Case Study—
Aguas Publicas Do Alentejo, Portugal

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Key Characteristics of Aggregation Case Study

	AGUAS PUBLICAS DO ALENTEJO, PORTUGAL
Context	• High-income country • Aggregation covering urban and rural areas • Medium level of WSS performance
Purpose	Performance, professionalization, environmental benefits, solidarity (cross-subsidies among municipalities)
Scope	Water production and transport; Wastewater treatment
Scale	• Administrative boundaries • Localities covered: 20 • Population covered: 235,192 inhabitants for water and wastewater • Coverage: 100 percent for water and 100 percent for wastewater • Network length: 1,008 km for water and 128 km for wastewater
Process	Voluntary and Incentivized (EU funds)
Governance	• Delegated (50 years) • Public company • Decision making: Equality of partners in the Partnership Commission although Águas de Portugal is the majority shareholder at the utility level • Asset transfer: Asset transferred from municipalities to the aggregated utility through lease agreements, with a rent representing the remaining depreciation cost minus allocated subsidies. These transferred assets remain the property of municipalities. • Liability: No liability undertaken • Staff transfer: Partial staff transfer from municipal departments to the aggregated utility • Clear entry and exit rules
Outcome	• Positive, but with OPEX increase
Findings	• Resistance of municipalities was overcome by partnership agreement showing a balance between State & Municipalities (need to search for consensus), necessary alignment of municipalities interests, staff transfer (30%), Bulk price harmonized but retail prices vary in each municipality

In Alentejo, municipalities were experiencing harsh difficulties in providing water supply and sanitation (WSS) services in line with EU standards owing to the low level of investment and infrastructure development, resources scarcity, and water quality issues. They saw aggregation as an opportunity to modernize WSS services, improve their performance, and achieve environmental benefits. However, reaching a common agreement on the design of the aggregation governance model would take them about eight years because of the reluctance of municipal representatives to lose their prerogatives regarding WSS service provision. The vote on a new aggregation model by the Portuguese government as well as the availability of funding from the EU Cohesion Fund would help resume and speed up the aggregation process, leading it to a successful outcome.

The Emergence of a National Legal Framework for Aggregation of WSS in Portugal

Until 1974, Portuguese water and sanitation services were fragmented, with more than 300 municipal operators functioning without any economic or administrative autonomy. The urgent need to improve WSS service quality and performance in the context of stringent EU directives led to the adoption of a new, specific law in 1993 enacting a broad-scope reform of the sector. It kept the distribution of drinking water and domestic sewage collection at the municipal level. It maintained the possibility for direct management and also allowed public-private partnerships. It created an innovative solution to improve WSS "bulk" systems through regional entities called "multimunicipal systems," owned by the region's municipalities and a state-owned holding (Águas de Portugal) as a majority shareholder. This solution was a compromise between maintaining municipal jurisdiction over WSS and setting up new and broader utilities to allow quicker infrastructure development, better management, and improvements in technical capacity as well as absorption of EU funds.

