

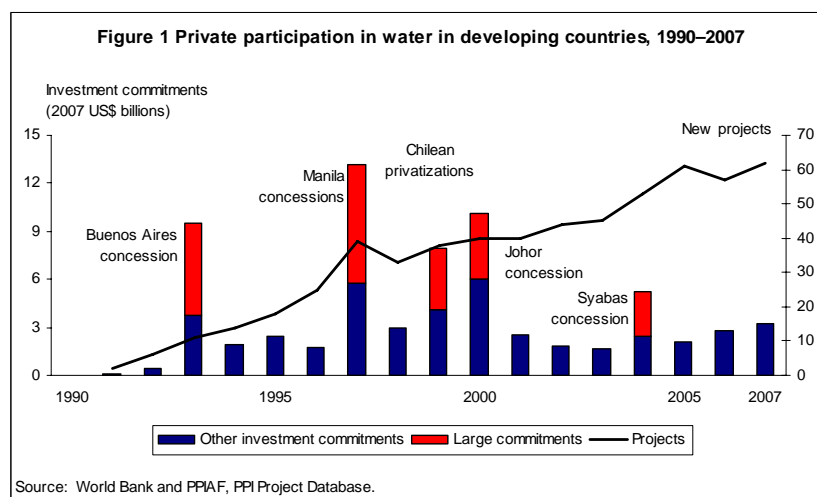
# PRIVATE PARTICIPATION IN INFRASTRUCTURE DATABASE

PPI data update note 9

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## Private water projects at a new peak in 2007, but investment levels low

In 2007, 14 low- and middle-income countries implemented at least 62 water projects with private participation, according to just-released data from the Private Participation in Infrastructure Project Database.<sup>1</sup> These projects accounted for more than US\$3.2 billion in investment commitments. In addition, a combined electricity and water project was implemented, representing investment of US\$600 million.<sup>2</sup> The number of new projects involving the private sector returned to the peak of 2005, while annual investment commitments (hereafter, *investment*) grew by 18%, though from a low level in 2006 (figure 1).<sup>3</sup>



**Highlights of 2007.** New private activity was highly concentrated in 2007. Two countries, China and Georgia, accounted for 63% of the investment. The top four countries by investment (with Mexico and Brazil added to the list) represented 79%. And just two countries, China and India, accounted for 76% of the projects.

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<sup>1</sup> Data on water projects with private participation include primarily medium-size and large projects as reported by the media and other public sources. Small-scale private service providers, which also play an important role in the water sector, are generally not included because of the lack of public information. Other contracts may have been omitted for the same reason. The Czech Republic and Estonia became high-income countries according to the 2007 World Bank country classification (released in July 2007) and are therefore excluded from the 2007 water data update.

<sup>2</sup> The combined electricity and water project is not included in the aggregate data here. Such projects are included in the energy analysis because the investments in most of these projects are usually directed to electricity.

<sup>3</sup> The 2007 water data update of the PPI Project Database ([ppi.worldbank.org](http://ppi.worldbank.org)) includes 21 more projects for 2001–06 than were reported in the 2006 update (PPI data update note 4). As a result, investments in 2006 changed from the US\$2 billion reported in 2006 to the US\$2.75 billion reported in 2007. Investment in 2005 changed from US\$1.7 billion to US\$2.1 billion. Most of the newly reported projects were for treatment plants in China.

New private projects focus on treatment plants, which accounted for 40 of the 62 water contracts in 2007—though just 47% of the investment. Among the treatment plant contracts, 14 are for potable water plants, accounting for almost 75% of the investment in treatment plants. Twenty-two are for sewerage facilities, accounting for most of the remaining investment. The other 4 contracts are for combined potable water and sewerage plants. China implemented 31 of the treatment plant contracts, covering a total capacity of 6.2 million cubic meters a day. The other 9 contracts for treatment plants were implemented in seven countries and covered a total capacity of 810,000 cubic meters a day.

