



Investment Opportunities in Saudi Water Sector

GCC Power and Water Desalination Summit 2011

October 2-3, 2011

Doha-Qatar

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SAWACO/ SKME/ CHEMSBRO
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Saudi Brothers Commercial Company Water Division Structure



**SUIDO KIKO ME:
WATER & WASTE
WATER
ENGINEERING
COMPANY**

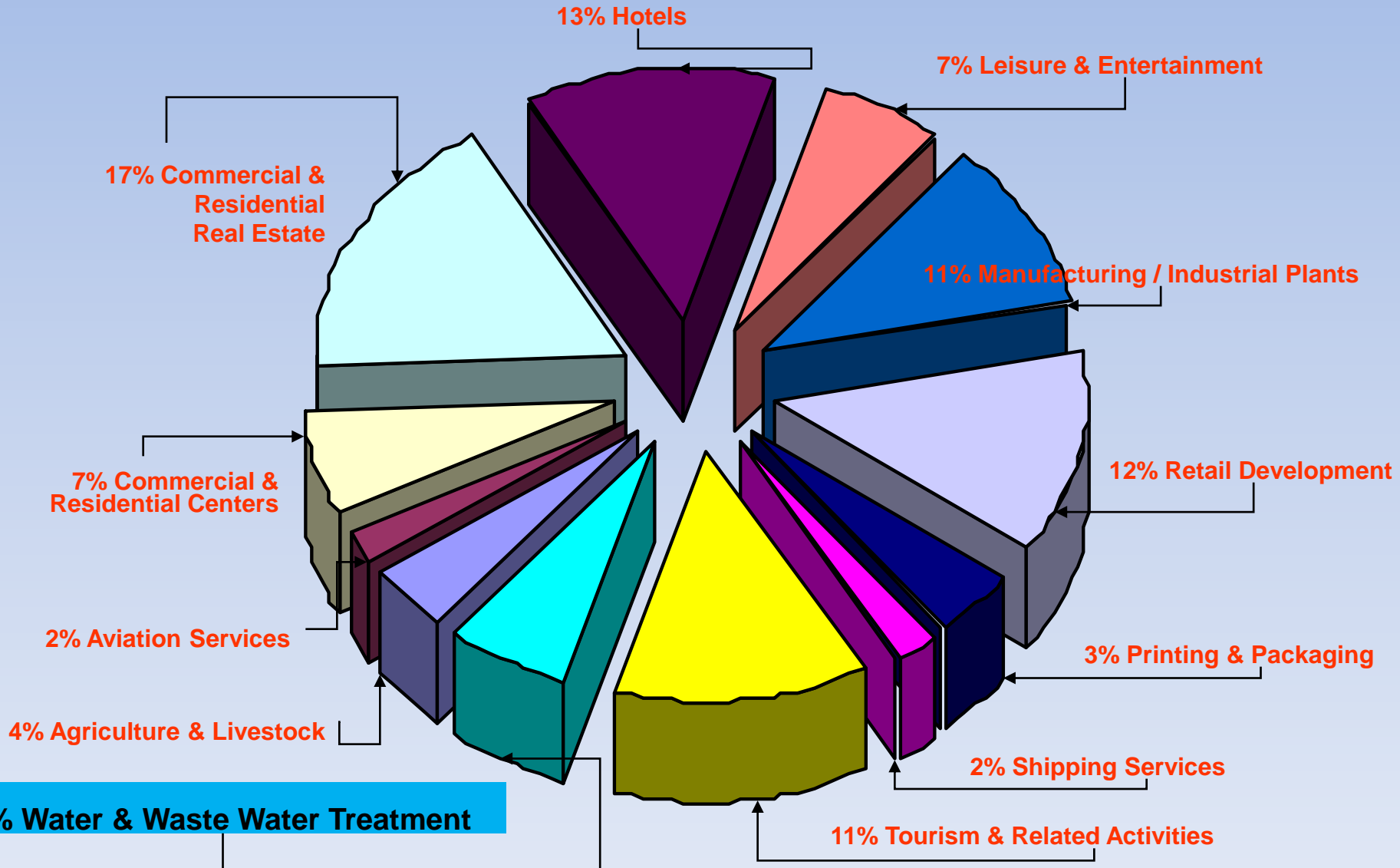


**SAWACO:
THE PRIVATE
WATER UTILITY**



**CHEMSBRO:
CHEMICALS &
SOLUTION PROVIDER
FOR WATER &
WASTEWATER
TREATMENT PLANTS**

Middle Eastern Diversified Portfolio Companies



2 - Introduction

Why Saudi Arabia ?

