on goods and services (54 percent) and personnel (38 percent).

[54] Data obtained from the following website:
http://apps5.mineco.gob.pe/transparencia/Navegador/default.aspx?y=2015&ap=ActProy.

Direct and delegated expenditures (Row D) considers the CG expenditures that directly support front-line delivery services. Following this definition, the PNSR and PNSU were included in this level. The total expenditures of both programs were 251 million Soles (US$ 79 million equivalent) in 2015. The PNSR participated with 73 percent, and the PNSU with 27 percent. Finally, the main category of expenditure was capital infrastructure (67 percent). As part of the methodology of the case study, intergovernmental transfers from the MVCS will be counted at the local level where the final expenditures are actually made.

The RG is the level that has the least amount of expenditures in the sector. Almost all its budget expenditure was related to capital infrastructure (97 percent).

The LGs are the main actors in this profile and case study. Together, they show the highest level of financial resources assigned to the water and sanitation sector, spending a total of 2,959 million Soles (US$ 930 million equivalent). Almost all resources were spent in the capital category (99 percent). It is important to note that CG transfers through the PNSR and PNSU to LGs were a critical source of financing, with a total of 600 million Soles (US$ 188 million equivalent) (or 21 percent of all LG's capital expenditures)[55].

In general, between the three levels of government, 3,540 million Soles (US$ 1,110 million equivalent) were spent in 2015 for water and sanitation services. The financial resources were mostly allocated to capital (95 percent). This distribution shows that operations and maintenance are not an important proportion of total expenditures. These allocations confirm that the focus of the sector is in increasing access to services, whereas other aspects are not given proper consideration.

Data for WSS providers is only available for urban providers. There is no available data for the expenditures of the JASS in rural areas because there is no record of their expenditures, and no entity compiles the necessary information or monitors them. The expenditures of the EPS can be divided into two categories: operating costs funded by fees collection, and capital infrastructure subsidized by LGs or the CG. The expenditure profile only includes operating costs to avoid double-counting. Thus, in 2015, the EPSs spent 1,844 million Soles (US$ 580 million equivalent), of which 61 percent were spent by SEDAPAL.

Table 12. Vertical Expenditure Profile of Water and Sanitation Services, 2015 (millions of Soles)

	LEVEL OF GOVERNMENT	PERSONNEL	G&S	CAPITAL	OTHER	TOTAL
C	Central Expenditures	14.1	19.8	2.5	0.6	37
D	Direct and Delegated Expenditures	1.9	81.3	167.6	0.3	251
1	Regional Government	0.9	6.0	287.1	0.0	297
2	Local Government	6.8	34.2	2,917.7	0.5	2,959
	Sub-Total	**23.6**	**141.3**	**3,374.8**	**1.4**	**3,541**
S	SEDAPAL					1,131
P	WSS Urban Provider Expenditures					713
	TOTAL EXPENDITURES					**5,385**

Source: Portal of Economic Transparency of the Ministry of Economics and Finance and SUNASS.

[55] It was assumed that the total amount of intergovernmental transfers was allocated to capital expenditures of the LG because there is no detail about the allocation. It is not possible to distinguish between transfers to the LG and the EPS. However, it is assumed that all was given to LGs, as it usually is. Intergovernmental transfers were registered only at the LG level, and were subtracted from the CG expenditures to avoid double-counting.

Note: G&S=Goods and services; SEDAPAL= Lima Water and Sewerage Services; WSS= water supply and sanitation.
The information in line P corresponds to 48 providers, as the remaining providers do not report their financial statements.

9.2. Assessment of the Vertical Composition of Water and Sanitation Expenditures

As Peru is a decentralized country, it is expected that the greater proportion of total expenditures is spent by subnational governments, especially by local governments as they are primarily responsible for the provision of services. In this regard, LGs spent 55 percent of the expenditures, according to the methodology presented in the last section, followed by SEDAPAL — the provider for Metropolitan Lima — with 21 percent of total expenditures. However, it must be remembered that a proportion of LG expenditures is made with direct transfers by the PNSR and PNSU, and that its main funding sources were 'ordinary resources' (mainly the CGs earmarked grants) and 'determined resources' (mainly from the canon mining concept), as detailed in section 7.

