

Seeing Light in the Cloud – Investment Opportunities Boosting Water Infrastructure

Challenges and Opportunities

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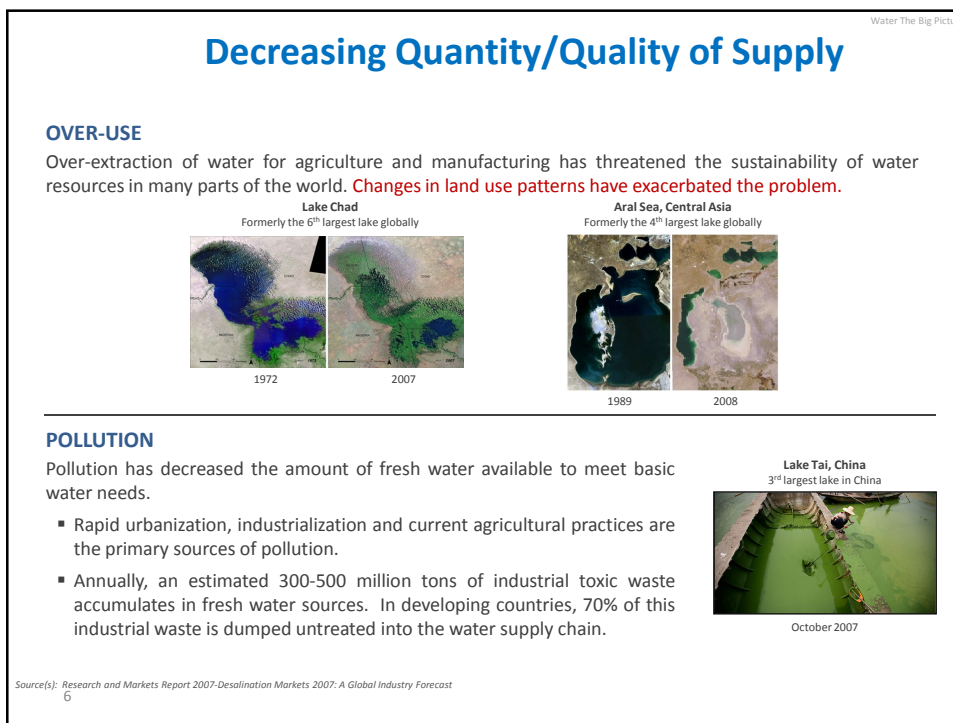
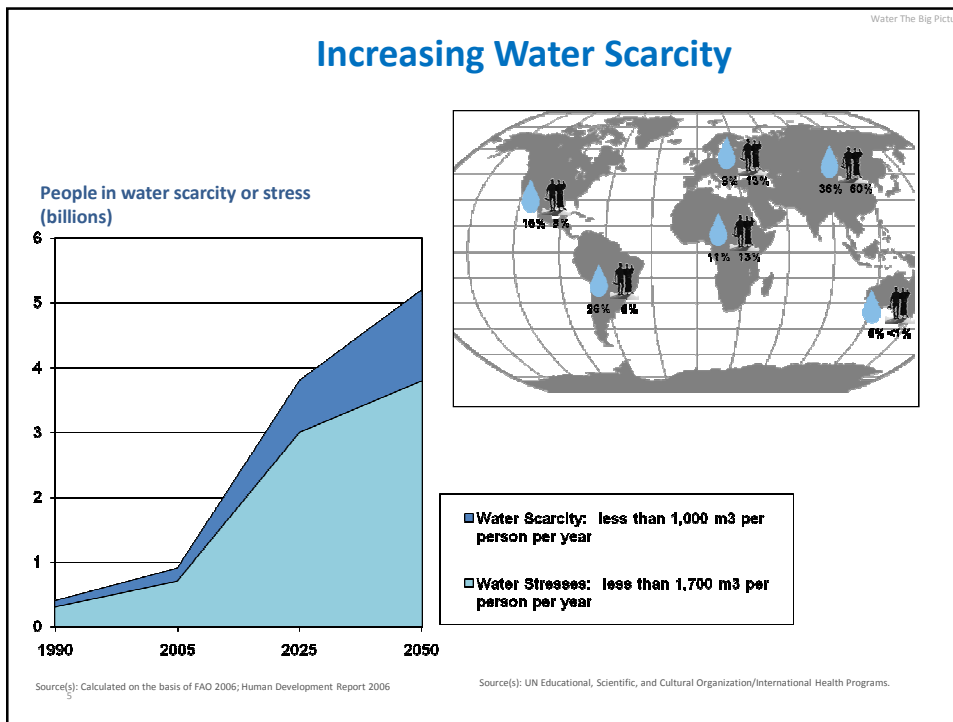
Roundtable Participants