- ❑ the largest water desalination capacity in the world
 - ❑ one of the highest water consumption per capita (domestic use)
 - 280 litre / day/ per capita (KSA).
 - 130 to 150 litre / day/ capita (UK , Germany & France)
 - More than 450 litre / day/ capita (USA & Canada)
 - ❑ approximately 45- 55% of wastewater in KSA is treated
 - ❑ approximately 18 % of TSE is used (NWC, 2010)
 - ❑ ranked 11th in the World Bank 's 2011 Easy of Doing Business Report
 - ❑ among the top 10 recipients of FDI (Foreign Direct Investment) in the world
 - ❑ the largest oil exporter in the world
 - ❑ possessing around 20% of the world's oil reserves
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3 - Indicators

1 - Economic Indicators

- ❑ GDP (official exchange rate): \$ 443.7 billion (2010 est)
- ❑ GDP (purchasing power parity): \$ 622 billion (2010 est)
- ❑ GDP ranked 23rd by comparison to the world
- ❑ GDP Real Growth Rate: 3.7% (2010 est)
- ❑ the largest GDP share in GCC region.
- ❑ contribute to approximately 50% of total GDP in GCC.

2- Social Indicators

- ❑ has the largest population in GCC
- ❑ Population 26,131 million (July 2011 est)
- ❑ Population Growth 1.536 % (2011 est)



4 - Key Drivers for Water Sector Demand

Three main key factors are driving water demand:

4- 1 Population's Growth

4- 2 Economic & Industrial Development

4- 3 Government Strategies

**4-4 Water Demand Chart
(Projection 2009 -2024)**



4- 1 *Population's Growth*

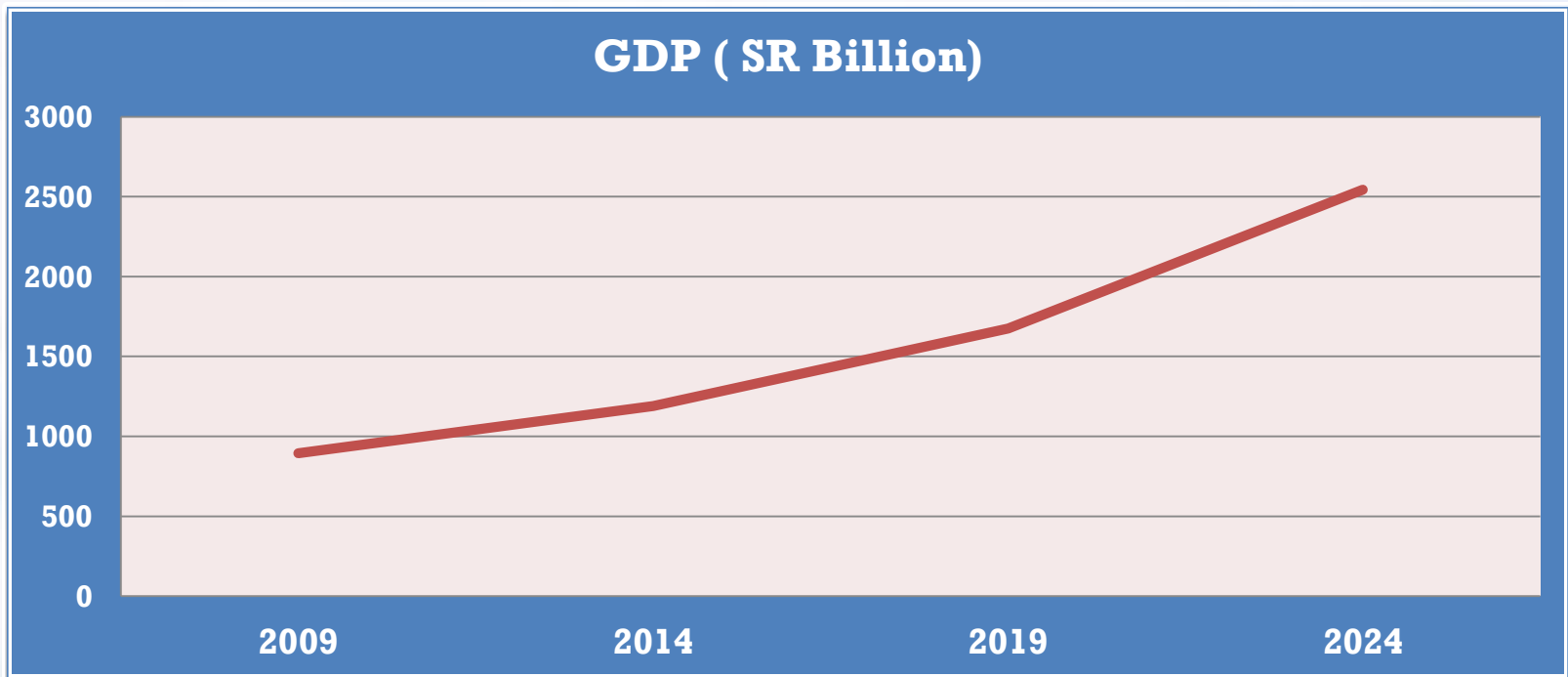
- average annual growth is around 2.0 / yr for the coming 15 years.
- projected population is about 30 million in 2024 as per government's data

