Chapter 4
Water Globalization: The Strategies of the Two French "Majors"

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4.1 The Two French "Majors": A Snapshot

Water management in Europe varies widely depending on the histories, traditions, institutions, and cultures of the different countries. But until the 1980s, water was directly managed by public authorities in all of Europe except France, which has largely delegated water management to private companies since the mid-nineteenth century. Under the French approach, municipalities own the infrastructure but outsource the management of the service through concessions, leases, and similar means.[1]

Two large French companies, the so-called majors, are the international leaders of the water and wastewater sector: Compagnie Générale des Eaux, which became Veolia Environnement, and Société Lyonnaise des Eaux, which became Suez Environnement.[2] Over time, Veolia Environnement has extended its activities to other sectors—waste, energy, and transportation—and is now the largest water services company in the world, operating in 77 countries (Table 4.1). A sampling of Veolia's activities includes managing the water production and distribution contract for the Parisian suburbs; waste management and recycling in Westminster, London, and the cooling network in Singapore's Marina Bay. It is also responsible for the power and electric systems and communications equipment in the traffic signals on the Øresund Bridge between Denmark and Sweden and manages biomass facilities in Pécs, Hungary. In addition, Veolia manages and operates the urban bus system in Phoenix, Arizona, in the United States, and urban and school

[1] See Chaps. 5, 6, and 7.

[2] This chapter refers to these two groups by both Lyonnaise des Eaux (or Lyonnaise) and Générale des Eaux (or Générale), or their current names, Suez Environnement, subsidiary of GDF Suez since the 2008 merger with Gaz de France, and Veolia Environnement.

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Table 4.1 Turnover from Veolia Environnement's three main activities, 2011

(In billions of euros)	Water	Sanitation	Energy services	Consolidated total
Europe	**8.7**	**7.0**	**6.5**	**22.3**
France	4.5	3.3	3.5	11.4
Germany	1.5	1.2	0.009	2.7
England	0.8	1.6	0.1	2.6
Rest of Europe	1.8	0.8	2.8	5.5
United States	**0.7**	**1.2**	**0.3**	**2.2**
Rest of the world	**3.1**	**1.4**	**0.4**	**4.9**
Middle East	0.2	0.1	0.09	0.4
Oceania	0.2	0.7	0.04	0.9
Asia	1.5	0.2	0.1	1.9
Others	1.0	0.3	0.1	1.6
TOTAL	**12.6**	**9.7**	**7.2**	**29.6**

Source: Veolia Environnement (2012)

bus services in Perth, Australia. It also operates three rail lines connecting Munich to Rosenheim in Upper Bavaria and Austria.

Suez Environnement, now a branch of the group GDF Suez, is the second largest private company in the world market of water and wastewater services and is active in 36 countries on five continents. The company manages the drinking water supply in Sydney, Australia; the wastewater recycling plant in New Delhi, India; and the Newtown wastewater treatment plant in Connecticut in the U.S. Suez also develops heating from waste treatment in Levallois-Perret, France, and oversees the design, construction, financing, and operation of an energy-from-waste unit in the county of Suffolk in the United Kingdom, the restoration of drinking water and sanitation services in Port-au-Prince, Haiti, and the extension of the wastewater treatment and recycling plant in Doha West, Qatar.

In 2011, Suez Environnement's revenue was 14.8 billion euros; 44 % of that revenue comes from the Waste Europe division, 28 % from Water Europe, and 28 % from the international division (Table 4.2). As of the end of 2011, 80,450 employees worked for the company (Suez Environnement 2011).

The very existence of Veolia and Suez is rooted in eighteenth and nineteenth century French history, and their integration and internationalization strategies helped reinforce their success. These strategies can be analyzed from two perspectives: "industrial organization" (Mason 1979; Bain 1956, 1959), particularly failures of the market, mergers and natural monopolies, and oligopolistic competition, as well as the technical and economic specificities of the water sector.

4.2 Générale des Eaux and Lyonnaise des Eaux: A History

In France, the municipal[3] responsibility to organize the provision of water services dates from the French Revolution. Several laws and regulations in the nineteenth and twentieth centuries reinforced this responsibility; decentralization laws of 1982

[3] Rural and urban communities.