The other 22 water contracts, involving investment of US\$1.7 billion, are for utilities. These water utility contracts cover sizable populations in several regions. Twelve cover service areas with a combined population of 11.3 million; the largest of these contracts are for the water utilities of three Chinese cities—Tianjin (1.75 million), Lanzhou (1.73 million), and Huangpi (1.13 million)—and for Georgia's Tbilisi Water System (1.1 million). Six contracts provide for 310,000 water connections; the management contract for Cameroon's Camerounaise des Eaux is the largest one (194,000 connections), followed by India's Latur water utility (100,000).

The contracts covered a range of types: there were 29 build-operate-transfer (BOT) contracts, 20 concessions, 5 divestitures, 5 management contracts, 2 leases, and 1 build-own-operate (BOO) contract. In addition, a combined electricity and water BOO contract was implemented.

**Regional activity.** Six regions reported new water projects reaching financial closure (tables 1 and 2).

- In *East Asia*, China, Indonesia, and Malaysia implemented new projects. In China 42 projects reached financial closure, involving investment of US\$1.6 billion. Of these contracts, 31 are for water and sewerage treatment plants (21 sewerage treatment plants, 7 water treatment plants, and 3 combined water and sewerage treatment plants). The other 11 are for water utilities. The 8 utility contracts for which information is available cover concession areas with a total population of 7.6 million. In Indonesia a concession was signed for a water treatment plant in Pangkalpinang City, and in Malaysia a concession for a water treatment plant in Hulu Langat.
- In *Europe and Central Asia* private activity was limited to three contracts. In Georgia the Tbilisi Water System was fully divested, involving investment of US\$435 million. In Poland the city of Toszek divested 50% of its water utility. In Romania a 25-year lease contract was signed for the water and sewerage utility of the town of Otopeni.
- In *Latin America* four contracts reached financial closure. In Brazil the city of Rio Claro signed a 30-year concession for sewerage services. In Chile the district of Pudahuel signed a 15-year concession for its water and sewerage utility. In Mexico two BOT contracts were implemented in the State of Queretaro—one for a water treatment plant, the other for a wastewater treatment plant.
- In the *Middle East and North Africa*, Algeria and Oman implemented five projects, involving investment of US\$1 billion. In Algeria two 5.5-year management contracts were signed for water and sewerage utilities: one for the city of Oran, and the other for the regions of Annaba and El Tarf. In addition, a 25-year BOT contract was signed for a desalination plant with a capacity of 200,000 cubic meters a day in Oran. In Oman two BOO projects reached financial closure. One is for a desalination plant with a capacity of 80,000 cubic meters a day in the Ash Sharqiyah region. The other is for a combined desalination and power plant with a capacity of 120,000 cubic meters a day and 678 megawatts.
- In *South Asia*, India implemented five projects, involving investment of US\$140 million. A 25-year BOT contract for a desalination plant, Chennai Desalination Ltd., reached financial closure. In the city of Nagpur two management contracts were signed: a 5-year contract for operating a water treatment plant and a 7-year contract for managing a water utility. In Latur, Maharashtra, the local government signed a 10-year concession for its water utility system. In the city of Kolkata the local government signed a 30-year BOT contract for a water supply and sewerage system in Section V, Salt Lake.
- In *Sub-Saharan Africa*, Cameroon signed a 10-year lease-*affermage* contract for the national water utility. Sudan implemented a BOT contract for a water treatment plant in Omdurman, near Khartoum.

**Potential new projects.** Besides the 62 projects that were implemented, six contracts were awarded in 2007 but had not reached financial closure or been signed by December of that year. In Brazil an 18-year BOT contract for sewerage service was awarded in the state of Bahia. In Algeria four BOT contracts were awarded for desalination plants to be located in Cap Djinet, Fouka, Mostaganem, and Souk Tleta. In Jordan a BOT contract was awarded for a water utility in Amman.