The results reveal that almost all the budget expenditures of the three levels of government are allocated to capital infrastructure. This is a good sign of efforts made to increase access to water and sanitation services. However, it is also confirms the lack of importance that LGs give to recurrent expenditures. In addition, it reveals that they are not fully fulfilling with their function of acting as a direct provider because the EPS does not cover all of the urban population —and because it also has to be the provider in some rural areas. Further, they have an important role regarding technical assistance and monitoring, aspects that require greater consideration in the expenditures profile if sector development is to progress, and the SDG 6 is to be attained.

10. CONCLUSIONS

The objective of this report is to provide an in-depth analysis of the role and impact of decentralization and decentralized governance structures in the delivery of WSS services in Peru. This country study on decentralization seeks to present the sector trends and institutional context for WSS services. It identifies the main underlying constraints that lead to weak service delivery outcomes.

Peru is a country where millions of people lack access to water and sanitation services. It is very far from reaching the sustainable management of these services. Only 86 percent of households have access to water services and 78 percent to sanitation services. Furthermore, other outputs that reflect problems are the continuity, quality of water and level of treatment of wastewater. On average, urban households only have 19 hours of water per day, and 35 percent of urban localities did not have a wastewater treatment facility. Regarding the level of chlorine, 33 percent of water meets the quality requirements in urban areas, whereas only 1.5 percent does in rural areas. These and other outputs of the WSS sector reveal a huge problem that is affecting the health of the population, especially in rural areas.

Several sector reform efforts have been made in Peru under various governments that could improve some indicators, particularly in terms of increased access to services. The period that stands out for rapid improvement in WSS was from 2010-2015, when the national average of access to water increased 9 percentage points in urban areas and 24 percentage points in rural areas. The sector improvement during this period corresponds to a national strategy of social inclusion that prioritized access to water and sanitation services by the poor. However, other types of indicators related to the sustainability of water remain a concern.

The analysis of the WSS sector in Peru under the decentralization framework shows that there are several constraints that contribute to the inefficient, inequitable and unsustainable access to services. The provision of these services is the responsibility of Local Governments that constitute EPSs for the respective service providers in urban areas. In practice, the professionalization of the EPSs is underway. Originally, the devolved structure did not take into account the real capabilities of LGs to manage water and sanitation provision. In general, the providers face institutional problems, political interference and pressure, corruption, lack of qualified staff, insufficient financial resources, inadequate management, commercial and fees collection problems, weak monitoring and inspection, and limited private participation.

In rural areas, the water and sanitation services situation is at its worst. The service delivery is the responsibility of the district municipalities, and the services are usually managed by the community through a JASS. The communal organization is comprised of the citizens of the village, who usually lack a high-level education, live in conditions of poverty, and whose main activity is agriculture. Furthermore, the fee is fixed on the basis of the community members' willingness to pay. Therefore, in most cases, it does not even cover operating costs.

This poor performance arrangement is related to the institutional structure. Poor, rural local communities cannot afford to pay for these services. The weak institutional nature of JASS added to the problem because of the lack of well-trained personnel, no payments made to the members of the JASS, inadequate management, a lack of financial resources and very little support from local authorities. This led to an unsustainable management model in rural areas that is reflected in the corresponding water and sanitation outputs.

As both types of management models are inadequate, the Central Government plays a very important role in the provision of the services. Its participation is mainly through the financing of capital infrastructure and reposition of inoperative facilities. The latter is a consequence of the lack of system maintenance at the provincial and district levels, as well as the lack of technical assistance to the JASS. Although the LGs are the level of government that allocates the

greatest proportion of total expenditures, its funding sources consist mainly of CG grants and resources from the canon mining concept.

In recent years, SUNASS and OTASS have been implementing reforms for the improvement of monitoring, as well as the modernization of the management structure. However, the technical assistance given thorough the PNSR to providers in rural areas is still insufficient for sector development.

Therefore, it becomes difficult for the country to move forward with the SDG 6 under the current decentralized scheme, which has been operating for almost 20 years. Although there have been important improvements in the level of coverage, “more of the same” will not produce better outcomes. This should be enough incentive for the CG, as the governing body, to change the paradigm of the interventions. It requires a reengineering process that goes well beyond financial support for capital infrastructure.

Strengthening administration in urban areas and a stronger role for the municipalities in rural WSS provision seems to be necessary to reach sustainability in water and sanitation provision. Currently, an important and integral water reform has begun under new authorities of the CG. This reform includes both some of the key measures mentioned and other important changes. However, implementation is still in progress.

