

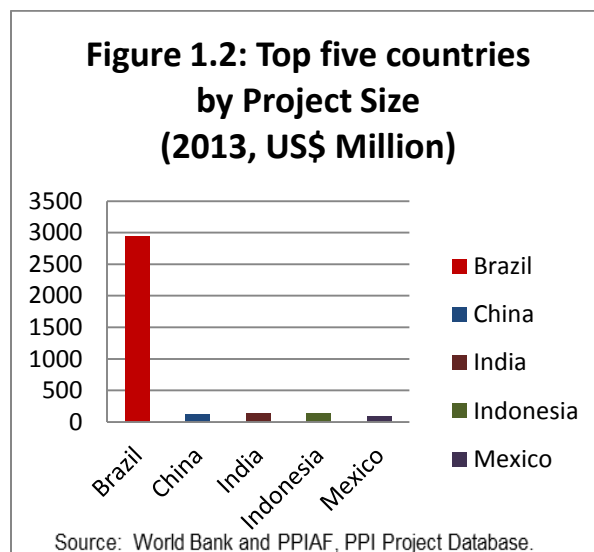
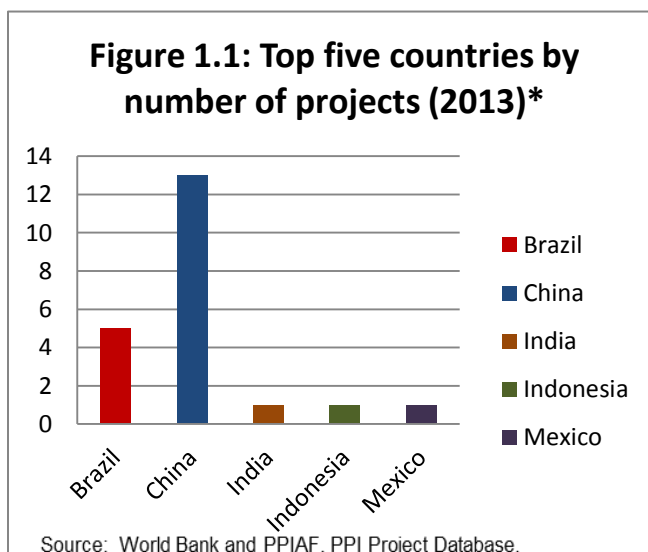
## 2013 Water Sector Private Participation in Infrastructure (PPI)<sup>1</sup> Update

- PPI in the Water and Wastewater Sector has declined 40% from 2012
- Brazil has attracted US\$3.0 billion in PPI, 86% of global PPI in the sector, all of which were sponsored by Odebrecht SA
- Local sponsors implement most of the new water projects
- Top five countries attract all of the PPI in Water and Wastewater

### 1. Water and Wastewater Sector Overview

Total PPI commitments<sup>2</sup> in the water and wastewater sector for developing countries in 2013 amounted to US\$3.4 billion, in 22 projects. This amount represents a 40 % decline from the previous year's US\$ 5.7 billion. Compared to the sector's average of US\$2.5 billion in PPI between 2009 and 2011, PPI in 2013 has actually increased in volume. In contrast, 2012 was a peak year for PPI in the water sector due to the closure of three large Brazilian projects which attracted US\$2.5 billion.

The top five countries attracted all of the investment for the sector. Brazil alone closed five projects that are among the largest globally. These projects all had the same sponsor, Odebrecht SA, a Brazilian conglomerate in the petrochemical, construction and engineering fields. China has closed the highest number of deals, but the thirteen projects totaled only US\$116.8 million in value.