Table # 1
Population Growth Projection – Long Term Strategy Period
(* Approximate)


	2009	2014	2019	2024
Total Population (million)	24.2	26.52	28.26	29.86
Water Demand* (million m3) (Domestic & Industrial)	7,500	8,420	9,300	10,250
1- Agriculture usage is not considered				
2- Current available desalination capacity is about 6,500 million m3/D				

4- 2 *Economic & Industrial Development*

- GDP average growth is around 5 to 6 % in the next 15 years.
- ultimately larger Industrial Sector & high demand on water.

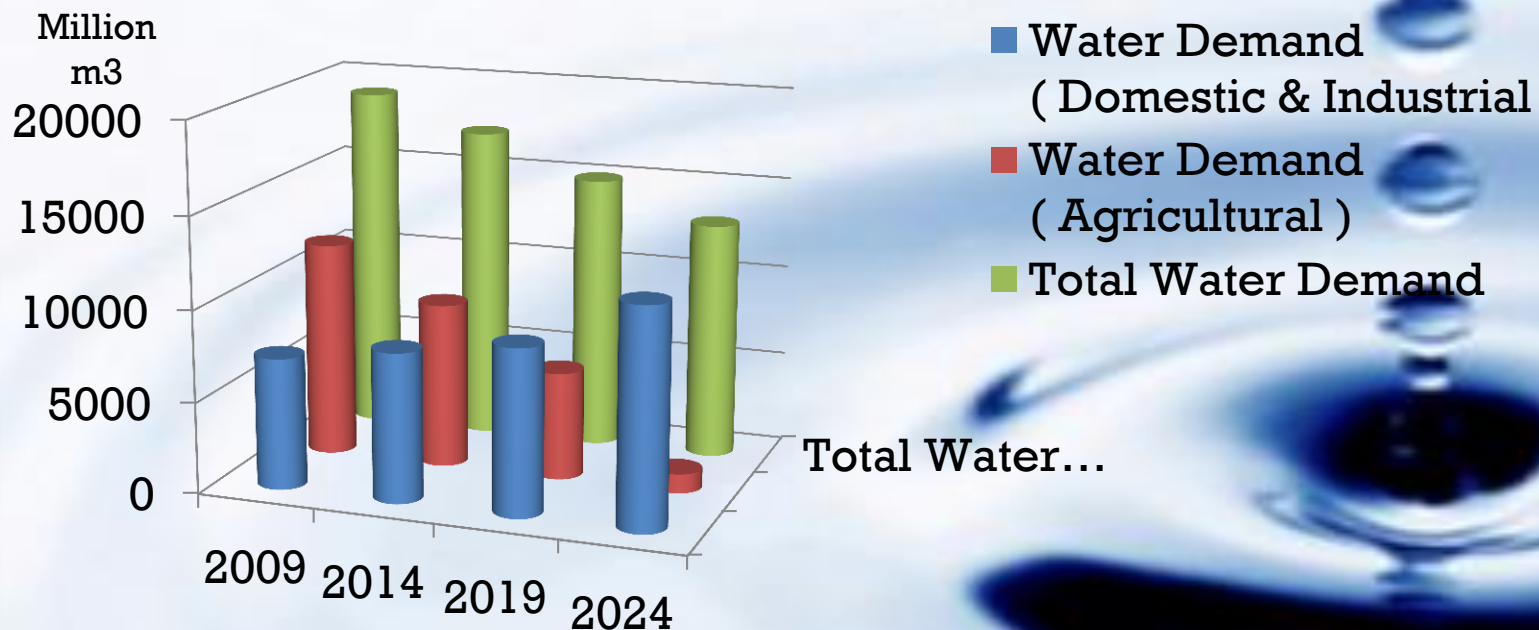


4- 3 *Government Strategies*

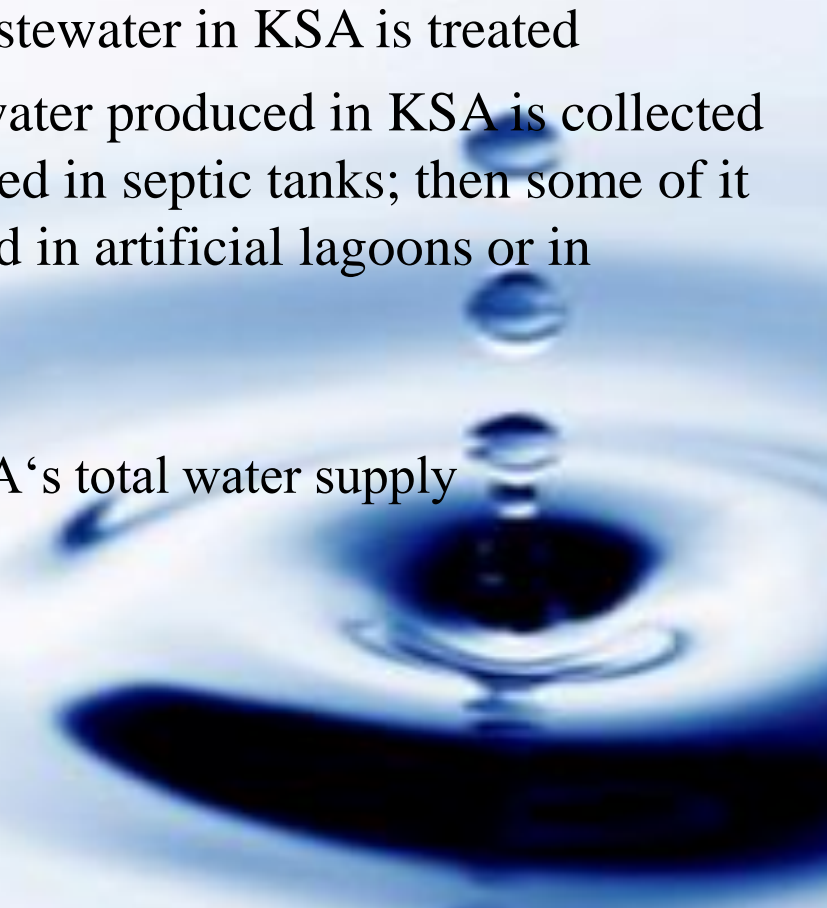
- about 80 % of overall consumption is by Kingdom's agricultural sector
 - Saudi government's food security policy has implied a high allocation of water resources to the agriculture sector (government abandoned this strategy in 2008)
 - household water saving
 - improving efficiency within the distribution networks
 - privatization process: Plants & Developments
 - Use of TSE (Treated Sewage Effluent) expected to quadruple within 10 years (NWC sources)
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4- 4 Water Demand Projection 2009- 2024

- shortage between current capacity & total demand.
- decrease in total demand in comparison to year 2009 → this is due to decrease in agricultural demand as per government strategies.