Table 4.2 GDF Suez turnover and employees, 2011 *(turnover in billion euros)*

					Suez Environnement			
	Energy	Gas and LNG[a]	Infras-tructure	Services business	Waste	Water	Total turnover	Total employees
Europe	**37.8**				**10.6**		**72.3**	**191,300**
					6.5	**4.1**		
France	13.5						31.1	108,300
Benelux and Germany	13.9						41	83,000
UK	3.4							
Rest of Europe	7.0							
International	**12.3**				**4.1**		**18.3**	**27,600**
South America	3.6 (Latin America)					0.8	4.6	4,500
North America	4.8					0.8	5.7	6,100
Middle East, Turkey, Africa (META)	1.1				0.8		7.0 (Asia, Middle East, Oceania)	17,000 (of which 5,250 are in Africa)
Asia	1.7				0.5		0.9 (Africa)	
Australia	0.8				1.0			
Total turnover	**50.1**	**9.9**	**1.4**	**14.2**	**14.8**		**90.6**	**–**
Total employees	**61,250**			**77,200**	**80,450**		**–**	**218,900**
	~61 % (~17 % France)	**~9.5 %**	**~29 %**					

Source: GDF Suez (2012a, b)
[a]LNG: liquified natural gas

confirmed it (Bauby 2011). Large differences in the size of the municipalities shaped the organization and regulation of water and wastewater services. More than 36,000 municipalities exist in France. More than 30,000 of them have fewer than 2,000 inhabitants, comprising 25.3 % of the total French population, while 102 municipalities have between 50,000 and 200,000 inhabitants (14.4 % of the population) and 10 have more than 200,000 inhabitants (8.9 %).

Today, the municipalities can choose between two main modes of water management: direct management through public operators, or régies, which provide water to 21 % of the population and treat wastewater for 47 % of the people, or delegation contracts to private firms, which can span 7–20 years and involve a tender process.

The French municipalities were long prevented from engaging in commercial activities, including water provision. They were in charge of public fountains and exerted control over water carriers—men who streamed water to users. The first water distribution networks were built and exploited by private entrepreneurs in the mid-nineteenth century, rooting water management delegation and services provision in the control of private companies (Breuil and Pezon 2005; Haghe 1998). If most operators were satisfied to intervene locally by managing the water service of only one municipality, some of them had national ambitions and sought to manage the water services for a growing number of municipalities. Thus, two groups, called majors, emerged: Compagnie Générale des Eaux was created on December 14, 1853, by Napoleonic decree,[4] and the Société Lyonnaise des Eaux et de l'Eclairage (SLEE) was founded in 1880 (Pezon 2000). The aim of SLEE was:

> To obtain, purchase, lease, and operate, in France and abroad, all concessions and companies relating to water and lighting, more precisely drinking water supply, wastewater, irrigation, establishment of the water dams and reservoirs, public and private lighting, and heating. It also gives itself means of buying patents and for taking part in existing companies. (Author translation. De Meritens-Fabry 2001)

In 1939 the turnover of Lyonnaise in energy was five times more than in water; in 1914 the two were equivalent. At the turn of the twentieth century, the Conseil d'Etat (the French Administrative Supreme Court) acknowledged the municipalities' right to certain economic activities, provided there is a proven failure of private initiatives. Whereas the construction of water supply networks had been extended, municipal initiatives based on public responsibility were developing. Gradually, in the first half of the twentieth century, municipalities struck a relative balance between public and private management. At the beginning of the twentieth century, delegated management through concession, which represented the main mode of management of water services in France, was progressively replaced by lease contracts (Pezon 2000).