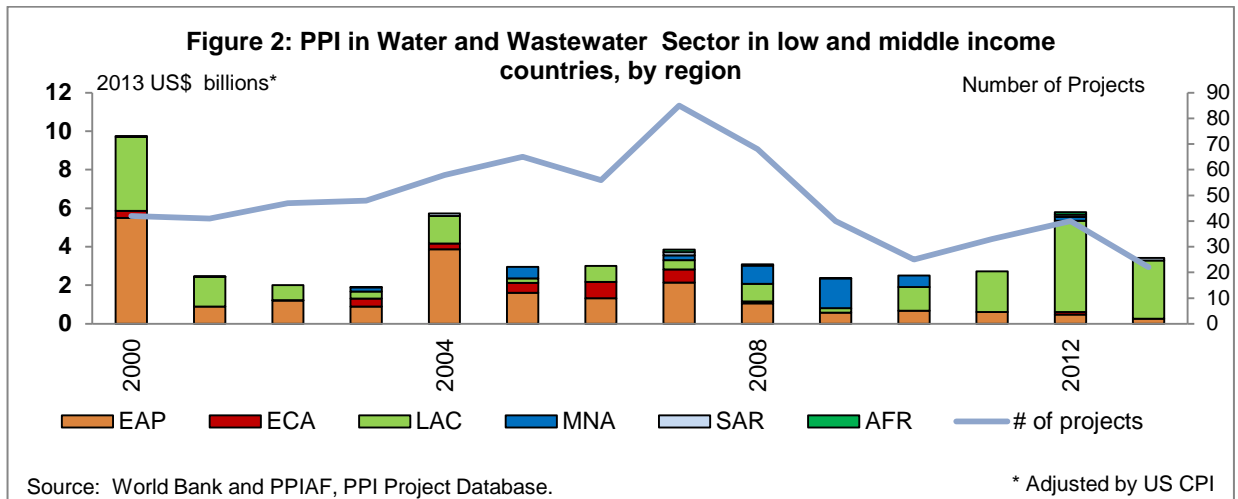


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<sup>1</sup> PPI (Private Participation in Infrastructure): Projects are considered to have private participation if a private company or investor is at least partially responsible for operating cost and associated risks. Projects are tracked which have at least 25% private equity or in the case of divestitures, at least 5% private equity. See our methodology [http://ppi.worldbank.org/resources/ppi\\_methodology.aspx](http://ppi.worldbank.org/resources/ppi_methodology.aspx).

<sup>2</sup> PPI or investment refers to the total value of projects in a given year as well as capital expenditures for capacity expansion.

## 2. Regional Overview



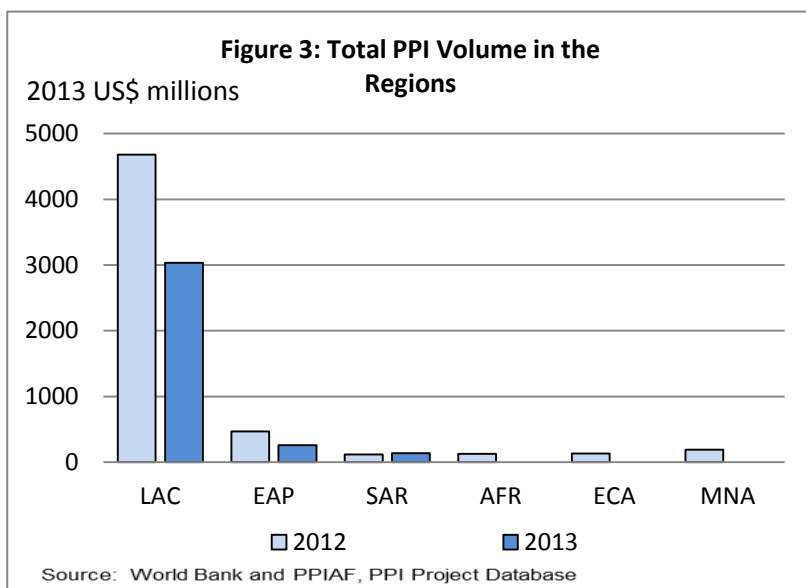
The Latin America and the Caribbean (LAC) region attracted most of the PPI in the energy sector, even though East Asia and Pacific (EAP) had a higher number of projects. This is partly due to a large wastewater treatment plant built in Pernambuco (Brazil), amounting to US\$1.9 billion. EAP is in second place in terms of amounts of PPI mobilized. Most of these projects were located in China, with an average investment value of US\$8.9 million. South Asia (SAR) came in third place, mainly due to a 20-year concession for water supply in Aurangabad (India). In Sub-Saharan Africa (AFR), a management contract<sup>3</sup> was signed by the government of the Republic of Congo and the Societe Nationale de Distribution d'Eau (SNDE) to improve the supply and the quality of potable water in Pointe-Noire and Brazzaville, the two biggest cities in the country.