11. REFERENCES

Bonifaz, J. L., and G. Aragon. 2008. *Sobrecostos por la falta de infraestructura en agua potable: una aproximación empírica.* Lima : Centro de Investigación de la Universidad del Pacífico.

Calderón, J. 2004. *Agua y saneamiento: el caso del perú rural* . Lima: ITDG - Oficina Regional para América Latina.

Castillo, O. 2016. *Los modelos de gestión comunitaria del agua y saneamiento en Latinoamérica y el Caribe: ventajas, límites y oportunidades* . Santiago de Chile: Universidad Autónoma de Chile.

Contraloría General de la República 2016 (a). *Efectividad de la inversión pública a nivel regional y local durante el período 2009-2014.* Lima : CGR and Cooperación Alemana GIZ.

Contraloría General de la República 2016 (b). Contraloría detectó presunto perjuicio económico por más de S/. 91 millones en Planta de Tratamiento de Agua de Huachipa y Ramal Norte. Nota de prensa N° 81-2016-CG/COM

Contraloría General de la República. 2014. *Estudio del proceso de descentralización en el Perú.* Lima.

Dianderas, A., F. Laca, I. Marmanillo, and C. Tapia. 2016. *Informe sobre la situación actual y perspectivas de desarrollo del sector agua y saneamiento en Perú.* Washington: Banco Mundial.

Equilibrium 2010. *Informe de clasificación de SEDAPAL*. Lima: Equilibrium clasificadora de riesgo

INEI. 2015. *Directorio Nacional de Muninicipalidades Provinciales, Distritales y Centros Poblados.* Lima.

Jurado Nacional de elecciones. 2008. *Guía de participación ciudadana en el Perú.* Lima: Dirección Nacional de Educación y Educación Cívica Ciudadana.

Martinez-Vasquez, J. 2013. *Fiscal descentralization in Peru: A perspective on recent developments and future challenges.* Atlanta: International Center for Public Policy. Andrew Young School of Policy Studies of Georgia State University.

MEF. (2016). *Instructivo Meta 41.* Lima.

_____. 2015. *Instructivo Meta 42*. Lima.

Ministerio de Vivienda, Construcción y Saneamiento. 2014. *Estrategia de comunicación y educación sanitaria para la promoción de la valoración del servicio, buen uso y prácticas saludables y de higiene familiar.* Lima : PNSR.

MVCS. 2014. *Plan Nacional de Inversiones del Sector Saneamiento para el periodo 2014-2021.* Lima.

_____. 2006. *Plan Nacional de Saneamiento 2006-2015 "Agua es Vida".* Lima: Dirección Nacional de Saneamiento, MVCS.

Oblitas de Ruiz, L. 2010. *Servicios de agua potable y saneamiento del Perú: beneficios y potenciales determinantes de éxito.* Santiago de Chile: CEPAL.

OTASS. 2016. *Informe final de resultados de evaluación de EPS 2015. Período 2012-2014.* Lima: MVCS.

_____. 2015. *Resultados del ranking de Gobernabilidad y Gobernanza 2014.* Lima.

Presidencia del Consejo de Ministros. 2014. *Participación ciudadana y rendición de cuentas.* Lima: Programa de fortalecimiento de capacidades en materia de Gobierno Abierto dirigido a gobiernos regionales y locales.

SUNASS. 2016. *Diagnóstico de las Plantas de Tratamiento de Aguas Residuales en el ámbito de operación de las Entidades Prestadoras de Servicios de Saneamiento.* Lima.

_____. 2015. *Benchmarking regulatorio de las EPS 2014.* Lima.

_____. 2014. *Reporte de los indicadores de gestión de las EPS a diciembre de 2014.* Lima.

Von Hesse, M., and C. Zavaleta. 2016. *Propuesta de bases para una política nacional de saneamiento: logros, experiencias compartidas y diálogo de política.* Lima: Ministerio de Vivienda, Construcción y Saneamiento.