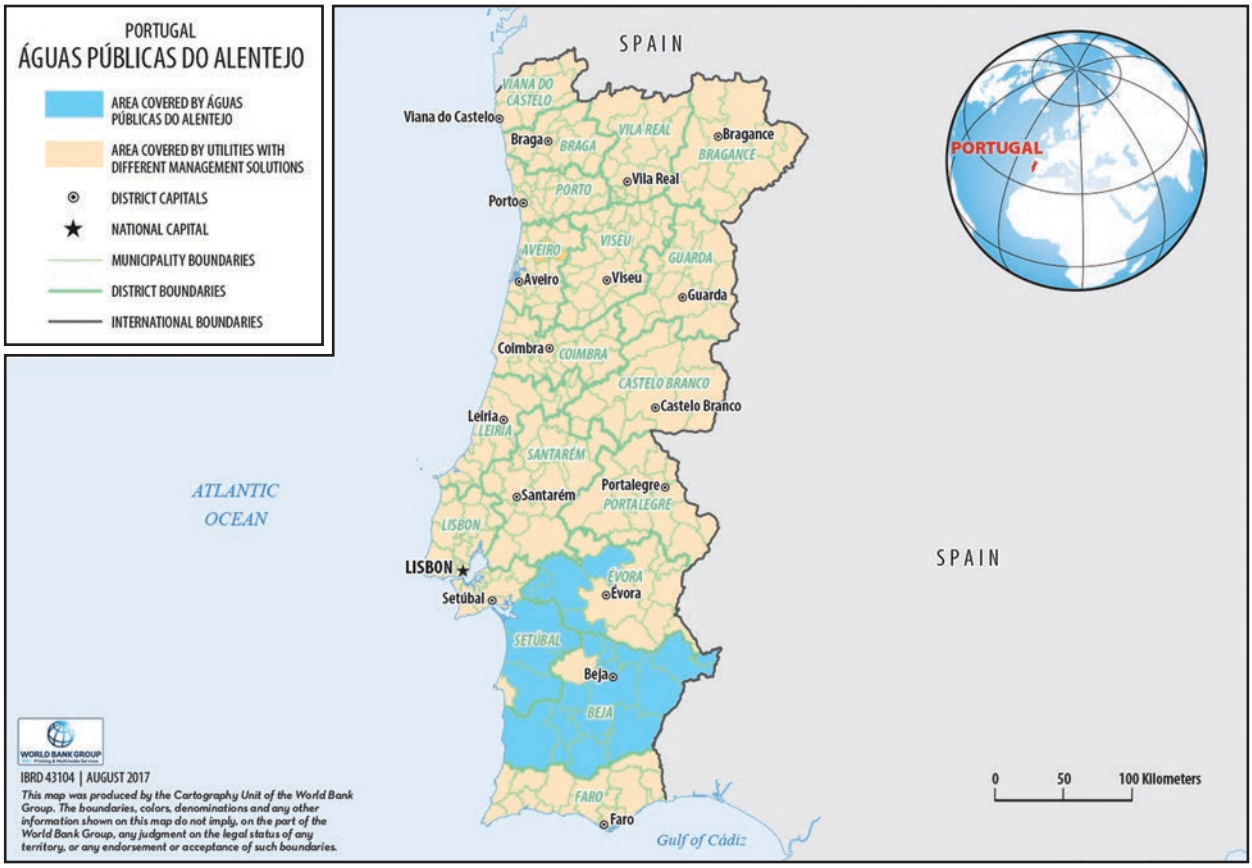
The implementation of multimunicipal systems was always surrounded by controversy as many municipalities considered that this model was jeopardizing their municipal attributions regarding WSS. To overcome the resistance of some municipalities, a new management model was introduced in 2009, allowing state-municipality partnerships. In 2013, in a context of harsh economic crisis, a trend toward aggregation of multimunicipal systems emerged to overcome economic difficulties encountered by systems covering less-populated regions. However, this move created controversy related to the dilution of each municipality's power into the aggregated multimunicipal entity and to the balance of municipalities' contributions to the entity. This trend is currently in reversal. Consequently, the multimunicipal systems created between 1995 and 2004 have nowadays a different geographical scope and have undergone some juridical evolution, too.

A Long Aggregation Design Period Necessary to Reach Common Agreement on the Governance Model

In Alentejo, the wide region of southern Portugal from the Tagus ("Tejo") valley to Algarve, the aggregation trend had already led to the creation of three bulk multimunicipal systems, covering 22 municipalities and operated by utilities having as shareholders Águas de Portugal and three groups of municipalities. The remaining municipalities of the region explored aggregation opportunities through different management models from 2000 to 2007 and finally opted for a partnership between the state and municipalities, which was discussed and set up between April 2008 and September 2009.

The first phase took a long time owing to distinct approaches from Águas de Portugal, the company entitled by the government to promote regional systems, and from municipalities. In fact, Águas de Portugal expected to promote a multimunicipal system, as implemented in several other Portuguese regions. But there was a strong resistance from the Alentejo

MAP 1. Municipalities Served by Aguas Publicas do Alentejo



municipalities to the multimunicipal model as they considered that WSS attributions should remain municipal and they feared private participation.