	<b>New Investment</b>	<b>Additional Investment</b>	<b>Total Investment</b>	<b>% of Total</b>
LAC	3,033.3	0.0	3,033.3	89%
EAP	256.8	0.0	256.8	7%
SAR	135.1	0.0	135.1	4%
AFR	0.0	0.0	0.0	0%
ECA	0.0	0.0	0.0	0%
MNA	0.0	0.0	0.0	0%
<b>Total</b>	<b>3,425.1</b>	<b>0.0</b>	<b>3,425.1</b>	<b>100%</b>

Europe and Central Asia (ECA) has not had any new projects in the water and wastewater sectors between 2008 and 2013, except for Serbia's Zrenjanin Water Plant and the Voronezh Water Utility (Russia), which cost US\$100 million in 2012. Similarly, there continues to be no water activities in the MNA region since the Arab Spring<sup>4</sup> in 2010, probably due to political instability impeding water governance in the region and lack of long term planning strategies for sustainable water supply.

<sup>3</sup> For this reason in Table 2, under Africa, the investment value is not entered here as this is a management contract and there is no actual investment in new infrastructure or expansion of capacity.

<sup>4</sup> Dr. Hazim El-Naser, Minister of Water and Irrigation in the Hashemite Kingdom of Jordan, "Water Security in the Middle East," A Crisis on Top of a Crisis", Stanford University, May 2014.



The rankings of the six regions by order of magnitude of PPI in the water and wastewater sector were:

(1) Latin America and the Caribbean (US\$3.0 billion), with over 89% of all PPI volume in the sector totaling 6 deals;

(2) East Asia and Pacific (US\$0.3 billion), with 7% of all PPI volume and fourteen deals, thirteen of which were from China;

(3) South Asia (US\$0.1 billion), with 4% of PPI volume in the sector for 2013; and

(4) Sub Saharan Africa, which closed one management contract. There was no capital expenditure for this activity.

(5) There was no PPI activity in ECA and MNA in 2013.

Overall, in terms of the investment amount, the trend is on a positive incline with certain peak years such as 2000, 2004 and 2012 due to particularly large projects (such as the Voronezh Water Utility). The total number of projects in the water and wastewater sector has been decreasing, however. To elaborate, looking at 2007, there was a record number of 85 projects closed and the total volume of PPI was US\$3.4 billion. Comparing 2007 to the period from 2010 to 2013, the average PPI volume (US\$3.5 billion) is approximately the same, but the number of projects has reduced to 30 per year. Countries with consistently large PPI in the sector are Brazil, Chile and Argentina in LAC; China, Malaysia and Philippines in EAP.

## 2.1 Latin America and the Caribbean (LAC)

LAC region continues to attract the largest water and wastewater investment in a consistent manner. From 2010 to 2013, it has maintained the first position globally in terms of the volume of PPI in the sector. In 2013, Brazil attracted US\$2.9 billion PPI in the sector, mainly for concessions awarded at the state level that serve many municipalities under a single contract.

In Mexico, the Hermosillo Wastewater Treatment Plant II, costing approximately US\$86.2 million, received a loan of US\$ 34.6 million from the North American Development Bank which accounted for 40% of the project costs. The rest of the costs were covered through a commercial loan and an equity contribution from the private partners.