Early in the aftermath of World War II, a series of transformations occurred that influenced the orientations of the private groups: the reconstruction after the war, the growth of the cities and the development of a consumer society; the nationalization

[4] Its founders had two objectives: to irrigate the countryside and supply urban water. http://www.veolia.com/fr/groupe/historique/1853-1900/

Table 4.3 From Lyonnaise des Eaux et de l'Eclairage to GDF Suez

1880	Creation of Société Lyonnaise des Eaux et de l'Eclairage
1946	Nationalization of the electricity → Lyonnaise des Eaux
1967	Compagnie Financière de Suez becomes a shareholder
1970 (years)	Purchase of Sita (urban waste management) and Degrémont (wastewater)
1990	Merger with Dumez → Lyonnaise des Eaux-Dumez
1997	Merger with Compagnie Financière de Suez → Suez-Lyonnaise
2001	The group takes the name Suez
2002	Sale of activities BTP and communication. Acquisition of Tractebel (Belgium)
2008	Merger with Gaz de France → GDF Suez
	Subsidiarization of Suez Environnement

Source: Data compiled by the author

of electricity and gas in 1946—but not of water—and decolonization. Water increasingly became an added-value trade: consumption exploded, increasing pollution, which in turn generated legislation enforcing wastewater treatment. Hence, the interest of Lyonnaise des Eaux in water purification companies like Degrémont, which it acquired in 1972 (Table 4.3).

4.3 The Development of Delegated Management in France

Unlike most other European countries, which long preserved the public management of water, French elected officials made extensive use of delegation management from the 1960s until the end of the 1980s. A third national-scale operator, SAUR, emerged during this time. In 1984 it was acquired by the Bouygues Group, a large building and public works (BPW) firm, but it remained too small to truly compete with Générale des Eaux and Lyonnaise des Eaux.

The development of the delegation process was due to a convergence of interests between elected officials and service companies. First, the production of water and water supply required increasingly complex treatments to meet public health requirements and quality standards; a growing number of municipalities, particularly small and medium-sized municipalities, encountered difficulties in developing the necessary techniques and competences, whereas the private groups provided broad solutions of design, creation, management, maintenance, and know-how for a series of other local services. With insufficient public funds, delegated management also seemed to be a means to secure private capital to finance infrastructure. It also allowed for the introduction of market-oriented approaches instead of administrative operations and the discharge of elected officials from their management responsibilities.

Despite progress in productivity, the increasing quality requirements of water and wastewater treatment, pushed by the European Union (EU), have led to increasing costs and user fees. Moreover, delegated management makes it possible for elected officials to escape responsibility for these increases to their constituents.

Table 4.4 Delegation contracts in France (2000–2001)

	Générale des Eaux		Lyonnaise des Eaux	
		% population		% population
Number of contracts	8,000		2,900	
Consumers served (million)	45[a]		23[a]	
Drinking water	26	43	14	23
Water treatment	19	31	9	15

Source: OIEAU (2002)

[a]Some consumers are counted twice, when they are served by the same operator

In addition, delegated management is supposed to combine the advantages of the monopoly (throughout the contract) and of competition (at the end of the contract, for its renewal).

Indeed, delegated management addressed the challenges of innovation and technical quality, management flexibility, and economies of scale. But in the absence of public funds, delegated management was an important means of financing French political life and electoral campaigns, which encouraged, in certain cases, corrupt practices. This situation changed with the Sapin Law of 1993, which was designed to prevent corruption and improve transparency in economic activities, public procurement, and public funding of political activities.

Delegated management accounted for 47 % of the water market in France in 1980 and 73 % in 1989 and accounts for 79 % today. Thus, the number of contracts managed by Lyonnaise des Eaux, for example, spiked from 1,300 in 1979 to 2,500 in 1988 and 2,900 in 2000–2001 (Table 4.4). Although some big cities have retained direct management of their water and wastewater services, the delegation system initially was developed for large cities, whose elected officials were confronted with increasing complexities of management.

In the 1970s these companies gradually became multi-service groups. Their technical and managerial skills and expertise allowed them to participate in each stage of the production, water supply, and wastewater process: research, marketing, plant exploitation, infrastructure construction, and activities linked to the use of water, such as treatment of industrial water and wastewater. At the same time, they extended their activities to encompass other urban services, including transportation, waste, parking, and school canteens. Productive, territorial, and commercial synergies exist between all these activities today.

The French system of delegation of water and wastewater brought obvious gains in quality and effectiveness to the sector, particularly with the increased technological advances in water treatment, distribution, and wastewater. Even so, the French system is characterized by the existence of deep imbalances stemming from the structural asymmetry of knowledge and expertise that exists between delegating organizing authorities and delegated companies. Operators used the room to maneuver within the system to gain strong profits, based on the possible existence of monopoly rents. They developed vertical and then horizontal integrations, which led to the existence of oligopolistic competition.