12. ANNEXES

Annex 1. Socio-economic Indicators, 2015, by region

Region	Population	GDP per capita (Soles)	Percentage of population with at least one UBN
Amazonas	422,629	9,169	37.2
Ancash	1,148,634	16,293	18.2
Apurímac	458,830	7,728	13.9
Arequipa	1,287,205	22,435	11.3
Ayacucho	688,657	9,960	24.9
Cajamarca	1,529,755	9,376	25.0
Cusco	1,316,729	15,981	15.9
Huancavelica	494,963	8,531	27.5
Huánuco	860,537	7,924	26.1
Ica	787,170	24,623	12.5
Junín	1,350,783	12,173	26.9
La Libertad	1,859,640	14,580	14.7
Lambayeque	1,260,650	11,221	15.4
Lima	10,848,566	25,693	9.2
Loreto	1,039,372	9,379	58.7
Madre de Dios	137,316	22,924	30.6
Moquegua	180,477	39,987	10.6
Pasco	304,158	17,198	44.2
Piura	1,844,129	13,122	25.5
Puno	1,415,608	8,713	30.2
San Martín	840,790	8,711	41.7
Tacna	341,838	18,801	10.6
Tumbes	237,685	13,100	26.8
Ucayali	495,522	10,866	47.4

Source: INEI.
Note: GDP= gross domestic product; UBN=Unsatisfied Basic Needs.

Annex 2. Organizational / Governance Structure of the Public Sector

	RG	LG
Main features of subnational / local entities		
1. Are local entities corporate bodies?	Yes	Yes
2. Do local entities have their own political leadership?	Yes	Yes
3. Do local entities prepare/adopt/manage their own budgets?	Yes	Yes
Governance of subnational / local entities		
4. Is the local political leadership (at least in part) locally elected?	Yes	Yes
5. Have elections been held in the past seven years?	Yes	Yes
6. Does the local political leadership include elected local councils?	Yes	Yes
7. Is the local executive directly or indirectly elected?	Yes	Yes

Author's elaboration
Note: LG= local government; RG= regional government.

Annex 3. Decentralized Organizational Structure of WSS in Urban Areas

N°	QUESTION	SUMMARY
O1	In practice, is there a public entity responsible for WSS within local jurisdictions? To what degree do residents rely on (regulated or unregulated) self-provision?	The EPS is responsible for water and sanitation provision in urban areas. There are 50 EPS and almost all are public (except one). Only a few urban residents rely on self-provision because the EPSs have a high degree of coverage.
O2	Is the organizational status of the WSS provider local in nature? If so, does the provider cover a single local jurisdiction, or does a single EPS cover multiple local jurisdictions (or even a whole region)?	The EPS organizational status is local in nature and covers at least one provincial municipality[56]. In some cases, there is only one provider for a whole region.
O3	Is the WSS provider a department of a local government? Alternatively, is the provider a corporate body? In the latter case, who legally owns the EPS?	The provider is a corporate body legally owned by Local Governments.
O4	In practice, is the WSS SDU executive (and/or board) appointed (and does it work under the guidance) of the LG?	The EPS board includes an agent of each of the municipalities. In bigger EPS, the General Manager is named by the Directorate, while in smaller EPS, the General Manager is named by the Board.
O5	Does the LG have authoritative decision-making power over key aspects of the WSS SDU's operations, including staffing decisions (establishments, hiring/firing/promotions, payments)?	The General Manager (and the Directorate in a bigger EPS) is responsible for the operations and staff decisions. However, in some cases, the LG can exercise its authority as part of the Shareholders Board to make some decisions.
O6	Does the LG have authoritative decision-making power over key aspects of the WSS provider's finances, including budgetary decisions and tariff-setting authority?	The General Manager (and the Directorate in larger EPSs) is responsible for finances. However, in some cases, the LG can exercise its authority as part of the Shareholders Board to make some budgetary decisions. The tariff-setting authority is the SUNASS, and the LGs cannot interfere in this matter.

Author's elaboration
Note: EPS= Sanitation Services Provider Entity; SDU= Service Delivery Unit; WSS=water supply and sanitation.

[56] Each provincial municipality has multiple district municipalities.