**Canceled and distressed projects.** Three contracts were canceled in 2007. In the Russian Federation the municipality of Tomsk terminated the 49-year lease contract signed in 2003 for the city's water and wastewater services. In Bolivia the national government finalized the announced termination of the 30-year concession for water and sewerage services in La Paz and El Alto. In Colombia the government of the city of Bogota canceled the 20-year BOT contract for the Tibitoc Water Treatment Plant. By 2007 the number of canceled and distressed water projects had reached a total of 55, representing 9% of all water projects and 32% of committed investment in 1990–2007.

**Concluded projects.** Five contracts concluded in 2007. Four of them were management contracts: one for the water utility in the cities of Gjakova and Rahovec, in Serbia; one for the water utility in the cities of Bukhara and Samarkand, in Uzbekistan; one for the water utility of Kavaja, in Albania; and one for Guyana's water utility. The fifth was a BOT contract for a wastewater project in Cuernavaca, Mexico.

**Table 1 Summary of water projects reaching financial or contractual closure in 2007**

Region	Country	Projects	Investment commitments (US\$ millions)	Projects by subsector		Projects by type of private participation				
				Treatment plant	Utility	Greenfield project	Concession	Management contract	Lease contract	Divestiture
East Asia and Pacific	China	42	1,605.23	31	11	23	15	1	0	3
	Indonesia	1	..	1	0	0	1	0	0	0
	Malaysia	1	..	1	0	0	1	0	0	0
Europe and Central Asia	Georgia	1	435	0	1	0	0	0	0	1
	Poland	1	..	0	1	0	0	0	0	1
	Romania	1	..	0	1	0	0	0	1	0
Latin America and the Caribbean	Brazil	1	257	0	1	0	1	0	0	0
	Chile	1	3.1	0	1	0	1	0	0	0
	Mexico	2	278.8	2	0	2	0	0	0	0
Middle East and North Africa	Algeria	3	230	1	2	1	0	2	0	0
	Oman	1	173	1	0	1	0	0	0	0
South Asia	India	5	140.9	2	3	2	1	2	0	0
Sub-Saharan Africa	Cameroon	1	0	0	1	0	0	0	1	0
	Sudan	1	120.7	1	0	1	0	0	0	0
<b>Total</b>		<b>62</b>	<b>3,243.73</b>	<b>40</b>	<b>22</b>	<b>30</b>	<b>20</b>	<b>5</b>	<b>2</b>	<b>5</b>

Note: .. = not available.

**Table 2 Water projects reaching financial or contractual closure in 2007**

Note: .. = not available.

East Asia and Pacific									
	Country	Project name	Project status	Sub-sector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	China	Baotou City Wanshuiquan District Wastewater Treatment Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	52.63	Cubic meters per day (thousands)	200	Dalian Dongda Environmental Engineering Co. Ltd. (100%, China)
2	China	Beijing No. 10 Water Plant A	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	197.37	Cubic meters per day (thousands)	500	Golden State Environment (50%, United States)
3	China	Binzhou City Nanhai Water Supply Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	9.47	Cubic meters per day (thousands)	50	George Malaysia Berhad (60%, Malaysia)
4	China	China Water Affairs Investment Co. Ltd.	Operational	Treatment plant	Divestiture (partial)	23.03	Cubic meters per day (thousands)	3,300	China Water Affairs Group Ltd. (20%, Hong Kong, China)
5	China	Daming County Wastewater Treatment Plant Phase I	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	6.26	Cubic meters per day (thousands)	20	Golden State Environment (100%, United States)
6	China	Danzhou City Water Distribution Network Project	Operational	Utility	Concession (rehabilitate, operate, and transfer)	4.47	Population (thousands)	210	China Water Industry Group Limited (100%, Hong Kong, China)
7	China	Dezhou City Xiajin Water Supply Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	13.47	Cubic meters per day (thousands)	104	Hyflux (100%, Singapore)
8	China	Fengxiang County Wastewater Treatment Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	7.5	Cubic meters per day (thousands)	20	Zhongxing Telecom (100%, China)
9	China	Foshan City Wastewater Treatment Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	7.89	Cubic meters per day (thousands)	50	Bio-Treat Technology Ltd. (100%, China)
10	China	Gaoan City Water Affairs Group Ltd.	Operational	Utility	Concession (rehabilitate, operate, and transfer)	13.16	Population (thousands)	830	China Water Affairs Group Ltd. (60%, Hong Kong, China)
11	China	Guangdong Xinhui Water Affairs Co. Ltd.	Operational	Treatment plant	Divestiture (partial)	9.7	Cubic meters per day (thousands)	235	China Water Affairs Group Ltd. (40%, Hong Kong, China)