In response, France passed a series of legislative and managerial reforms, beginning in the 1990s, which increased organizing authorities' orientation, control, and regulation in terms of reinforcing competition, improving transparency, and creating expertise at their disposal but did not eliminate the structural asymmetry.[5] In some cases, public management was reintroduced or is envisaged (Paris in 2010, Bordeaux by 2018); in others, organizing authorities became large enough to better exert their role of regulation and control.

4.4 Strategies of Integration

The fact that the two majors constitute an oligopoly that structures the market does not prevent them from innovatively seeking strategies of integration and diversification. The groups have proved an astonishing plasticity, seeking extremely varied synergies depending on circumstance (Lorrain 1995b). One can identify three tendencies, which follow one another or overlap over time, especially from the 1980s until the 2000s (Bonin 1987; Lorrain 2005): horizontal, diversifying and expanding activities to have a large coverage of urban services; vertical, controlling all of the steps in the production cycle (from resources to management) in a certain sector; and environmental, introducing into their activities concerns about sustainable development (resource protections, biodiversity, etc.).

4.4.1 Horizontal or Multi-Service Integration

Close and long-term relationships with local authorities are at the heart of the water trade. As a result, there is a propensity to offer these communities a range of services. This phenomenon is long-standing; Suez is the heiress of SLEE, which, until 1945, provided gas, electricity, and water.[6] From the 1960s to the 1990s, with the development of the delegated management of a growing number of local public services, this multi-service model gradually extended to waste, heating and cooling, urban networks, energy, parking, public transport (for Veolia Environnement), funeral services (for Suez), and the management and maintenance of buildings, fire protection, and other services.

In the 1990s, the companies' ambition grew, extending to video communication wiring (Générale des Eaux became French international media conglomerate Vivendi in 1998), the management of school canteens, leisure parks, prison infrastructure,

[5] These reforms included the Sapin Law on the prevention of corruption and the reinforcement of competition and transparency; the Barnier and Mazeaud laws on the improvement of transparency; the development of incentive mechanisms; and the involvement of users in the regulation process.

[6] After the nationalization of electricity industries in 1946, SLEE became Lyonnaise des Eaux.

Table 4.5 From Générale des Eaux to Veolia Environnement

1853	Creation of Compagnie Générale des Eaux (SGE)
1970 (years)	Absorption of SGE, which became the Group Vinci
1983	Participation in the creation of Canal+ (television) and of SFR (telecommunications)
1998	Merger with Havas (communication and press) and transformation into Vivendi (new name)
1999	Merger with Universal (U.S. group of communication)
2000	Break-up in Vivendi-Universal and Vivendi-Environnement
2003	Vivendi-Environnement becomes Veolia Environnement

Source: Data compiled by the author

building surveillance, and elevator maintenance (Table 4.5). The groups sought to offer a complete range of services and become indispensable partners of the local public authorities. The city of Toulouse, for example, delegated the majority of its local public services to the same group, Générale des Eaux.

4.4.2 Vertical Integration

Vertical integration sought the control of the entire product chain, including hydraulic pipes and projects; manufacturing of pumps, valves, and treatment equipment; and electric works. BPW plays a privileged role in this strategy because projects by water companies always involve this building and public works sector and ensure employment to a myriad of subsidiaries. At the end of the 1980s, this strategy gained importance with the buyout of large companies engaged in building and public works. At the same time, Bouygues, the large building and public works company, bought out SAUR in 1984, thus landing in third place in the sector. Competences that these groups gradually acquired went well beyond vertical integration. The objective was to constitute large groups able to deal with any project by ensuring the design, construction, financial backing, engineering, and even the operation. In 1994, BPW became more important than water in the turnover of the two groups (28 % BPW and 26 % water for Vivendi and 35 % and 22 % for Suez, respectively): "The physical production of cities constitutes a vast unified market by the strategies of some private large multi-sector companies" (Lorrain 1990). From this point of view, the traditional links between these groups and the banking sector (Société Générale for Générale des Eaux, Banque Nationale de Paris (BNP) and then Suez for Lyonnaise des Eaux) have become more important (Morin 1996).

