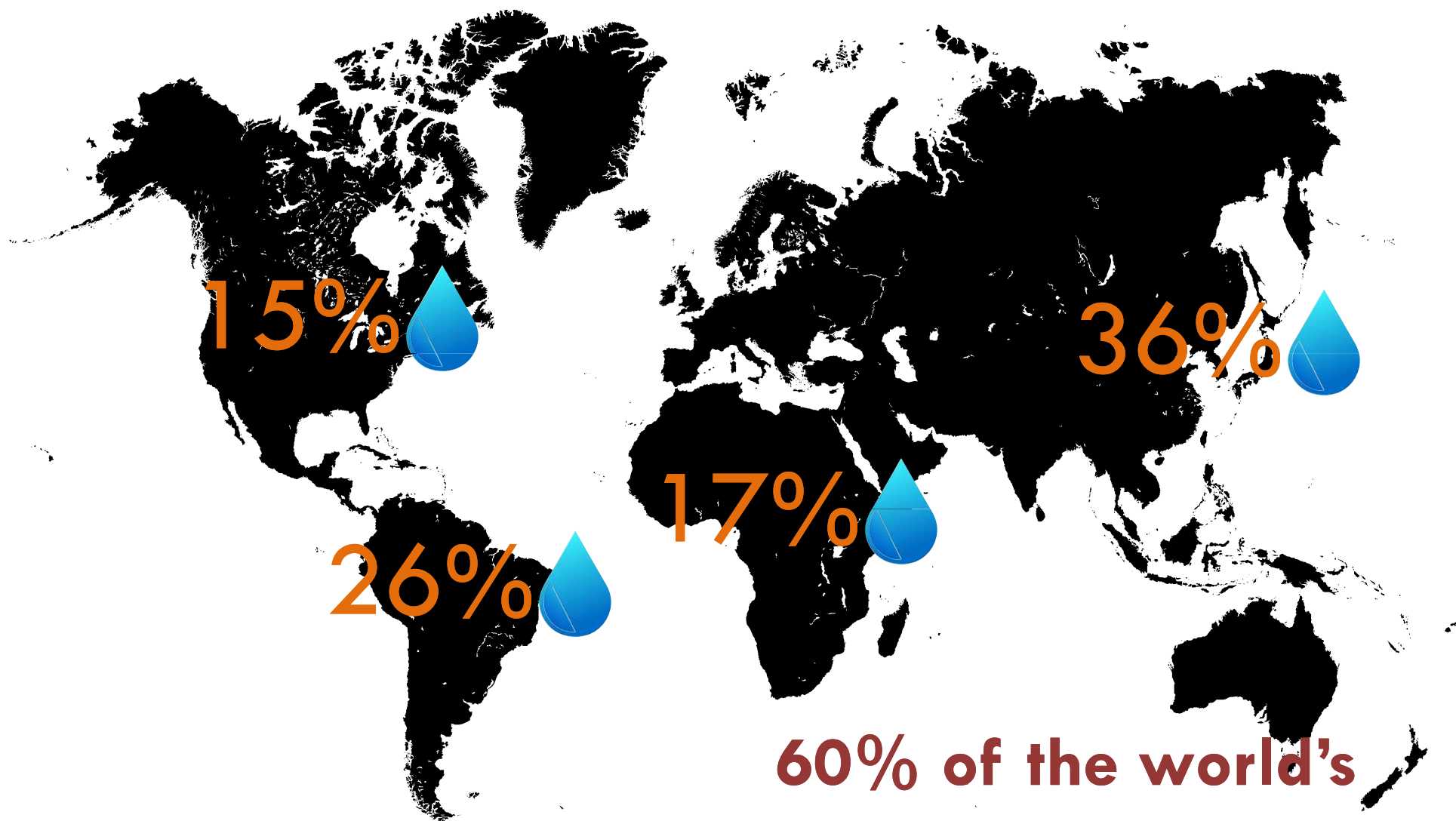




Ensuring the future of Mega Manila's Water Security

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**60% of the world's
population resides in Asia**

UNESCO

Sustainable water management in large cities requires a holistic, integrated approach



1.Tokyo
2.Delhi
4.Mumbai
7.Shanghai
8.Kolkata
9.Dhaka
10.Karachi
13.Beijing
15.Manila
16.Osaka-Kobe
19. Moscow
20.Istanbul
22.Seoul
23.Chongqing
24.Jakarta
26.Shenzhen
28.Guangzhou

- 12 of the world's 21 mega-cities are in Asia. UNESCAP (2010)
- Manila ranks 9th in Asia, 15th in the world.