Annex 4. Decentralized Organizational Structure of WSS in Rural Areas

	QUESTIONS	SUMMARY
O1	In practice, is there a public entity responsible for WSS within local jurisdictions? To what degree do residents rely on (regulated or unregulated) self-provision?	Communal organizations (JASS), comprised of community members, are responsible for WSS services in a self-provision structure.
O2	Is the organizational status of the WSS provider local in nature? If so, does the provider cover a single local jurisdiction, or does a single SDU cover multiple local jurisdictions?	The scope of the JASS includes rural communities. Depending on its capabilities, they can include more than one community.
O3	Is the WSS provider a department of a local government? Alternatively, is the provider a corporate body? In the latter case, who legally owns the WASA?	In small cities, a department of the local government can be the provider. However, in smaller communities the JASS is the provider and is registered as a communal organization, independent of the LG.
O4	In practice, is the WSS SDU executive (and/or board) appointed (and does it work under the guidance) of the LG?	The General Council of the JASS is appointed by the community members, without intervention by the LG.
O5	Does the LG have authoritative decision-making power over key aspects of the WSS SDU's operations, including staffing decisions (establishments, hiring/firing/promotion, payments)?	The General Council, in accordance with the community members, makes all decisions. The LG does not have any authority in operations or staff decisions; it only participates by providing technical assistance and financing.
O6	Does the LG have authoritative decision-making power over key aspects of the WSS provider's finances, including budgetary decisions and tariff-setting authority?	The General Council, in accordance with the community members, makes all decisions, including the determination of tariffs.

Author's elaboration
Note: JASS= Sanitation Services Users Association; LG= local government; SDU=service delivery unit; WASA=water and sanitation agency; WSS= water supply and sanitation.

Annex 5. Assignment of Functions for Water and Sanitation to the Local Level in Urban Areas

	QUESTIONS	SUMMARY
A1	According to the legal framework, are WSS provided by LGs in line with the subsidiarity principle? If so, which specific responsibilities are assigned to LGs and/or other local entities by the policy/legal framework?	In line with the subsidiarity principle, WSS is the responsibility of LGs, specifically of provincial municipalities covering the entire jurisdiction of their province. The EPS must have the organization, resources and the technical and professional personnel necessary to assure its proper management, efficient operations and maintenance, good quality services, expansion of its coverage, and the fulfillment of the established regulations.
A2	In practice, are local governments (or a WASA under the LG) responsible for the recurrent provision of WSS in line with the subsidiarity principle? If so, which services do they provide in practice?	In practice, the EPS is the responsible party for the recurrent provision of WSS. They manage human resources, do the operation of the systems, and provide part of the capital infrastructure. However, maintenance is a forgotten issue.
A3	In practice, are local governments (or a WASA under the LG) responsible for planning and procuring the capital infrastructure required for providing WSS (UW/US) in line with the subsidiarity principle?	In practice, the CG is responsible for the planning (national and sectorial). The EPS is responsible for planning the capital infrastructure required through the elaboration of the PMO. However, the CG has an important participatory role through capital infrastructure and transfers to the EPS and LG.
A4	Does the *de facto* assignment of functions (authority and responsibility) match the *de jure* functions (authority and responsibility)?	Even when the assignment of responsibilities is quite clear in urban areas and the allocation of powers are appropriate with the service delivery, not all the *de facto* functions match the *de jure* functions, mainly regarding the capital infrastructure.

Author's elaboration

Note: CG= central government; EPS= Sanitation Services Provider Entity; LG= local government; PMO= Optimized Master Plan; US= urban sanitation; UW= urban water; WASA= water and sanitation agency; WSS= water supply and sanitation.

Annex 6. Assignment of Functions for Water and Sanitation to the Local Level in Rural Areas

	QUESTIONS	**SUMMARY**
A1	According to the legal framework, are WSS (RW/RS) provided by LGs in line with the subsidiarity principle? If so, which specific responsibilities are assigned to LGs and/or other local entities by the policy/legal framework?	WSS are provided by LGs at the district level. They have to manage water and sanitation services through specialized operators, communal organizations or management units. The Municipality has to: plan and promote the development of the services; manage WSS through specialized operators, communal organizations or directly through management units; boost and register communal organizations; monitor the provider's performance; ensure the sustainability of the systems; participate in the financing; and offer technical assistance.
A2	In practice, are local governments (or a WASA under the LG) responsible for the recurrent provision of WSS (RW/RS) in line with the subsidiarity principle? If so, which services do they provide in practice?	The JASS are responsible for the recurrent provision of WSS in rural areas. In practice, they conduct the operations of water systems and settle the family fees. The district municipality is responsible of capital infrastructure, technical assistance and monitoring, in the best-case scenario.
A3	In practice, are local governments (or a WASA under the LG) responsible for planning and procuring the capital infrastructure required for providing WSS (RW/RS) in line with the subsidiarity principle?	In rural areas, in practice, the planning exercise is elaborated by LGs, but in some cases, it is not implemented. However, they are responsible for the procurement of capital infrastructure.
A4	Does the *de facto* assignment of functions (authority and responsibility) match the *de jure* functions (authority and responsibility)?	The *de facto* assignments of functions in rural areas do not match with the *de jure* responsibilities. The main reason is that they are not assigned in accordance with the actual capabilities of the communal organizations.