- **Mr. Fawaz Bahlas, Privatization Manager, National Water Company, KSA**
- **Mr. Tang Kin Fei, President, Singapore Water Association, and CEO Sembcorp Industries**
- **Mr. Bernard Guirkingner, Sr. Exec VP, Suez Environnement**
- **Prof. Benedito Braga, VP, World Water Council and Director, Brazilian National Water Agency**

CHALLENGES

Summary

- Increasing water scarcity
 - Growing population, improved standard of living, climate change
 - Decreasing water quality
- Environmental stresses increasing while economic and social pressures overriding environmental concerns in some areas
- Ageing infrastructure
- Economic slowdown and limited availability of capital and debt
- Lack of true water economy by which to afford cost recovery



Financing the Ageing Infrastructure

- In the United States, bringing water supply and sewerage infrastructure up to current standards will cost more than \$1 trillion over the next 20 years, with hundreds of billions more required for dams, dikes and waterway maintenance
- The World Business Council for Sustainable Development estimates that the total costs of replacing ageing water supply and sanitation infrastructure in industrial countries may be as high as \$200 billion per year
- In most urban public water systems charges often barely cover the recurrent cost of operation and maintenance, leaving little or no funds to recovery the capital costs of modernization and expansion. A survey of 132 cities in high-, middle and low-income countries found that 39% did not recover even their operation and maintenance costs (true of 100% of cities in southeast Asia and the Maghreb)
- Water infrastructure deteriorates over time. Leakage rates of 50% are not uncommon

UN World Water Development Report 2009

Financing the Water/Wastewater Sector

Annual capital requirements for water/wastewater supply and services and financing gaps, 2006-2025, in billions of USD

Region	Capital Required	Low Gap	Medium Gap	High Gap
E. Europe, Caucasus and Central Asia	28.1-40.5	13.4	20	26.1
North America	23.9-46.8	3.3	4.9	21.4
Latin America	4.3-6.5	2.9	4.0	5.1
Developed Asia and China	38.2-51.4	29.5	32.9	36.5
Rest of the World	14.3-22.6	18.5	22.4	26.1
Total	92.4-148.0	67.4	84.2	115.2

Note: Gaps refer to the differential between expected investment requirements based on three capacity estimates and the revenue sources (tariffs, development assistance and loans)

Owen, 2006 and UN World Water Development Report 2009

Impact of Financial Crisis

New water survey reveals financeability fears

Recession eats into UK water revenues

The big UK water companies have warned that lower consumption volumes and rising bad debts are impacting their top line. It could just be the tip of the iceberg.

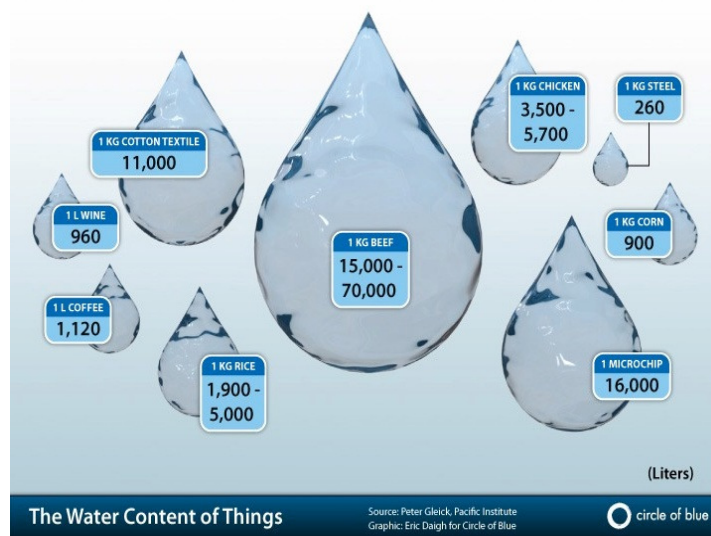
DEWA refinancing weighs as pressure mounts

Refinancing a \$2.2 billion loan in April could prove costly for Dubai's water authority. What are its options?