Population is growing at almost 2% a year



If left unattended, the twin engines of **urbanisation** and **resource depletion** will undermine efforts to achieve and sustain water security: water availability and access will be eroded and conflicts over use will escalate

Global Water Partnership, "Towards Integrated Urban Water Management"

-0.4%

Rural Population Growth
Rate

2.9%

Urban Population Growth
Rate

Source: World Bank, 2012



46.4 M

Urban Population

49%

Urban Population
% of Total Population



Source: World Bank, 2012



The Mega Manila Experience

1997 - 2012

Achieving Synergy through PPP

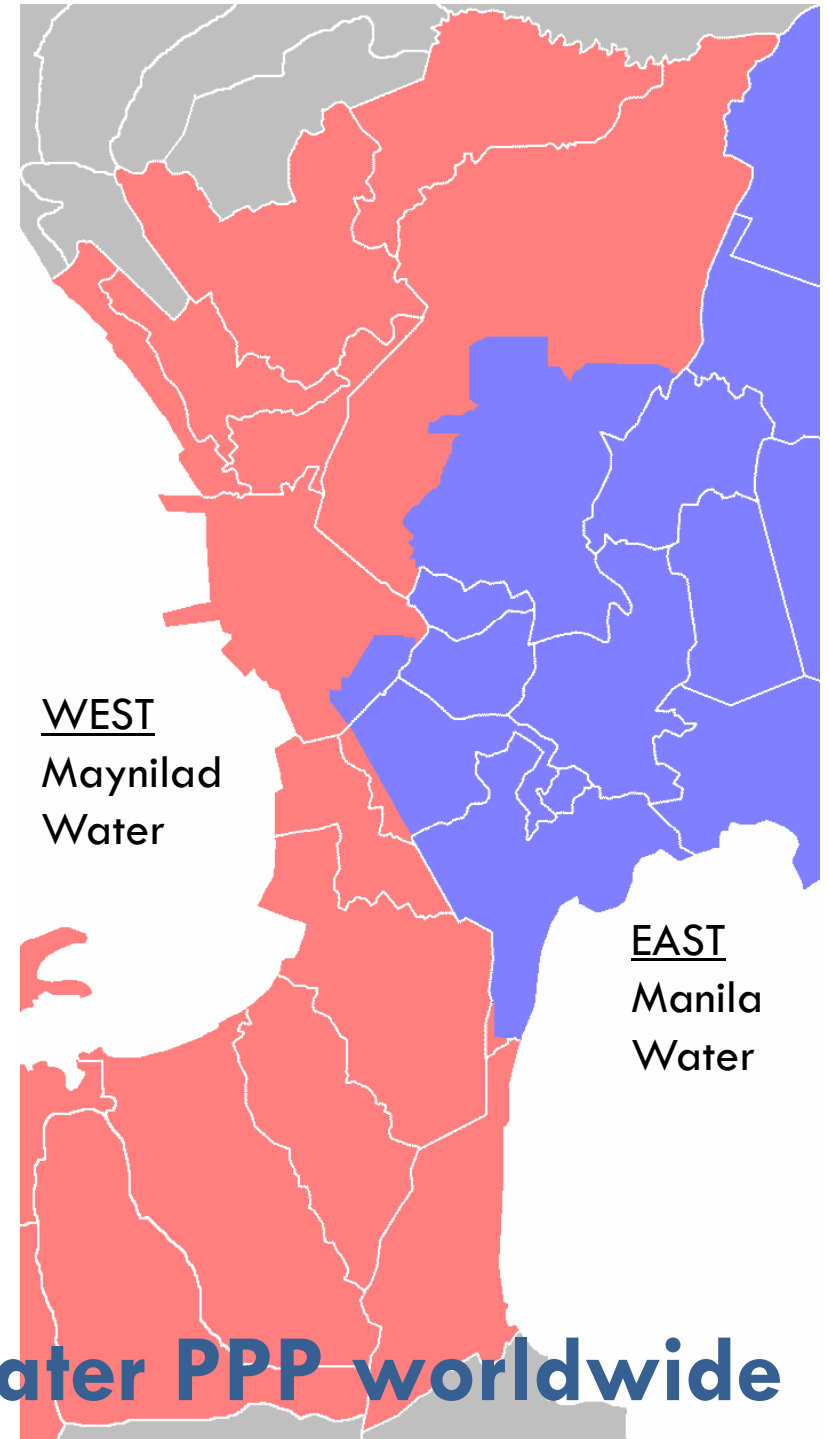
40

The number of cities and municipalities served by MWSS

1,940

The area in square kilometers of the MWSS Service Area

Considered the largest Water PPP worldwide



5.84M

The number of MWSS
customers in 1997 /
9.73M population.
16 Hours a day service

13.8M

The number of MWSS
customers today / 15.8M
population
24 Hours a day service



9.8

The number of employees
per 1000 connections in
1997

2.2

The number of employees
per 1000 connections
today



68%

The amount of water lost to pilferage or leaks (Non-Revenue Water) in 1997