The two horizontal and vertical integration models, when combined, constitute several groups involved in many sectors, from construction to operation. It was the tendency in the 1990s, where one saw them engaging in personal services such as the hotel industry, restoration, residences for elderly people, and medical

institutions, to become real conglomerates, involved in telecommunications. The creation of Vivendi Universal, the first world communications group, encompassing cinema, media, and telecommunications, is the result of a strategy of both horizontal and vertical integration. This strategy reached its apex in the 1990s but exploded between 1998 and 2001 with the breakup of Vivendi and a severe debt crisis of Suez from 2002 to 2005.

4.4.3 Environmental Integration

Companies refocused on their traditional core activities during the 2000s. To a certain extent, that represents a return to the multi-service model because the know-how involved in operating strongly territorialized local public services lies at the heart of the business by tying long-term relations with public decision makers. Veolia Environnement, for example, created in the aftermath of Vivendi, remains active in transport, energy services, and waste, in addition to water and wastewater. But beginning in the 2000s, the overall diversification of the 1990s left room for a strategy centered on what the two large groups call services to environment: water, wastewater, transport, and waste. Thus Bouygues sold SAUR, which still retains concessions, such as that of the city of Mendoza in Argentina[7] and some cities in Africa. From the 2000s, the word "environment" became more than a marketing platform or cause du jour. It became a new way to acquire know-how for the future. It unites water and waste; indeed, the two majors sought both diversification and control of the entire production chain in these two fields.

In terms of diversification, new services and technologies appeared, often related to legislative changes, particularly in the fields of treatment and decontamination of water, maintenance and rehabilitation, water production or waste recycling, resources protection, energy saving, etc. The environmental topic is a very dynamic factor in the invention of new trades and services offered to public authorities and companies and facilitates a move toward the definition of regulations (Lupton and Bauby 2008) and public policies.

Today, the control of the value chain rests more on engineering. This old form of vertical integration is specific to France (Drouet 1987). Independent engineering from manufacturers and operators dominates elsewhere but has acquired greater prominence: Dégremont at Suez and the wastewater undertaking by OTV[8] at Veolia Environnement are essential assets for the competitiveness of the groups and the penetration of new markets. The two groups use expressions such as "comprehensive solutions" when referring to the whole cycle of water. They propose "to apprehend largely and according to a common approach, the management of

[7] See Chap. 8 for more information on the privatization of water and sanitation services by international consortia in Argentina.

[8] OTV is an engineering group within Veolia specializing in water engineering activities.

actions with an environmental impact, as well as the development of solutions allowing interactions and optimization between these services" (Veolia Environnement 2006). It is in services to industrial and service companies, which tend to outsource the management of their fluids, water, and effluents, that the following dynamic is best seen: whereas the groups formerly provided only the engineering and the construction of the installations, today they propose to assume their integral management and optimization. Veolia Environnement extends its services, for example, to waste management, energy services (steam, industrial heating and cooling), and even to rail transport; the range of services can thus include management and real estate maintenance.

One finds the multi-service approach in the overall efforts to reduce the impact of the activity on the environment. For the two groups, this market is rapidly growing, and it is this same environmental management approach that they try to develop with local authorities. Thus, one speaks today about water management in the city, including the management of rainwater resources (Veolia Environnement 2007). When Suez Environnement speaks about the control of the value chain, it explicitly refers to the cycle of water (Suez 2007). The two majors followed similar integration processes, and environment today has become the strategic integrator of their "production value."[9] Environment is the key element of Veolia's still more diversified activities, whereas Suez places more focus on two pillars, water and energy, granting an increasingly central place to the latter (see infra). As of December 2011, Veolia was moving toward a recentering of its three activities, water, environment, and energy, and was trying to sell its stakes in transportation.

4.5 Strategies of Internationalization

Originally, the water sector was designed and organized in Europe at the local level according to the characteristics of the available resource; wastewater management was also organized at this level. Thus, the first operators were born from local initiatives. The phenomena of vertical and horizontal integration that gave rise to the large companies active today appeared only gradually. Initially, this integration took place within each country but expanded beyond the national borders beginning in the early twentieth century. The internationalization of the two majors is related to the specific history of each group and the opportunities that opened to them to use their competences, starting with the traditionally strong water and wastewater sector, which propelled the French model of delegation.