Author's elaboration

Note: JASS= Sanitation Services Users Association; LG= local government; RS= rural sanitation; RW= rural water; WASA= WASA= water and sanitation agency; WSS= water supply and sanitation.

Annex 7. Effective and Responsive Local Political Leadership

	QUESTIONS	SUMMARY
B1	Does the local government level have meaningful "political" decision-making space (responsibility and authority), separate from higher-level governments?	The LGs do have meaningful political decision-making space. They have a high degree of discretion in the use of their resources — separately from the CG or RGs.
B2	Does the Local Government or Local Administration have the power to recruit, appoint and generally hold human resource authority over the core local administration team?	The LGs have the power to manage human resources in their respective municipalities, with all due discretion. They can recruit, appoint and fire staff at their discretion.
B3	What is the local power structure? Is the LG Executive directly (or indirectly) elected? Is the LG Council directly (or indirectly) elected?	There is a strong executive system of local governance, and the Mayor and the Municipal Council are elected by suffrage.
B4	Are the LG election systems and elections competitive?	The LG election system is competitive. There is no a ruling party, nor a central party dominance.
B5	Does the LG Executive have broad support from the LG Legislative Council and the LG's administrative apparatus/staff?	In some cases, the LG Executive and the Local Council/administrative staff have a relationship of cooperation, but in other cases there is a conflicting relationship. Each LG has different arrangements.
B6	Is the LG effective in achieving results in the service delivery areas that constituents care about?	The LG is effective in achieving results in service delivery in some areas that constituents care about in varying degrees of acceptance, depending on the municipality.

Author's elaboration
Note: CG= central government; LG= local government; RG= regional government.

Annex 8. Local Control over Administration and Service Delivery in Urban Areas

	QUESTIONS	SUMMARY
C1	Does the LG (Executive or Council) appoint the head of the EPS for WSS?	The General Manager of the EPS is appointed by the Directorate in EPS that is of greater size, and by the Shareholders Board in the EPS that is of smaller size. However, for the former, the Directorate is appointed by the Shareholders Board.
C2	Does the LG approve the budget of the EPS for WSS?	The budget of the EPS is approved by the Directorate of the EPS. The EPS budget is totally independent from the LG.
C3	Does the LG determine its own organizational structure and staff establishment for the WSS provider?	The LG determine its own organizational structure according to their budgetary constraints. The LG does not determine the staff establishment for the EPS because it has its own establishment.
C4	Does the LG have control over its human resource decisions with respect to WSS?	The LG has control over its human resource decisions. With respect to the human resources of the EPS, the LG is not supposed to have any type of control.
C5	Does the LG plan and manage the procurement of capital investments /infrastructure required for WSS?	The EPS should plan and manage the procurement of capital investments on its own. However, in some cases, political interference is a latent problem.

Author's elaboration
Note: EPS= Sanitation Services Provider Entity; LG= local government; WSS= water supply and sanitation.

Annex 9. Local Control over Administration and Service Delivery in Rural Areas

	QUESTIONS	**SUMMARY**
C1	Does the LG (Executive or Council) appoint the head of the SDU/JASS for WSS?	The LG appoints the head of the SDU when the service is delivered by the municipality. However, when the JASS is responsible for provision, the community appoints the President and the other members of the communal organization.
C2	Does the LG approve the budget of the SDU/JASS for WSS?	The LG approves the budget of the SDU when the service is delivered by the municipality. However, when the JASS is responsible, the JASS members approve the budget.
C3	Does the LG determine its own organizational structure and staff establishment for the WSS provider?	The LG determines its own organizational structure and its premises for the WSS provider when the municipality delivers the service. When there is a JASS, the staff establishment is a communal place, or perhaps a place determined by the municipality.
C4	Does the LG have control over its human resource decisions with respect to WSS?	The LG has control over its human resource decisions with respect to the SDU; it is, however, not supposed to have control over the human resources of the JASS.
C5	Does the LG plan and manage the procurement of capital investments /infrastructure required for WSS?	The LG plans and manages the procurement of capital investments/infrastructure required for WSS in all rural areas, both when the service is delivered through the local SDU or through the JASS.

Author's elaboration
Note: JASS= Sanitation Services Users Association; LG= local government; SDU=Service delivery unit; WSS=water supply and sanitation.