“Getting the last bank in” at Salalah
Blood Bath Review: Water struggles to escape the nightmare on Wall Street

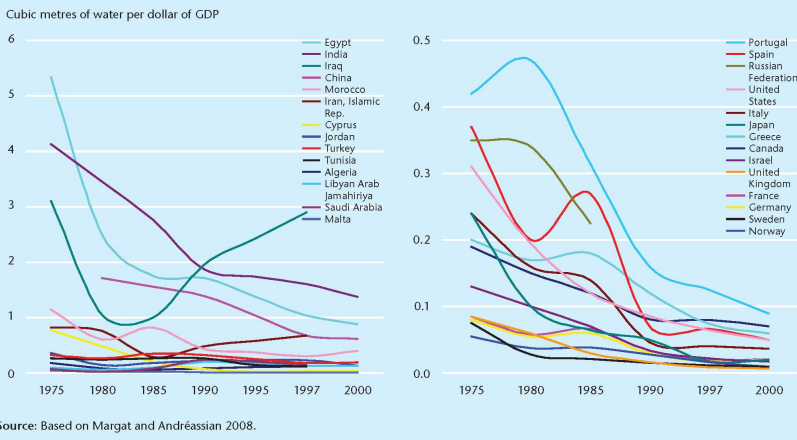
Global Water Intelligence, 2009 Issue Headlines

Water Economy: Challenge or Opportunity?



Ratio of Water Use to GDP

Figure 6.3 The ratio of water use to GDP has been declining in many countries



UN World Water Development Report, 2009

OPPORTUNITIES

Summary

- Stimulus packages and aid in some regions
- Creative financing and short-term solutions
- Sustainable practices and improved water efficiencies
- Technology prospects
- Enabling cost recovery – putting the water economy to work

Stimulus Packaging

Feb 2009 Obama signed \$12 billion stimulus package in support of water projects



Stimulus funding for State Revolving Funds versus need

	State	SRF funding in ARRA	Major projects value
1)	New York	\$437m	\$4,677m
2)	California	\$283m	\$11,666m
3)	Ohio	\$223m	\$371m
4)	Texas	\$181m	\$6,008m
5)	Illinois	\$179m	\$819m
6)	Michigan	\$170m	\$1,509m
7)	New Jersey	\$162m	\$369m
8)	Pennsylvania	\$157m	N/A
9)	Massachusetts	\$134m	\$2,274m
10)	Florida	\$134m	\$2,346m

GW, March 2009

Creative Financing

Global Water Intelligence, 2009

Banobras sees boomtime for investment

Despite the financial crisis, Mexican state development bank Banobras says it is still boomtime for water infrastructure. Mark Walsh finds out how it aims to keep the money flowing.

JBIC pumps up the volume

Gulf power and water developers have become increasingly reliant on JBIC funding. A \$5bn cash infusion from the Japanese government should help.

A fresh approach to project finance

The Middle East project finance market is not as sick as it seems. All parties will need to show a greater degree of flexibility if the market is to evolve.

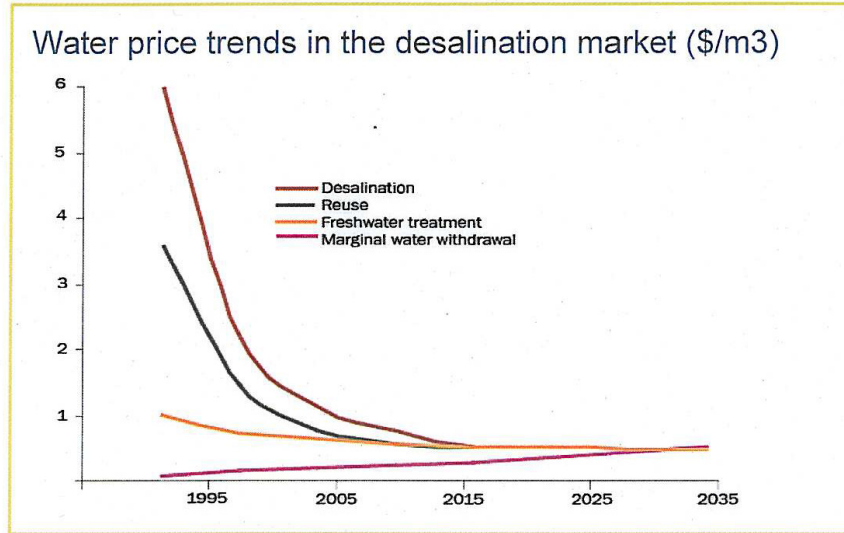
Progress table of Gulf IWPPs

Plant location	Capacity	Developer/s	Status
Ras Azzour	1 million m ³ /d & 1500MW	Now EPC	Revised tender out Q4
S2	459,000m ³ /d & 1700MW	GSEI	Bridge expires Q4
Ad Dur	218,000m ³ /d & 1234MW	GSEI	FC early June 2009
Salalah	68,200m ³ /d & 400MW	Sembcorp	Bid evaluation underway

Sustainable Practices and Improved Water Efficiencies

- Agriculture – Improve irrigation and recovery practices
- Municipal – Reduce leakages, enhance conservation and promote recycling
- Industrial – Increase recycling efforts

Technology Prospects



Global Water Intelligence, 2008

Enabling Cost Recovery

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