[9] According to their names "Veolia Environnement" and "Suez Environnement," and corporative statutes. See Articles 3 of their corporative statutes http://www.finance.veolia.com/docs/Statuts-au-03-aout-2011.pdf; http://www.suez-environnement.fr/wp-content/uploads/2012/01/Statuts_SUEZ_ENVIRONNEMENT_Company1.pdf?9d7bd4

4.5.1 A First Internationalization

The example of Lyonnaise des Eaux is particularly significant. The company developed services—electricity, in particular—in the French colonies of North Africa (Tunis, Morocco); central Africa (Togo, Congo); and the Pacific (New Caledonia). After the nationalization of electricity in France in 1946, Lyonnaise des Eaux restructured its activities. In the 1950s, it was present in many African countries: Algeria, Morocco, Tunisia, Madagascar, Guinea, Congo, Center Africa, Senegal, and Togo. In 1959, Africa accounted for 80 % of the company's mortgage portfolio value and 15 % of its benefits (De Meritens and Fabry 2001).

Between 1959 and 1973, colonized countries gained independence and the national authorities in the countries concerned stopped the credits of the subsidiaries of Lyonnaise des Eaux. In some cases, Lyonnaise des Eaux succeeded in continuing to ensure a technical presence within the new management companies. However, because the company retreated to France, it lost its expertise in working in foreign contexts. Compagnie Financière de Suez became the main shareholder of Lyonnaise des Eaux in 1974. The consolidation of the water supply business and diversification of city services—water, sanitation, heating, energy, safety, and funeral services—followed. In 1997, Lyonnaise des Eaux merged with Compagnie Financière de Suez to become a "world group of community-based services" (De Meritens and Fabry 2001).

4.5.2 The 1980s to the 1990s

The development of Lyonnaise des Eaux and Générale des Eaux in the 1960s and the 1970s occurred in France through the rapid growth of delegation (see supra). But the risk of progressive saturation of the French market appeared. The companies ensured themselves a fast growth rate by seeking new activities, thus reinforcing their character of multi-service groups, and by conquering new markets in the field of water and wastewater. This second internationalization went hand-in-hand with the transformation of these companies into multi-service groups.

Thus, during the 1970s, Lyonnaise des Eaux tried to enter the Spanish market, a pathway to Latin America, by recovering the historical link that existed with Aguas de Barcelona through its participation in the holding group AGBAR[10] (De Meritens and Fabry 2001). Between 1980 and 1990, Lyonnaise des Eaux's strategy consisted of widening its international expansion. The countries of the European Community and North America were "privileged for their economic political stability and those of Asia and the Pacific for their rapid growth" (De Meritens and Fabry 2001).

[10] Construction, local public services, health, communication, and all that relates to water in Barcelona.

In the United Kingdom under Margaret Thatcher, Lyonnaise des Eaux became significantly involved in three water companies. After the fall of the Berlin Wall, the Eastern European countries discovered the model of delegated management proposed by the French groups.

The groups centered their strategies on the export of their technology, expertise, and the French system of delegation-concession, the so-called French model, "which is recognized in most of the world as a rational, effective, and efficient mode of management" (De Meritens and Fabry 2001). This strategy converged with one developed at the same time by international agencies, impelling structural reforms, in particular the transformation of the management of public services, including cost recovery policies and the use of the private sector to manage and finance infrastructure (World Bank 1994). The French firms had been actively cooperating for the development of these doctrines by promoting the merits of the French model of delegated management and the regulation by concession contracts and its advantages over the English model of privatization and regulation by independent commissions. But, whereas delegated management in France primarily took the form of lease contracts, developing countries generally advocated concession at the end of the 1980s and the beginning of the 1990s, including financing the investments or total privatization.