12	China	Guanyun County Water Supply and Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	16.75	Cubic meters per day (thousands)	80	Hyflux (100%, Singapore)
13	China	Haikou City No. 1 Water Affairs Company Limited	Operational	Utility	Concession (rehabilitate, operate, and transfer)	122.82	Population (thousands)	800	Veolia Environnement (49%, France)
14	China	Hanzhong City Xingyuan Water Supply Company Ltd.	Operational	Utility	Concession (rehabilitate, operate, and transfer)	13.59	Population (thousands)	280	InterChina Holdings (100%, Hong Kong, China)
15	China	Hu County Wastewater Treatment and Recycling Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	12.89	Cubic meters per day (thousands)	60	Beijing Sound Environment Industry Group (100%, China)
16	China	Huangpi Sewerage Collection Network Project	Construction	Utility	Greenfield project (build, operate, and transfer)	43.42	..	..	Asia Water Technology (100%, Singapore)
17	China	Huangpi Water Supply Facilities	Construction	Utility	Concession (rehabilitate, operate, and transfer)	110.53	Population (thousands)	1,130	Asia Water Technology (70%, Singapore)
18	China	Jining Haiyuan Water Co., Ltd.	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	5.27	Cubic meters per day (thousands)	30	China Water Industry Group Limited (70%, Hong Kong, China)
19	China	Jinzhou Water Affairs Group Co., Ltd.	Operational	Utility	Divestiture (partial)	30.7	Population (thousands)	880	China Water Affairs Group Ltd. (51%, Hong Kong, China)
20	China	Lankao County Wastewater Treatment Plant	Operational	Treatment plant	Greenfield project (build, operate, and transfer)	4.34	Cubic meters per day (thousands)	25	Anhui Guozhen Environmental Protection Science & Technology Co., Ltd. (100%, China)
21	China	Lanzhou City Water Supply Group	Operational	Utility	Concession (rehabilitate, operate, and transfer)	225	Population (thousands)	1,730	Veolia Environnement (45%, France)
22	China	Linyi Hedong Water Co., Ltd.	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	5.92	..	..	China Water Industry Group Limited (60%, Hong Kong, China)
23	China	Lujiang County Urban Wastewater Treatment Plant Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	..	Cubic meters per day (thousands)	20	Anhui Daliang Real Estate Company Ltd. (..%, China), Lujiang County Changfa Real Estate Development Company Ltd. (..%, China)
24	China	Nanjing City North Wastewater Treatment Plant	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	65.79	Cubic meters per day (thousands)	300	Golden State Environment (100%, United States)

