

Water Arabia 2013

National Water Strategy

The Road Map for sustainability,
Efficiency and security of
Water Future in the K.S.A

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Presentation Outline:

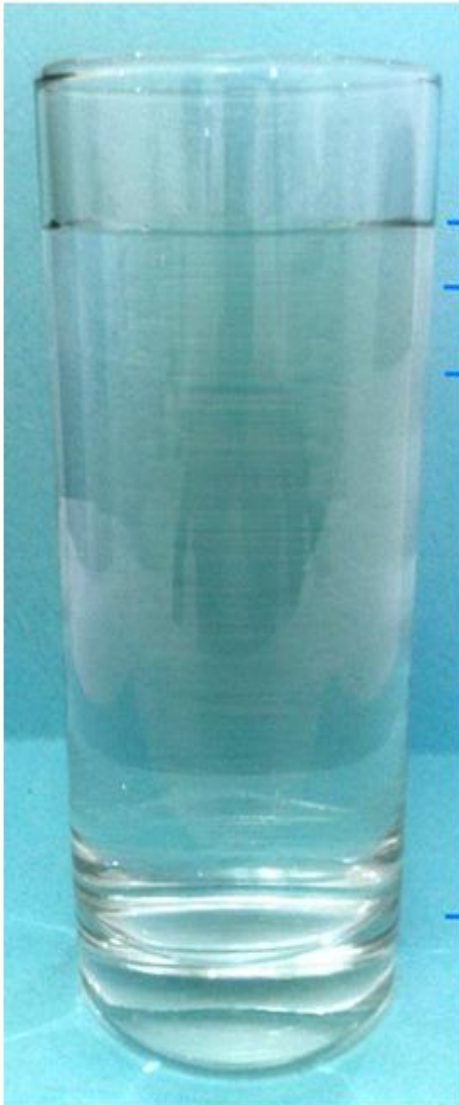
- Water Resources and their uses
- Main challenges of Water Sector
- Vision and Mission for the Water Sector
- Goals and Objectives of the National water Strategy
- Design Framework of the National water Strategy
- Key Indicators and Targeted outcomes

Water Resources and Their uses:

- Saudi Arabia owns a limited renewable Water Resources, but Allah gave the kingdom a great deal of non-renewable reserves of groundwater.
- The total volume of renewable resources and non-conventional resources including desalinated water and treated wastewater amount to 5.20 BCM
- The Kingdom uses annually:
 - 15.97 BCM of water for irrigation purposes
 - 2.42 BCM of water for municipal purposes
 - 0.80 BCM of water for industrial purposes

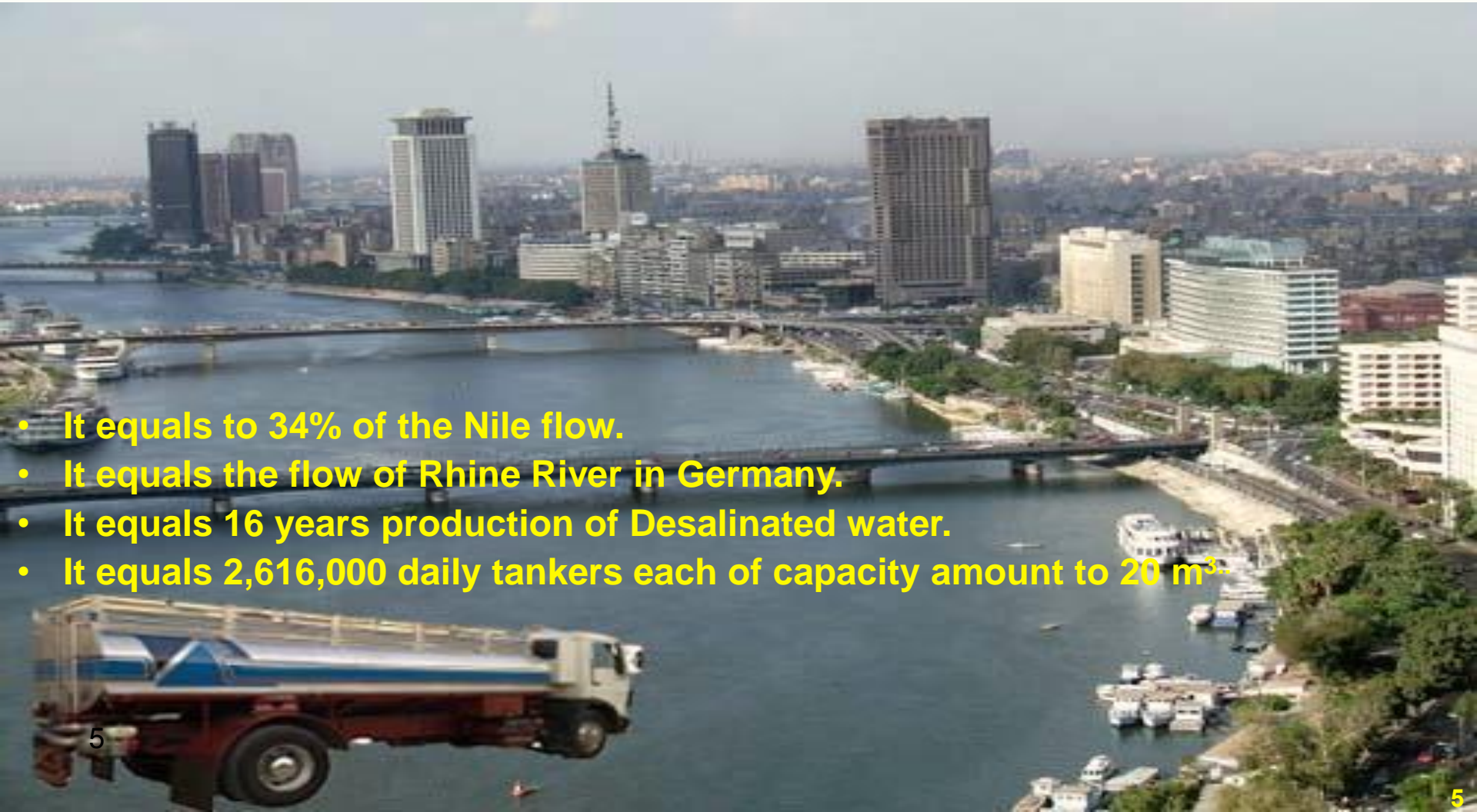
(Annual Report 2011 G)