In 1990, the merger with a construction company with broad international exposure helped Lyonnaise gain entry into new markets. Lyonnaise sought to meet the requests of megacities that "expected broad offers from companies (construction, maintenance, management of the services)" and it became the leader of construction, town planning, and environmental services (De Meritens and Fabry 2001). In the water sector, Lyonnaise des Eaux obtained significant contracts abroad: in Buenos Aires, Mexico City, Cartagena, Sydney, and Chengdu (China) in 1993–1994 and in Johannesburg, Jakarta, Manila, La Paz, Budapest, Maribor (Slovenia), Casablanca, and Medan (Indonesia) in 1997; thereafter, in Casablanca and Santiago, the latter of which was a total privatization. In particular, a 1993–1994 contract with Buenos Aires served as a "leading experiment" on which to base a common reference on good practices regarding privatizations in the water sector (Lorraine 1995b). In this new phase of internationalization, Lyonnaise des Eaux also invested in industrialized countries, including the United Kingdom, the United States, and Spain. Consequently, it developed joint ventures with local companies, particularly in China (De Meritens and Fabry 2001).

Générale des Eaux and Lyonnaise des Eaux enjoyed spectacular growth and obtained a critical size at an international level in the 1980s. The situation began to change around 1990 with shifts in the worldwide economy and the redefinition of the strategies of the groups. Two apparently contradictory processes developed: Lyonnaise and Générale consolidated their leadership position in water supply and extended their activities in other sectors, primarily in those considered to be more profitable or less risky—in particular energy for the Lyonnaise company and communication for Générale.

4.5.3 Changes and Strategic Redeployments of the 2000s

The context has clearly changed since the end of the 1990s. A series of macroeconomic, financial, sectoral, and social shifts strongly modified the majors' perspectives of investment profitability and led to the strategic adjustment of their multilateral organization.

According to a study of 34 significant World Bank cases, concessions in the water sector appear relatively less attractive. Thus, 40 % of the water concessions in Latin America prove to be "non-attractive." The same study stressed that concessions were considered risky at the end of the 1990s (Sirtaine et al. 2005; Foster 2005). As Guasch noted (2004), "In the sectors of water and transport, the needs for investments were the highest, but, at the same time, the recovering of the costs by the tariffs was difficult because of social and political reasons." In addition, macroeconomic shocks influenced the rates of exchange in Mexico in 1994, Brazil in 1999, and Argentina in 2001 (Schneier-Madanes and de Gouvello 2003). Political changes, as well as mobilizations of populations particularly sensitive to water challenges, also played a role in these companies becoming less attractive (Sierra 2006). Thus, the strategy that had emerged in the beginning of the 1990s revealed its weaknesses and even its strategic errors (Estache 2006). At the same time, the accelerated development abroad (privatizations, concessions) generated a debt rate that was difficult for these groups to reabsorb.[11] The level of debt called for large investment withdrawals and greater selectivity.

Each particular failure cannot be analyzed separately from this context: the disengagement of Suez from Buenos Aires or Jakarta, for example, concerns not only local causes but a strategic redeployment, because the group imposes for all its activities and on each branch the obligation to finance its expenditures (Hall et al. 2011). That strategy reduces the capacity of expansion in water and forces majors to choose contracts that minimize investments and fixed assets (e.g., standard lease contracts). Undoubtedly, in each case, there are specific factors that lead to the decision making, but a general strategic framework also is at work: Suez was not only withdrawing from Argentina but also from countries like Indonesia and Malaysia to center itself in particular in Europe.

At that time, Suez seemed to disengage somewhat from water and carry out multi-utility diversifications, especially in energy, which appeared to be more profitable and less risky. One can analyze the redeployments that were developed at the beginning of the 2000s, such as the search for an activity that could replace water as the principal business. Water gave way as "the first trade of the group" in the two majors. In 2005 the energy sector accounted for 75 % of the turnover of the Suez-Lyonnaise des Eaux group; the group was the second provider of electricity in France with 8 % of the market shares, the fifth in Europe with 14 million customers,

[11] Veolia Environnement had 3.6 billion euros in assets for 12.9 billion euros in debts; Suez had 26 billion euros in debts in 2002, which fell to 13.9 billion euros with the transfer of 11 billion euros in assets, but the debt still exceeded the value of the assets.