During the second phase, municipalities approved the partnership option, as this model is supported by a set of technical and juridical provisions meant to balance the relationship between the state and municipalities. All activities, investment plans, budgets, tariffs, annual reports, and accounts have to be approved by the Partnership Commission. The equality of partners in the Partnership Commission is a major distinction between a state-municipal partnership and a multimunicipal system, because in the latter plans, budgets, reports, and accounts are approved by the General Assembly of shareholders, where Águas de Portugal has a majority of shares. For AgdA, approval must be given also by the Partnership Commission, where there is equality between members, and the General Assembly of shareholders.

The AgdA Partnership Agreement was signed in August 2009. AgdA was created in September 2009 and a 50-year management agreement was signed on the same day. Municipalities instituted a specific association—Associação de Municípios para a Gestão da Água Pública do Alentejo, (AMGAP)—to represent them in the management of Águas Públicas do Alentejo. The utility is a public limited company, having a stock capital of €3 million (initially €500,000) shared by Águas de Portugal (51 percent) and AMGAP (49 percent). Municipalities subscribed to AMGAP capital (with shares varying from 1 percent to 15 percent, in accordance with a mix of several criteria), and the

association subscribed and paid 49 percent of AgdA shares. The balance of power between the state and municipalities in the Partnership Commission and the existence of only two shareholders creates a need for a permanent search for consensus. Even though Águas de Portugal is the majority shareholder at the utility level, the Partnership Agreement and the correlative powers of the Partnership Commission reinforce the parity in this management model. In addition, municipalities also have to agree on common positions.

Several infrastructures were transferred from municipalities to the aggregated utility through lease agreements, with a rent representing the remaining depreciation cost minus allocated subsidies. These transferred assets remain the property of municipalities. The infrastructure built or acquired by the utility will be its property at the end of the contract. If they are sold before, the agreement of the Partnership Commission is required. The initial Partnership Agreement did not provide any entry rule but an amendment dated 2015 allowed it, with the approval of the Partnership Commission and only if the entry does not result in an increase in tariffs of 5 percent or more. The initial agreement specified that, if a municipality decides to leave, it will compensate the utility with the remaining depreciation costs of infrastructures and with the damages incurred, including lost profits. When AgdA started operation, about 30 percent of its staff consisted of transferred employees. The remaining 70 percent were selected during the implementation period. Aggregation followed administrative boundaries as AgdA is covering 20 municipalities from three intermunicipal communities. Some drinking-water systems are physically interconnected, and the utility's planning and execution of works is carried out on the best technical option. The aggregation comprised bulk drinking-water production, transport, and storage, except in very small villages, and treatment and rejection of wastewater.

TABLE 1. Municipality Served by AgdA and Date of Beginning of Operation

Beginning of operation	Municipality within AgdA
July 1, 2010	Barrancos
	Moura
	Serpa
	Mértola
	Aljustrel
	Beja
	Cuba
	Alvito
	Viana
	Vidigueira
January 1, 2011	Vendas Novas
	Grândola
February 1, 2011	Castro Verde
	Ourique
	Almodôvar
	Odemira
March 1, 2011	Alcácer do Sal
April 1, 2011	Santiago do Cacém
June 1, 2013	Arraiolos
From January 1, 2014 to May 1, 2014	Montemor-o-Novo

Municipalities decided that the tariffs for services provided by AgdA (drinking water and sanitation) would be the same for all municipalities, even if AgdA bore different costs and made different profits in operating bulk services in each municipality. Thus, the equity among municipalities was part of the aggregation design. The stability of tariffs before and after aggregation was not an objective, as municipalities knew that the set-up of the utility would have an impact on their retail tariffs, which for some were very low. At the beginning, only one-third of the tariff was variable and two-thirds was flat and resulting from the size of the population of each municipality. As some littoral municipalities had many holiday houses and a lesser permanent population, they benefited from the low variable share of the tariff. Other municipalities proposed a change and, after negotiations, the flat component of the tariff dropped to 50 percent, based on the number of houses in each municipality, and the variable part of the tariff reached 50 percent.