5- Wastewater Sector Overview

- more water consumption leads to increase in wastewater that require treatment
 - approximately 45 -55% of the wastewater in KSA is treated
 - approximately 40 % of the wastewater produced in KSA is collected by network. The balance is collected in septic tanks; then some of it is collected by trucks to be dumped in artificial lagoons or in WWTPs
 - approximately 18 % of TSE is used
 - water reuse accounts for 1% of KSA's total water supply
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6 - Challenges, Opportunities & Investment

Opportunities are open in water & wastewater treatment projects:

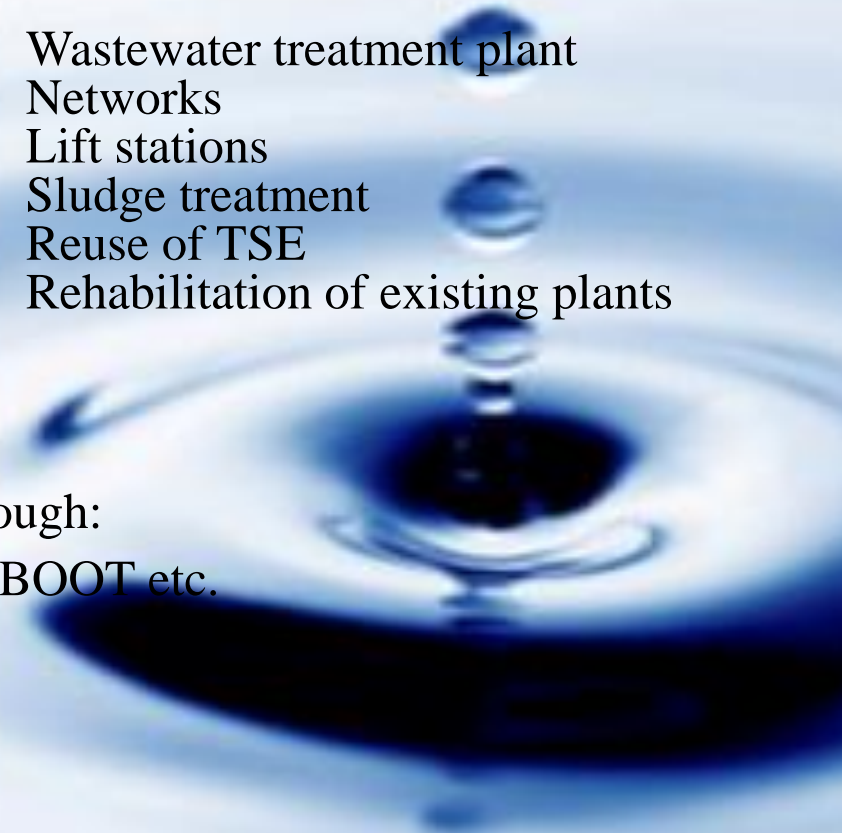
A- Water Segment

- Brackish & sea water treatment plants
- Water networks
- Reservoirs
- Deep well drilling
- Rehabilitation of existing plants

B- Wastewater Segment

- Wastewater treatment plant
- Networks
- Lift stations
- Sludge treatment
- Reuse of TSE
- Rehabilitation of existing plants

This would be through:
EPC, PPP, IWPP, BOT, BOOT etc.



6- 1 *Water Sector Structures & Key Players*

1- The National Water Company

- established in 2008 & responsible for underground water production & treatment , water distribution & wastewater treatment & collection .
- Covering Riyadh + Jeddah representing 30% of kingdom's population.
- Within 3 – 5 years to cover more cities representing 60% of kingdom's population.

2- The Water & Electrical Company (WEC)

- formed in 2003 to carry out the IWPPs.