35%

The Non-Revenue Water level today



The West Zone has recovered over 1000 MLD NRW in 4 years

Manila Water reports NRW of 11%



Ensuring Mega Manila's Long Term Water Security

2012 - 2037

The future of urban water management is improved water governance



- ❑ US\$ 2.2 Billion in Infrastructure Projects
 - ▣ Angat Dam and Dyke Strengthening Project
 - ▣ Rehabilitation, Operation and Maintenance of Angat Hydro-electric Power Plant Auxiliary Turbines No. 4 & 5
 - ▣ Angat Water Utilization and Aqueduct Improvement Project, Phase 3
 - ▣ New Centennial Water Source Project
 - ▣ Bulacan Bulk Water Supply Project



Investing in Sewerage Services



	Maynilad (West Zone)	Manila Water (East Zone)
Sewer Coverage	9%	12%
Operational STPs	4 (141 MLD)	25 (91.3 MLD)
New STPs 2012-2016	7 (272 MLD)	5 (455 MLD)
2017-2037	19	18



The future of urban water management is improved water governance



- Demand Management
 - ▣ Water Conservation
 - ▣ Tariff Reviews
- Organizational Excellence
- Partnership Building
 - ▣ Exploring Synergies

Exploring **SYNERGIES**

- the interaction of elements that when combined produce a total effect that is greater than the sum of the individual elements