An Aggregation Process Incentivized by EU Funds…

The process of aggregation was highly incentivized both by the growing requirements and enforceability of EU standards for water quality, wastewater treatment, and environmental protection, and by the availability of EU funds to be allocated preferentially to regional entities as stipulated by the article 12 of the Decree no. 191/2000. AgdA has had access to the EU Cohesion Fund, which allowed the financing of upgrading and expansion investments. These grants covered 58.2 percent of Águas Públicas do Alentejo´s investment until 2015 (€70 million). This important financial contribution had already been crucial for the development and improvement of the water sector in Portugal, as from 2007 to 2013 the average contribution of European funds represented 57 percent of the total investment amount in the country, mostly allocated to multimunicipal systems. As a result, services taken over by AgdA have managed to get out of the low-level equilibrium trap, thus breaking the vicious cycle of low price–low quality. The strong investment in and modernization of infrastructure such as water pipes and wastewater treatment plants is still under way, but the breadth of the territory and the need to contain operational costs extend the investment time frame, under the approved plan. Eleven wastewater treatment plants have already been built, and new ones are to be built in coastal municipalities to improve compliance with EU Bathing Water Quality directives. The utility has a further €130 million investment planned until 2021—which means the final investment value represent almost three times the amount already completed.

… Which Successfully Improved Performance and Service Quality, and Brought Environmental Benefits

Prior to the aggregation, municipalities had small water supply systems with shortcomings related to quality and reliability (problems of resource quality, treatment adequacy, and transport capacity). These difficulties were more important during summer time and drought periods. For instance, when AgdA started operating the services in villages with a very dry climate and a lack of sources, it had to supply drinking water using motor pumps. As far as wastewater was concerned, the existing sanitation systems needed substantial treatment upgrading. The difficulties with water scarcity in the region underpinned the urgent need for action. Taking into account this overall starting point, the success of aggregation can therefore be assessed in comparison with its main purposes, which were performance and service quality enhancement, professionalization, and technical capacity improvement, as well as environmental benefits.

A strong improvement in drinking-water quality has been achieved by Águas Públicas do Alentejo, as the conformity of drinking water supplied increased from 93.54 percent in 2010 to an average of 99.47 percent in 2014 and 2015, a steady progress matching high-level European standards. The reliability of water supply was also very much improved, mostly in smaller towns and villages. Non-revenue water dropped by 29 percent between 2009 and 2015, while the length of the network expanded by 37 percent.

Within its few years of activity, Águas Públicas do Alentejo has targeted its interventions toward network expansion and rehabilitation, storage, treatment and drinking-water quality. Regarding technical capacity, the utility has developed a long-term investment plan and has updated its asset inventory. Sewerage blockages dropped from six per km per year to none. Wastewater treatment is entirely outsourced to private providers, as are other services such as geology and expropriations. The compliance indicator for wastewater discharge parameters has had a limited increase, clearly lower than the national average of 77 percent (RASARP 2016). The high number of treatment facilities (116) and the investment still ongoing do not help in this regard. The distinction between bulk activity, provided by Águas Públicas do Alentejo, and the retail

TABLE 2. Evolution of Key Performance Indicators Before and After Aggregation

Success indicator	Assessment indicators associated with targeted purpose	Before aggregation	After aggregation
Service Quality Enhancement	Continuity (hours/day)	11	24
	Non-revenue water (m^3/km/day)	8.7	6.2
	Water network (km)	737 km	1,008 km
	Sewerage network (km)	84 km	128 km (2015)
	Sewerage blockages (no./km/year)	6	0
Technical capacity	**Differentiation of services**	Undifferentiated services	Differentiation of functions
	Staff productivity		
	Per water produced (m^3/employee)	n.a.	190,350 m^3/employee
	Long-term and medium-term investment plan	No	Yes
	Assets inventory	No	Yes
	Staff training expenditure (hours/year)	n.a.	3,247 training hours
	Private sector participation	Yes	Yes
Environmental benefits	Drinking-water quality (%)	93.54	99.47
	Wastewater treatment quality (%)	57	62
Equity		Different tariff for each municipality	Tariff harmonized for all municipalities