25	China	Nanjing Jiangning City North Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	14.47	Cubic meters per day (thousands)	120	Asia Environment Holdings Limited (100%, Singapore)
26	China	Suizhou City Urban Wastewater Treatment Plant Phase I	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	6.58	Cubic meters per day (thousands)	50	Suizhou City Yulong Water Supply Company Ltd. (100%, China)
27	China	Suqian City Yanghe Wastewater Treatment Plant	Operational	Treatment plant	Management and lease contract (management contract)	0	Cubic meters per day (thousands)	10	Anhui Guozhen Environmental Protection Science & Technology Co., Ltd. (100%, China)
28	China	Suzhou City Five Wastewater Treatment Plants	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	59.21	Cubic meters per day (thousands)	360	Salcon Bhd (70%, Malaysia)
29	China	Taizhou City North Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	7.24	Cubic meters per day (thousands)	80	Golden State Environment (100%, United States)
30	China	Tianjin City North Water Affairs Company Limited	Operational	Utility	Concession (rehabilitate, operate, and transfer)	406.5	Population (thousands)	1,750	Veolia Environnement (49%, France)
31	China	Wangcheng County Wastewater Treatment Plant Stage I	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	17.1	Cubic meters per day (thousands)	40	Asia Environment Holdings Limited (100%, Singapore)
32	China	Wuhu City Tianmenshan Wastewater Treatment Plant Phase I	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	9.21	Cubic meters per day (thousands)	60	Anhui Guozhen Environmental Protection Science & Technology Co., Ltd. (100%, China)
33	China	Xi'an City Chang'an District Wastewater Treatment Project	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	17.63	Cubic meters per day (thousands)	100	Beijing Sound Environment Industry Group (100%, China)
34	China	Xianning City Wenquan Wastewater Plant	Operational	Treatment plant	Greenfield project (build, operate, and transfer)	5.47	Cubic meters per day (thousands)	60	Beijing Sound Environment Industry Group (100%, China)
35	China	Xinmin Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	13.55	Cubic meters per day (thousands)	60	Dayen Environmental Ltd. (100%, Singapore)
36	China	Xuyi County Water Supply Company	Operational	Utility	Concession (rehabilitate, operate, and transfer)	5.21	..	..	Golden State Environment (100%, United States)
37	China	Yangzhong City Water Company	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	6.45	Cubic meters per day (thousands)	75	Golden State Environment (75%, United States)
38	China	Yichun City Water Supply Co., Ltd.	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	3.95	Cubic meters per day (thousands)	100	China Water Industry Group Limited (51%, Hong Kong, China)

39	China	Yidu Wastewater Treatment Project	Operational	Utility	Greenfield project (build, operate, and transfer)	8.26	..	..	Jiangsu Weide Environmental Technologies Company Ltd. (..%, China)
40	China	Yongshun County Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	7.3	Cubic meters per day (thousands)	30	Easen International Company Ltd. (..%, United States), Grupo Tradebe (..%, Spain)
41	China	Zhaoan County Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	8.55	Cubic meters per day (thousands)	60	Grupo Tradebe (..%, Spain), Easen International Company Ltd. (..%, United States)
42	China	Zhoukou City Water Affairs Group Ltd.	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	6.58	Cubic meters per day (thousands)	30	China Water Affairs Group Ltd. (60%, Hong Kong, China)
43	Indonesia	Pangkalpinang City Water Treatment Plant	Construction	Treatment plant	Concession (build, rehabilitate, operate, and transfer)	..	Cubic meters per day (thousands)	12	Darco (70%, Singapore)
44	Malaysia	Sungai Lolo Water Treatment Plant	Operational	Treatment plant	Concession (rehabilitate, operate, and transfer)	..	..	..	Puncak Niaga Holdings Berhad (83%, Malaysia)

### Europe and Central Asia

	Country	Project name	Project status	Sub-sector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	Georgia	Tbilisi Water System	Operational	Utility	Divestiture (full)	435	Population (thousands)	1,093	Multiplex Solution (100%, Switzerland)
2	Poland	ZGKiM Toszek	Operational	Utility	Divestiture (partial)	..	Number of connections (thousands)	1.9	Remondis (50%, Germany)
3	Romania	Otopeni Water and Sewerage System	Operational	Utility	Management and lease contract (lease contract)	0	Number of connections (thousands)	2	Veolia Environnement (100%, France)