**Table 2: Latin America and the Caribbean (LAC) Top Five Deals**

<u>Country</u>	<u>Project Name</u>	<u>US\$ Million</u>	<u>Sponsors*</u>	<u>Source of Revenue</u>
Brazil	Foz do Atlantico- Wastewater collection and treatment	1,911.8	Odebrecht SA (80% / Brazil), Lidermac Construcoes (20% / Brazil)	User fees
Brazil	Foz do Brazil Unidade Goias- Wastewater collection and treatment	540.8	Odebrecht SA (100% / Brazil)	User fees
Brazil	Foz de Macae- Water utility with wastewater	237.9	Odebrecht SA (100% / Brazil)	User fees
Brazil	Rio Manso Wastewater Treatment Plant	195.0	Odebrecht SA (100% / Brazil)	Off take agreements
Mexico	Hermosillo Wastewater Treatment Plant II	86.2	Fypasa Construcciones, S.A. de C.V (Mexico)	

\*Exact Shareholding was not publically available for all projects

## 2.2 Europe and Central Asia (ECA)

There was no PPI activity in 2013 for ECA and there has been a lack of new private investment in ECA region since the global financial crisis in 2009. From a pre-crisis rate of four projects per year (2000 to 2009), only two projects have closed since 2009 in the Russia Federation and Serbia. Furthermore, the Serbian project, Zrenjanin Water Plant became distressed in 2013. In many ECA countries, regulatory uncertainty has taken a toll on new PPI in the water and wastewater sector.

## 2.3 East Asia and Pacific (EAP)

EAP saw the financial closure of thirteen projects in China and one in Indonesia, a similar level to 2012 where China attracted the most number of projects. The most active sponsors in China were local Chinese investors and included the Beijing Sound Environment Industry Group, United Water Corporation and Anhui Guozhen Environmental Protection Science & Technology Co. Ltd. Most of the contracts were greenfield BOTs or long term concessions for wastewater treatment awarded at municipal levels<sup>5</sup>. There were also three management contracts for wastewater treatment plants that were awarded by local governments in Ningyang County and Langxi County.

In 2013 the Tangerang Water Supply project in Indonesia reached financial close with a loan of US\$23.4 million from the International Finance Corporation (IFC). This was the largest project in EAP, a Build operate Transfer project aimed to quadruple the capacity of the Tangerang water treatment plant to 168,480 cubic meters per day from 38,880 cubic meters per day as well as connect 150,000 new households and industrial customers. Recent developments reveal that the local government was unwilling to push through tariff reforms and as a result Moya Asia, the sponsor, applied for early termination.

**Table 3: EAP Top Deals**

<u>Country</u>	<u>Project Name</u>	<u>US\$ Million</u>	<u>Sponsors</u>	<u>Source of Revenue</u>
Indonesia	Tangerang Water Supply	140	International Finance Corporation (13%), Moya Holding Company (88% / Bahrain)	Offtake agreements
China	Beijing Fatou, Liqiao and Wulituo Wastewater Treatment Plants Concession Agreement	38.7	Beijing Sound Environment Industry Group (100% / China)	Offtake agreements
China	Xingping City Wastewater Treatment Plant Phase II	19.9	Beijing Sound Environment Industry Group (100% / China)	Offtake agreements
China	Hancheng City Wastewater Plant Project	15.8	Beijing Sound Environment Industry Group (100% / China)	Offtake agreements
China	Jingbian County Wastewater Treatment Plant Phase II	13.1	Beijing Sound Environment Industry Group (100% / China)	Offtake agreements

## 2.4 Sub-Saharan Africa (AFR)

In 2013, the Africa region recorded one PPI project in water. This new project was a four-year management contract awarded to Veolia Environment (France) to improve the quality and supply of water for two of the largest cities in the Republic of Congo. The project was part of the PEEDU program (Projet Eau, Electricité et Développement Urbain), co-financed by the government of the Republic of Congo (80%) and the World Bank (IDA) (20%) for a total cost of US\$125.5 million. The deal is to serve 1,050,000 inhabitants in the two cities.