systems, which remained in the hands of municipalities, does not allow for a proper assessment and comparison of costs before and after the aggregation. The only available economic indicator for that period, for all municipalities, is the price of water and wastewater services for retail consumers living in municipalities served by Águas Públicas do Alentejo. But the retail tariffs for customers vary significantly. For instance, in Beja, a city with 34,000 inhabitants, the average price for water and wastewater services reached €1.22 per m^3 in 2008, while the small municipalities of Mértola (7,000 inhabitants) and Barrancos (1,600 inhabitants) had average prices of €0.48 per m^3 and €0.30 per m^3. These very low prices do not mirror the reality of costs. The equity target—the same price per cubic meter for all municipalities—while bringing a fairer distribution for poorer and less populated municipalities has also some negative effects, as it allows municipalities to have different policies for the retail tariff. Amounts paid by retail consumers living in municipalities served by AgdA increased, stabilized, or decreased between 2008 and 2015. This variance revealed that, for social reasons, several municipalities' budgets were subsidizing WSS retail services. In addition, consumers paying higher overall tariffs may be indirectly subsidizing those with much lower ones. At the bulk level, this evolution reflects the fact that Águas Públicas do Alentejo is also making investments in some poor municipalities that get a bigger per capita benefit from them. The regulator is currently trying to bring remedies to such situations through a new tariff regulation.

Aggregation Case Study at a Glance

Key Lessons Learned from Aggregation Case Study

Financial Support and/or Incentives (a "Big Push") Are Important to Help Services Get Out of the Low-Level Equilibrium Trap

To boost the success of aggregation reforms, external stakeholders can provide financial support to aggregating utilities to help them achieve the aggregation purpose. In most cases, these subsidies are used to

fund investment programs, thus acting as a Big Push, which helps WSS services get out of the low-level equilibrium trap. In Portugal, to be eligible for allocations from the EU Cohesion Fund, utilities had to operate with a regional or at least supramunicipal scope, thus implying an aggregation trend (Decreto-Lei 191/2000, article 12). The utility Águas do Alentejo benefited from a €70 million investment in the form of EU subsidies, covering up to 58 percent of its investment programs for the period 2009-2015.

Aggregation Forces More Explicit Decision-Making Processes, Leading to Better Corporate Governance

Aggregation involves the creation of a new, separate organizational entity that is accountable to more than one stakeholder. Therefore, aggregation presents an opportunity to adopt sound corporate governance principles related to autonomy and accountability. Águas Públicas do Alentejo, a public limited company created to provide bulk water, was able to increase the water tariff and establish a uniform tariff in the 20 municipalities in its service area. This tariff policy was viewed as a positive management improvement toward sustainability, as it was driven by cost recovery principles. Corporatization also brings managerial independence to utilities that can make their own decisions regarding staff recruitment or wage policy, thus lowering or preventing political interference and patronage. When Águas Públicas do Alentejo was created, about 30 percent of its initial total staff was composed of transferred employees. The remaining 70 percent were selected by the utility during the aggregation implementation period.

Defining Principles but Allowing Flexibility in Implementation Ensures Local Ownership

National reforms are more likely to be successful when they follow the principle of subsidiarity and allow flexibility for local stakeholders to own the aggregation process and adapt it to their local context. In Portugal, the central government created in 1993 a multimunicipal management model to improve WSS bulk systems through regional entities, owned by Águas de Portugal, a state-owned holding, as a majority shareholder. However, several municipalities resisted the implementation of this model for fear of losing their WSS responsibilities. In 2009, the central government introduced a new management model for bulk and retail services, called a state-municipalities partnership, to facilitate further the potential for aggregation in the WSS sector.

Reference

RASARP - Relatório Anual dos Serviços da Água e Resíduos em Portugal 2016, and correlative data RASARP is edited by ERSAR and available at www.ersar.pt

SKU W17053