3- The Ministry of Water & Electricity

- takes overall responsibility for water & power sector in KSA.
- NWC after 2008 is responsible for Riyadh, Jeddah , Makkah/ Taif, Madinah & more cities to come under its umbrella (to reach to about 60% of Kingdom's population .

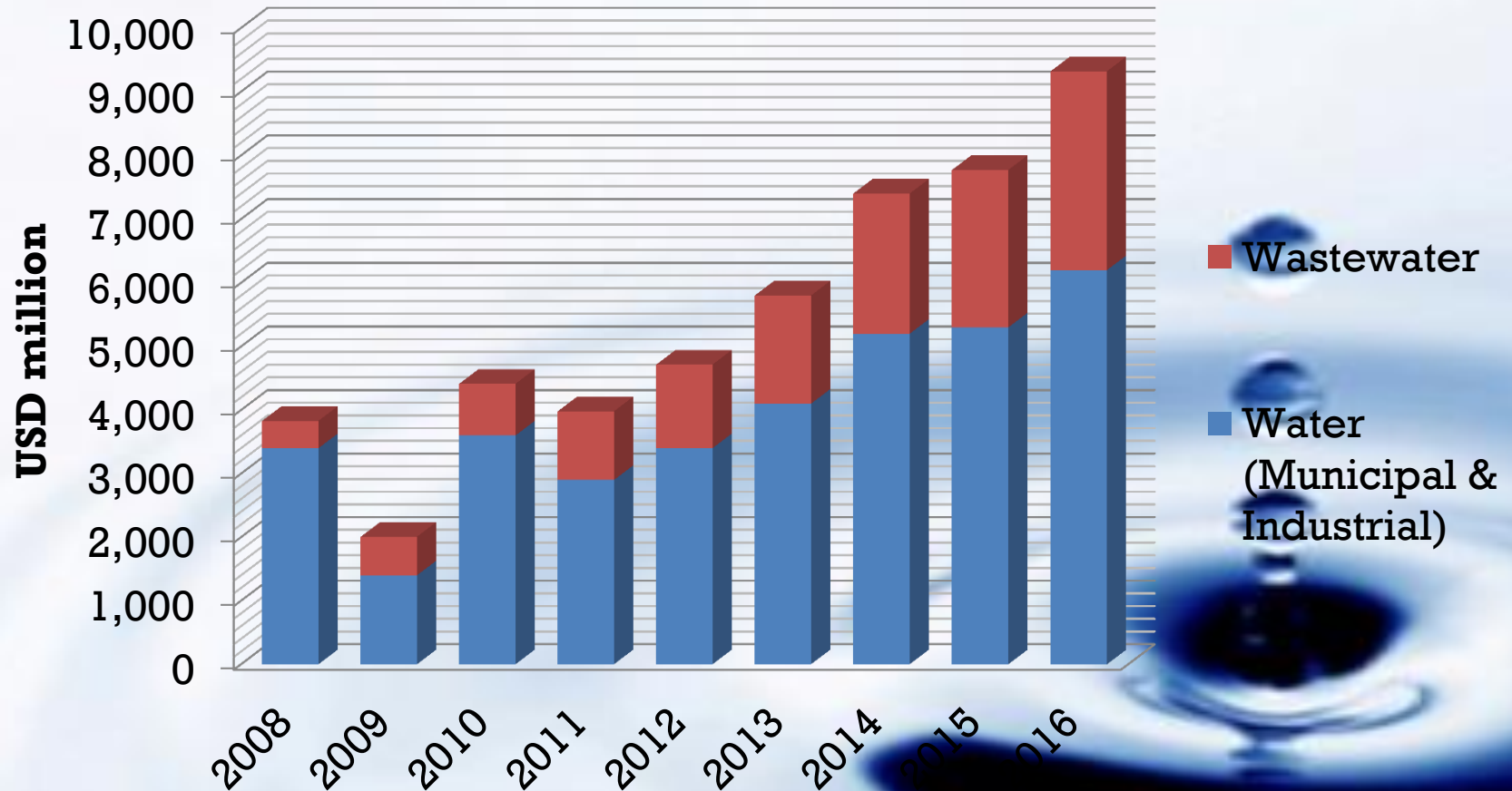
4- The Saline Water Conversion (SWCC)

- responsible for water & water transmission in KSA.
- has about 24 desalination plants & producing about 60 % of water required in KSA.
- Production facilities are in process of being privatized.