Exploring **SYNERGIES**

Power comprises 30%
of Manila Water's Costs



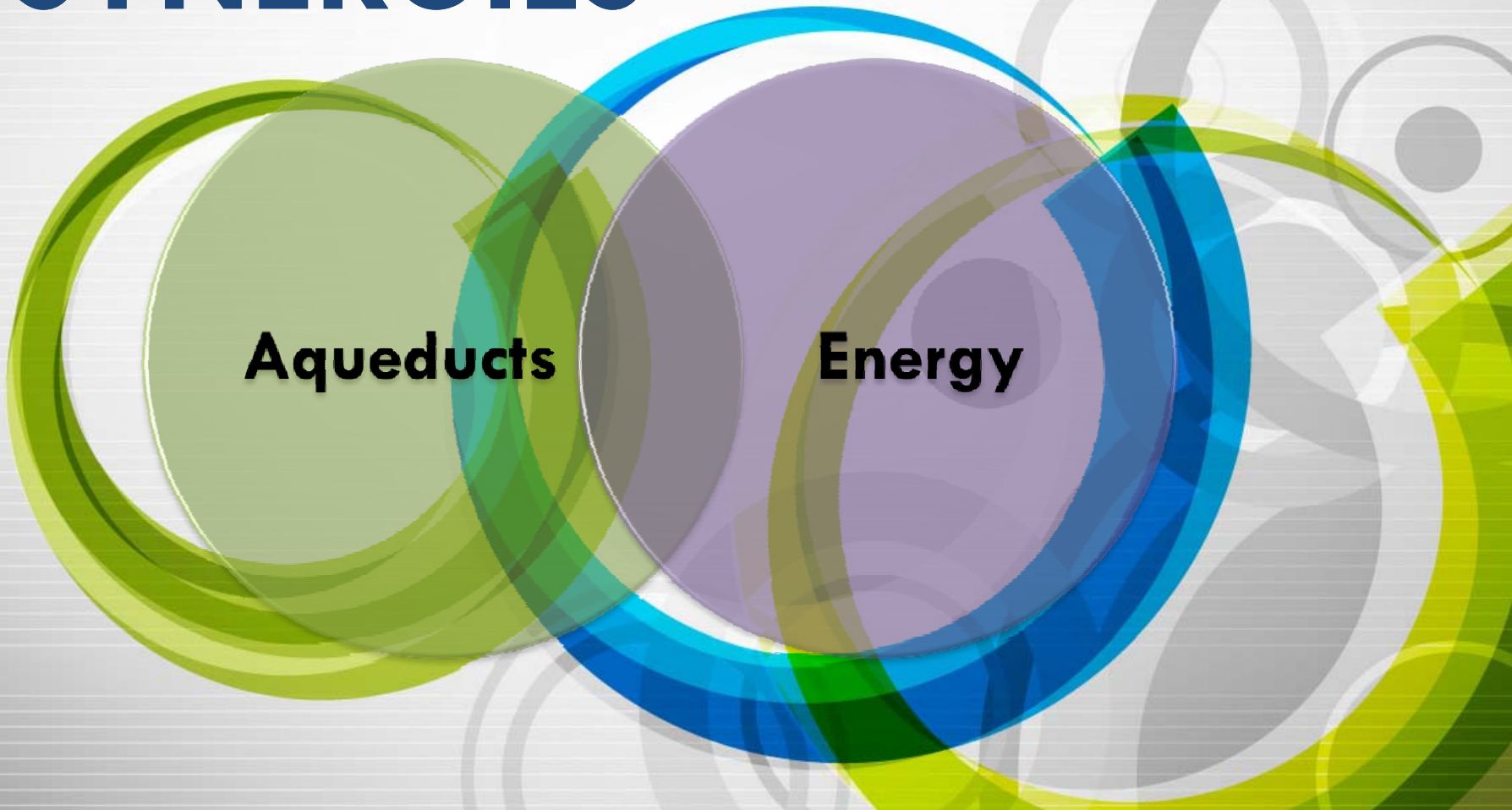
Wastewater

A Venn diagram with two overlapping circles. The left circle is light green and labeled 'Wastewater'. The right circle is light purple and labeled 'Energy'. The overlapping area is a darker shade of green. The circles are surrounded by concentric rings of green and blue, and the background features faint, larger-scale circular patterns.

Energy

Exploring **SYNERGIES**

Power comprises 10%
of Maynilad's Costs



Aqueducts

A Venn diagram illustrating the synergy between two sectors. It features two overlapping circles. The left circle is light green with a thick green border and is labeled 'Aqueducts'. The right circle is light purple with a thick blue border and is labeled 'Energy'. The overlapping area in the center is a darker shade of green. The background consists of faint, grey, concentric circles.

Energy

Exploring **SYNERGIES**

The background features a light gray field with faint, overlapping circular patterns. Overlaid on this are several vibrant, flowing bands in shades of blue, green, orange, and yellow. Two semi-transparent circles are positioned in the lower half of the image: a light blue one on the left and a light orange one on the right. The text 'Exploring SYNERGIES' is located in the upper left, with 'Exploring' in a dark blue sans-serif font and 'SYNERGIES' in a larger, bold, dark blue sans-serif font.

**Water
Supply**

Irrigation



Exploring **SYNERGIES**

**Water
Supply**

**Flood
Management**

Exploring **SYNERGIES**



Groundwater
Recharging

Water
Reuse

Rainwater
Harvesting

Desalination

Salamat