### Latin America and the Caribbean

	Country	Project name	Project status	Sub-sector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	Brazil	Rio Claro Sewerage System	Operational	Utility	Concession (build, rehabilitate, operate, and transfer)	257	Population (thousands)	160	Odebrecht SA (100%, Brazil)
2	Chile	Izarra de Lo Aguirre Water Concession	Construction	Utility	Concession (build, rehabilitate, operate, and transfer)	3.1	Number of connections (thousands)	2	..
3	Mexico	Queretaro Aqueduct II	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	246	Cubic meters per day (thousands)	130	Mitsui (26%, Japan), ICA SA de CV (37%, Mexico), Fomento de Construcciones y Contratas SA (FCC) (26%, Spain)
4	Mexico	San Pedro Martir Wastewater Treatment Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	32.8	..	..	Mitsui (50%, Japan), Tyco International (50%, United States)

### Middle East and North Africa

	Country	Project name	Project status	Sub-sector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	Algeria	Annaba and El Tarf Management Contract	Operational	Utility	Management and lease contract (management contract)	0	Population (thousands)	1,000	Gelsenwasser (100%, Germany)
2	Algeria	Oran Management Contract	Operational	Utility	Management and lease contract (management contract)	0	Population (thousands)	1,500	SUEZ (29%, France), Criteria Caixa Corp SA (28%, Spain)
3	Algeria	Tlemcen Hounaine Desalination Plant	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	230	Cubic meters per day (thousands)	200	Sacyr Vallehermoso (SyV) (17%, Spain), ACS Group (Actividades de Construccion y Servicios) (17%, Spain), Abengoa (17%, Spain)
4	Oman	Sur Desalination Plant	Construction	Treatment plant	Greenfield project (build, own, and operate)	173	Cubic meters per day (thousands)	80	Veolia Environnement (52%, France), Suhail Bahwan Group (48%, Oman)
5	Oman	Barka II Power and Desalination Facility	Construction	Electricity, treatment plant	Greenfield project (build, own, and operate)	600	MW	678	SUEZ (48%, France), Mubadala Development Company (48%, United Arab Emirates)



## South Asia

	Country	Project name	Project status	Subsector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	India	Chennai Desalination Ltd.	Construction	Treatment plant	Greenfield project (build, operate, and transfer)	115	Cubic meters per day (thousands)	100	Abengoa (25%, Spain), IVRCL Infrastructures & Projects Ltd. (75%, India)
2	India	Kolkata Salt Lake Section V Water Supply Project	Construction	Utility	Greenfield project (build, operate, and transfer)	16.9	Cubic meters per day (thousands)	20.45	Tata Enterprises (100%, India)
3	India	Nagpur 24x7 Water Supply	Construction	Utility	Management and lease contract (management contract)	0	Number of connections (thousands)	10	Veolia Environnement (100%, France)
4	India	Nagpur Pench Treatment Plant Rehabilitation Project	Construction	Treatment plant	Management and lease contract (management contract)	0	Cubic meters per day (thousands)	23	Veolia Environnement (100%, France)
5	India	Latur Water Supply Scheme	Construction	Utility	Concession (rehabilitate, lease or rent, and transfer)	9	Number of connections (thousands)	100	UPL Environmental Engineers Ltd. (33%, India), Hydro-Compe Enterprises (33%, Cyprus), Subhash Projects & Marketing Ltd. (33%, India)

## Sub-Saharan Africa

	Country	Project name	Project status	Subsector	Type (subtype) of private participation	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsor
1	Cameroon	Camerounaise des Eaux	Operational	Utility	Management and lease contract (lease contract)	0	Number of connections (thousands)	194	Office National de l'Eau Potable (ONEP) (..%, Morocco)
2	Sudan	Omdurman Water Treatment Plant	Operational	Treatment plant	Greenfield project (build, operate, and transfer)	120.7	Cubic meters per day (thousands)	200	Biwater (49%, United Kingdom)