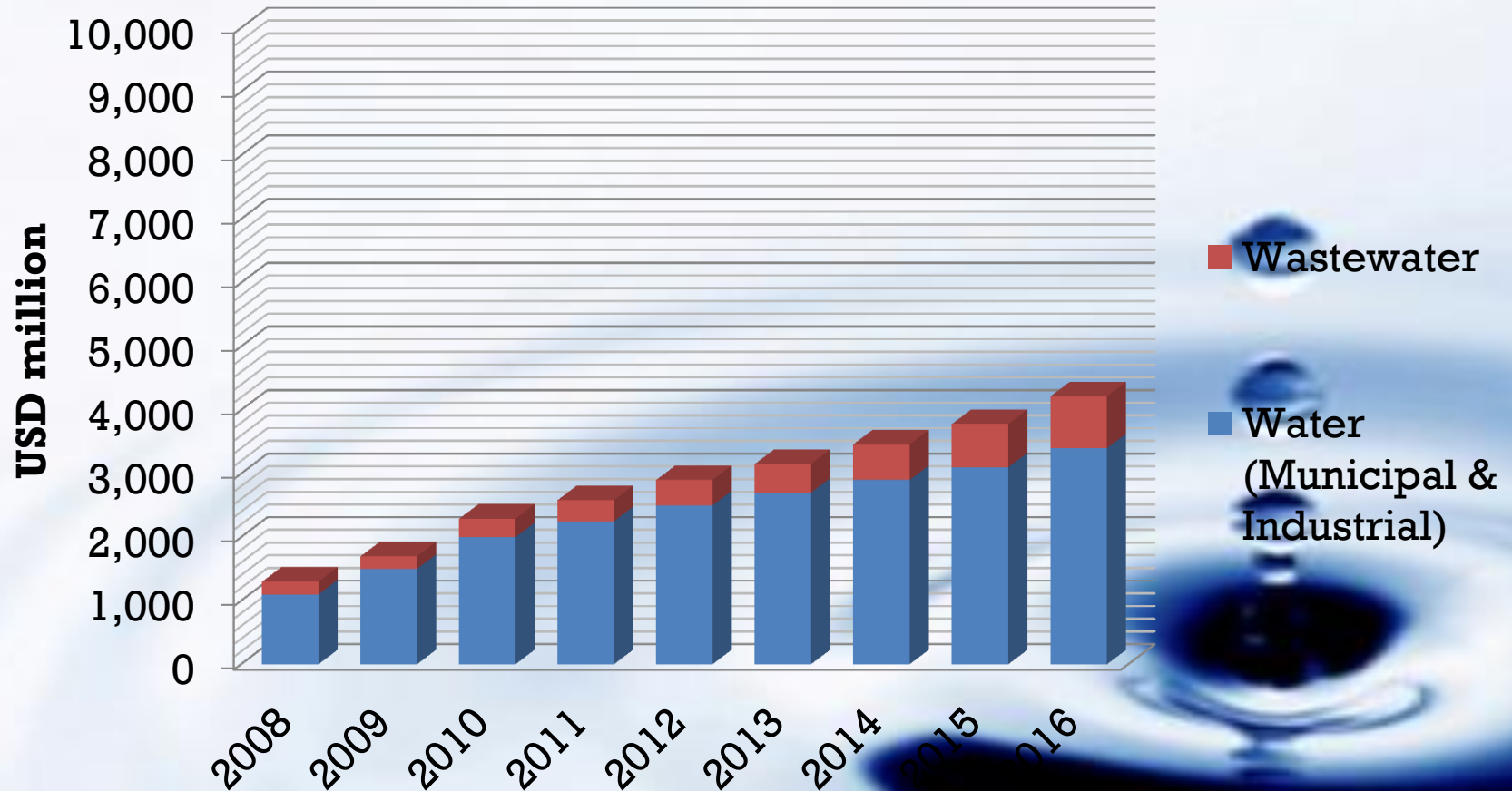
5- Marafiq → the utility company for Royal Commission for Jubail & Yanbu