Table 4.6 Suez merger with GDF

(%)	Europe	North America	South America	Others
Turnover Suez 2005	78.6	10.0	5.0	6.4
Turnover GDF Suez 2011	81.7	6.4	2.9	8.9
Employees GDF Suez 2011	87.4	2.8	2.0	7.7

Source: Suez, *Document de référence* (2006). GDF Suez, *Document de référence* (2011)

and the 10th in the world. It was the sixth largest gas operator in Europe. It had 80 million customers worldwide and 65 million sanitation customers, but only 5.6 million for electricity and 2.1 million for gas. It carried out 78.6 % of its turnover in Europe. The merger between Suez and the French public enterprise Gaz de France confirms this strategic reorientation (Table 4.6).

From 2005 to date, the changes of the Veolia Environnement-Générale des Eaux Group are less pronounced. In general, the number of operators in the international water market fell with the dawn of the 2000s. Générale des Eaux withdrew from Tucumán (Argentina), the Bechtel Group from Cochabamba (Bolivia), and Azurix from the Province of Buenos Aires. Other operators pulled out of Malaysia, Mexico City, Cancun, and Monterrey. For example, Anglian Water withdrew from China and Thailand, and Suez from Northumbrian Water in Britain. The attempts at new concessions failed, as did the search for operators to replace the departing ones (Cochabamba, Province of Buenos Aires, and Tucumán).

At the beginning of 2006, the German RWE Group decided to center its activities on energy and give up the multi-service operator model, which had led it to be simultaneously the largest producer of electricity in Germany, the second producer of gas, and the third world operator in the field of water, with two principal subsidiaries, Thames Water (Great Britain) and American Water (USA). Likewise, other operators of electricity, such as the Spanish Iberdrola, Endesa, or Union Fenosa, withdrew from the water sector one after the other.

The companies developed a specific approach to portfolio management, resulting in a permanent re-evaluation of the interest of each activity, asset, and contract as the volatility of the delegated companies (concessionaires) grew. A shift from the traditional formula of less capital-intensive service contracts occurred. The new slogan became a development model: "Less capital consumed, more cash-flow generated" (*La Tribune* 2004).

The merger methods between Suez and Gaz de France, with the subsidiarization of the activities in the field of water and environment (*La Tribune* 2007), as well as the Shareholders Pact between the principal shareholders of this subsidiary, confirm these main tendencies. The first steps of this merger date to the beginning of the 2000s.

The strategy of the French officials in the framework of the Europeanization of electricity and gas, marked by a double process of liberalization and constitution of large European operators forming an oligopoly, rested on the progressive constitution, beside EDF (Electricité de France), of a second large energy group based in France (Bauby and Varone 2007). The merger encountered a series of obstacles

before the 2007 French presidential election. As a precondition for the merger, the then newly-elected President Nicolas Sarkozy specified that the industrial project and the activities of the new GDF Suez group would be centered on energy, separate from water and environment activities. Suez Environnement, which encompassed water activities, waste, sanitation, and environment, remained a subsidiary of GDF Suez. But the new shift of Lyonnaise des Eaux seemed to correspond to a strategic recentering on energy. One century after the company was formed, one rediscovered the basis of the Société Lyonnaise des Eaux.

4.6 What Strategic Redeployments?

This retrospective on the two large French water groups can give the impression of an inevitable development; they became multi-service, multinational groups present on nearly every continent. Today, they certainly compete with each other and with other operators, but they form an oligopoly that structures the water markets and is not sheltered from income phenomena, markets sharing, or influence in some regions.

They knew to develop themselves on the basis of increasing needs for quality, environmental protection, and public health, and to propose their expertise and delegated management in a sector with no market competition. They wove their webs, without any legal or institutional constraint for organizing authorities—generally local public authorities—to open their markets or to privatize.

However, the increasing sensitivity of populations to the current and future challenges of the water sector, its essential character as a public good and a fundamental right, and the abuses of delegated management revealed these colossi to have clay feet. A strong public regulation is needed to prompt governments to seek access to water and the quality of the service; to try to fill the structural asymmetry of information and expertise from which the groups profit; and to develop transparency, raising the moral standard and preventing risk of dominant position abuse. Service groups tend to be innovative, seeking new means of development, and propose to offer local authorities necessary expertise and innovative projects. But their search for sources of economic added value and higher profits increasingly bumps up against requests for public control and public regulation, which can reduce the groups' room to maneuver and lead to difficult strategic redeployments, particularly between core activities and regional priorities.

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