<sup>5</sup> These agreements typically oblige the grantor (eg cities or municipalities) to provide a payment to the contractor on the basis of a volumetric production / treatment and in some instances with some payments linked to performance indicators.

**Table 4: AFR Top Deals**

<b>Country</b>	<b>Project Name</b>	<b>US\$ Million</b>	<b>Sponsors</b>	<b>Source of Revenue</b>
<b>Congo, Rep.</b>	Societe Nationale de Distribution d'Eau (SNDE) Second Management	0.0	Veolia Environnement (100% / France)	Management fee

## 2.5 South Asia (SAR)

In 2013, PPI in water in South Asia reached US\$ 135.1 million with one deal in India, a decline from the peak in 2007 and 2009 where SAR saw seven projects in two years. This new 20 year concession signed by the City of Aurangbad (India), is to serve the entire water supply chain for the city on a 24/7 basis. The city has a population of 1.2 million, and is projected to reach 2 million in the next twenty years. The contract was to achieve operational efficiency through non-revenue water (NRW) reduction from the existing 58% to 15% in three years' time serving a consumer base of 250,000 connections. Although this contract was awarded at the city level, the government of India will finance 36% of the cost, the state government will finance another 14% and sponsors will finance the remaining 50%.

**Table 5: SAR Top Deals**

<b>Country</b>	<b>Project Name</b>	<b>US\$ Million</b>	<b>Sponsors</b>	<b>Source of Revenue</b>
India	Aurangabad City Water Utility Company Limited	135.1	Subhash Projects & Marketing Ltd (59% / India), Essel Group (22% / India), Va Tech Wabag (10% / Austria) <sup>6</sup>	User fees and fixed payment(s) from the government

## 2.6 Middle East and North Africa (MNA)

PPI in Middle East and North Africa has slowed down, indicating that political risks are still presenting a major challenge to investors<sup>7</sup>. There is potential, however, given water scarcity and the population growth projections. In July 2013, the Jordanian government announced plans<sup>8</sup> to move ahead with the Aqaba Desalination Water Pipeline project which when completed will produce 85 million cubic meters of water annually. This desalination project which will serve Israel and Jordan<sup>9</sup> has been planned to be awarded by the first quarter of 2015.

## 3. Emerging Trends

Looking at the data, it is hard to draw a prevailing trend as there have been fewer projects in the sector and the spectrum of projects varies significantly in terms of capacity and scale. In countries like Brazil, there were a number of large PPI projects that closed at the state or municipal level. In these cases, the off-takers were usually large public utilities with reasonably good financial and credit standing thus allowing the deals to be bankable. In contrast, EAP countries such as China and Philippines tended toward smaller water plants for minor urban and rural areas. The LAC region has overtaken EAP in attracting the largest volume of PPI. LAC is likely to continue being the top region for growth in the water sector due to the significant backlog of PPP projects in Brazil and Chile.

<sup>6</sup> The PPI systematically includes sponsors who have more than 15% in the project company and does not attempt to track the complete shareholding.

<sup>7</sup> Africa & Middle East Outlook 2013, IJGlobal.

<sup>8</sup> 'Jordan to Move Forward With Aqaba Desal Plant', Singapore International Water Week, July 2013.

<sup>9</sup> 'Senior Israeli, Jordanian and Palestinian Representatives Sign Milestone Water Sharing Agreement', the World Bank Press Release.

Finally, another observation is the significant reduction of foreign sponsor presence in the water and wastewater sector compared to 2012. This is unlikely to be a trend going forward as there are a number of domestic sponsors looking to expand internationally. Top sponsor countries for the sector in 2012 included France and Spain; however, these sponsors did not close many deals in 2013. Local sponsors were prevalent for both Brazilian and Chinese projects in 2013. In Brazil, Odebrecht – primarily a construction and engineering company--- quickly moved into the water sector, closing all the deals (that PPI database monitors) in the country for the year. The rise of the local sponsors in China seems to suggest that the water sector reforms are giving more room for local private water enterprises than in the past.