Annex 10. Types of Revenue Sources

Type	Description
Ordinary resources	It includes the income from tax collection and other sources, which are not linked to any entity and constitute funds freely available.
Directly-collected resources	It comprises the revenues generated by Public Entities and managed directly by them, as well as those according to the current regulations. It includes revenues from financial performance.
Official credit operation resources	It includes funds from internal and external sources from credit operations carried out by the State with institutions, international organizations and foreign governments, as well as lines of credit. It also comprises the funds coming from operations carried out by the State in the international capital market.
Donations and transfers	It includes the non-reimbursable financial funds received by the government from international development agencies, governments, institutions and international organizations, among others.
Determined resources	It includes contributions to funds, such as the Municipal Compensation Fund, the canon mining, royalties, customs duties, and municipal taxes[1/].

Source: Portal of Economic Transparency of the Ministry of Economics and Finance.
Note: [1/] Taxes in favor of Local Governments, whose fulfillment does not involve a direct benefit of the Municipality to the taxpayer.

Annex 11. Local Fiscal Autonomy and Financial Management in Urban Areas

	QUESTIONS	SUMMARY
D1	Does the WSS provider have an orderly and participatory annual budget process?	The EPS elaborates its own budget, but not necessarily on the basis of strategic planning, nor is it orderly or participatory.
D2	Are expenditure out-turns for local WSS providers consistent with the originally-approved budget?	There is no data about the consistency of the expenditures and the budget of the EPS.
D3	What is the quality and timeliness of annual financial statements for the WSS provider?	Financial statements are done every year as a requirement of the SUNASS, but not all are audited.
D4	Are LGs free to define their own local revenue instruments?	LGs are free to define their own local revenue instruments.
D5	Do LGs have the right to set the tax base or tax rate for all local revenue instruments?	LGs do have the right to set the tax base or tax rate for all local revenue instruments.
D6	Does the WSS provider (or its parent government entity) take into account full-cost recovery (including the user cost of capital) when setting W&S user fee rates?	The EPS follows the formula that the SUNASS established for the tariff estimation. It takes into account full-cost recovery and allows for periodical increases, according to the PMO and tariff studies.
D7	Does the WSS provider (or its parent government entity) effectively and equitably collect water and sanitation user fees?	The EPS faces a big commercial problem of inadequate collection of fees because much of water consumption is not invoiced. It also has low levels of micro metering.
D8	Does the WSS provider have access to borrowing from financial institutions to fund local capital infrastructure expenses?	The EPS has access to borrowing from financing institutions, but with some restrictions. In practice, the only provider that incurs liabilities is SEDAPAL because it is the only one that has positive operational revenues.
D9	Does the WSS provider receive (conditional or unconditional) grants/transfers from a higher-level government to support local government operations and water and sanitation services to the poor?	The EPS used to receive transfers from the CG to support the investment in capital infrastructure and maintenance, but not for operations. The CG does not transfer resources as a direct subsidy for the tariff as a pro-poor intervention.
D10	Does the WSS provider receive formula-based grants/transfers from the higher-level government in a complete and timely manner, and without unnecessary administrative impediments?	There are no formula-based transfers to the EPS done in a complete and timely manner. The transfers are obtained by interest of the CG, or by a request of the EPS or the LG.

Author's elaboration

Note: CG= central government; EPS= Sanitation Services Provider Entity; LG= local government; PMO= Optimized Master Plan; SEDAPAL= Lima Water and Sewerage Services; SUNASS= National Superintendence of Sanitation Services; WSS= water supply and sanitation.