6- Others → Aramco, SAGIA & Private Utilities

6- 2 *Market Forecast 2010 – 2016* (*CAPEX Water & Wastewater*)



6- 3 *Market Forecast 2010 – 2016* (*OPEX Water & Wastewater*)



6- 4 Forthcoming Projects- Water

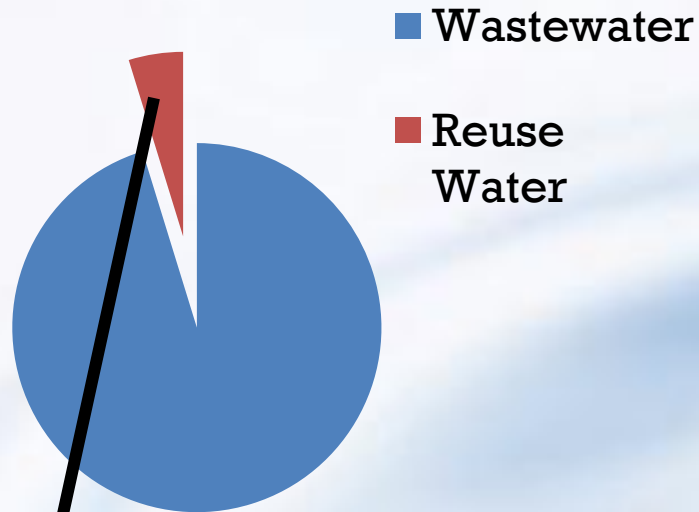
	City	Capacity M3/D	Type	Remarks
1	Yanbu 3	550,000	MSF	SWCC & Marafiq (2011)
2	Shouibah 4	650,000	MSF	IWPP
3	Shuqaiq 3	175,000	MSF	IWPP
4	Khobar 4	250,000	MSF	IWPP
5	Jubail RO (Upgrade)	78,000	RO	SWCC (2011)
6	Al Waji/ Duba/ Haql	29,000	MED	SWCC
7	KAEC	70,000	RO	Private
8	Jizan Economic City	12,000	RO	Private
9	Al Khafji	30,000	RO	EPC (most likely)
10	Others	Networks, rehabilitation, O&M...etc.....		

6- 5 Forthcoming Projects - Wastewater

	City	Capacity M3/D	Type	Remarks
1	Al- Kharij STP- Ph3	200,000	WWTP	EPC
2	Jeddah – Airport Ph2	250,000	WWTP	EPC
3	Jeddah- AlKhumra Ph- 4	250,000	WWTP	EPC
4	Jeddah- Al Khumra Ph- 5	250,000	WWTP	EPC , planned
5	Maddinah	200,000	WWTP	EPC (Awarded September 2010)
6	KAEC	30,000	WWTP	Most likely BOT
7	Others	Networks, reuse water, rehabilitation , O&M & sludge treatment ...etc.....		

6- 6 Water Reuse Development

Projected Water Reuse 2010



Water reuse account for 1% of Saudi Arabia's water supply

Projected Water Reuse 2020



Water reuse account for about 30 % of Saudi Arabia's water supply


6.7 Anticipated Investment For The Next 5 Years

Table # 3
Investment forecast for the next 5 years
(water, wastewater, industrial water & water ruse)

Year	2011	2012	2013	2014	1015	2016
USD (Million)	6,200	7,900	9,100	10,000	11,100	13,150

Anticipated investment in the water sector (water & wastewater) is about 52 billion USD for the next 5 years

7 - Conclusion

- 1- Population growth is pushing for faster extraction rate than the replenishment rate which is leading to a decline in groundwater resources → significant investment is required in desalination and non-conventional sources like TSE**
 - 2- Anticipated investment in water & wastewater sectors for the next 5 years → about 52 billion USD**
 - 3- Private Sector will take a large share in the investment particularly in the new projects → through EPC, PPP & IWPP, BOT, BOOT in order to meet the demand**
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THANK YOU

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