Annex 12. Local Fiscal Autonomy and Financial Management in Rural Areas

	QUESTIONS	SUMMARY
D1	Does the WSS provider have an orderly and participatory annual budget process?	The JASS rarely has a budgetary process and, when it does exist, it is basic and not orderly or participatory.
D2	Are expenditure out-turns for local WSS providers consistent with the originally-approved budget?	When a budgetary process is done, it is difficult to prove if the expenditure out-turns are consistent with the budget because the budget is not an important tool for them.
D3	What is the quality and timeliness of annual financial statements for the WSS provider?	The JASS does not have financial statements. They have some a record of incomes and expenditures, but those are not official.
D4	To the extent that LGs have functional responsibilities for WSS, are LGs free to define their own local revenue instruments?	LGs are free to define their own local revenue instruments.
D5	To the extent that LGs have functional responsibilities for WSS, do LGs have the right to set the tax base or tax rate for all local revenue instruments?	LGs do have the right to set the tax base or tax rate for all local revenue instruments.
D6	Does the WSS provider take into account full-cost recovery (including the user cost of capital) when setting W&S user fee rates?	The JASS applies a family fee established by the community members that does not follow any technical or economic criterion. In small cities, the SDU of the municipality establishes a fixed fee as well.
D7	Does the WSS provider effectively and equitably collect water and sanitation user fees?	The JASS effectively and equitably collects water and sanitation user fees. In contrast, in the SDU in small cities, it is not done as effectively as by the JASS.
D8	Does the WSS provider have access to borrowing from financial institutions to fund local capital infrastructure expenses?	The JASS do not have access to borrowing from financial institutions. In small cities, if the SDU needs more money, it asks the local authorities for an increment.
D9	Does the WSS provider receive (conditional or unconditional) grants/transfers from a higher-level government to support LG operations and water and sanitation services to the poor?	Neither the JASS nor the SDU receive transfers directly from the CG. The LG is the entity that receives the transfers to execute projects in rural areas.
D10	Does the WSS provider receive formula-based grants/transfers from the higher-level government in a complete and timely manner, and without unnecessary administrative impediments?	Neither the JASS nor the SDU receive formula-based grants/transfers from the CG in a complete and timely manner.

Author's elaboration

Note: CG= central government; JASS= Sanitation Services Users Association; LG= local government; SDU=Service delivery unit; WSS= water supply and sanitation.

Annex 13. Participation and Accountability in Urban Areas

	QUESTIONS	**SUMMARY**
E1	Is a local performance framework in place and being applied to water and sanitation services? (for example, a service charter?) Is this performance framework adopted by the elected LG?	There is no local performance framework in place, or being applied for water and sanitation services.
E2	Who monitors the performance of the WSS provider? An elected local government? The CG?	SUNASS monitors the performance of the EPS.
E3	Are local budgets and finances (for WSS) managed in a participatory and transparent manner?	Local budgets and finances, which includes WSS, are managed in a participatory and transparent manner.
E4	Does the local WSS provider have its own effective participatory planning/social accountability / oversight mechanisms? What is the frequency of public interaction between the WSS provider and citizens?	The EPS does not have its own participatory planning, or social accountability. However, it does have internal oversight mechanisms. The planning instrument is the PMO and is done on its own. There is no participation of citizens in the planning process.
E5	Does the parent government (separate from WSS provider) have an effective mechanism in place to receive and resolve complaints about services?	The EPS has mechanisms in place to receive and resolve complaints about the services; it is the entire responsibility of the EPS. The CG, SUNASS or OTASS do not receive or resolve complaints.

Author's elaboration

Note: CG= central government; EPS= Sanitation Services Provider Entity; LG= local government; OTASS= Technical Agency of the Administration of Sanitation Services PMO= Optimized Master Plan; SUNASS= National Superintendence of Sanitation Services; WSS= water supply and sanitation.

Annex 14. Participation and Accountability in Rural Areas

	LEADING QUESTIONS	**SUMMARY**
E1	Is a local performance framework in place and being applied to water and sanitation services? (for example, a service charter?) Is this performance framework adopted by the elected local government?	There is no local performance framework in place, or being applied to water and sanitation services.
E2	Who monitors the performance of the WSS provider? An elected local government? The CG?	District municipalities are responsible for monitoring the performance of the providers, and no independent entity is responsible for the monitoring of communal associations.
E3	Are local budgets and finances (for WSS) managed in a participatory and transparent manner?	Local budgets and finances are managed in a participatory and transparent manner, including WSS through the participatory budget plan.
E4	Does the local WSS provider have its own effective participatory planning/social accountability/oversight mechanisms (separate from its parent government entity)? What is the frequency of public interaction between the WSS provider and citizens?	The JASS does not have its own participatory planning or oversight mechanisms, but a high level of social accountability is exercised in the communal meetings. The SDU almost never interacts with the citizens.
E5	Does the parent government (separate from the WSS provider) have an effective mechanism in place to receive and resolve complaints about services?	There are no mechanisms in place to receive and resolve complaints about services in rural areas at any level of government.

Author's elaboration
Note: CG= central government; JASS= Sanitation Services Users Association; SDU=Service delivery unit; WSS=water supply and sanitation.