Water Consumption Facts and Figures



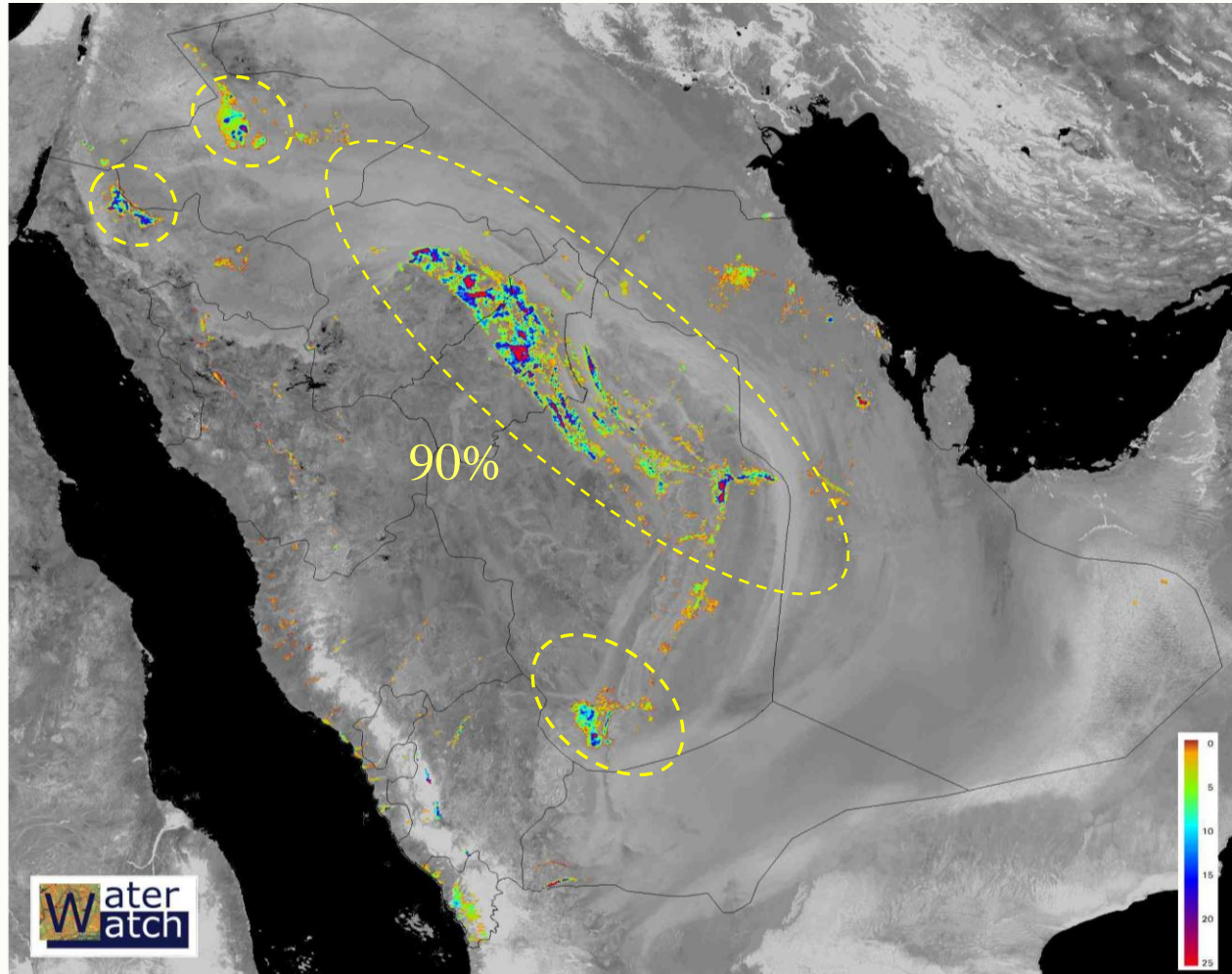
Source	2011
Desalinated sea water	1.5 BCM
Renewable water resources	3.7 BCM
Non-renewable water resources	13.8 BCM
Total of water consumption	19.0 BCM

19 Billion Cubic Meters/year .. what does it mean?

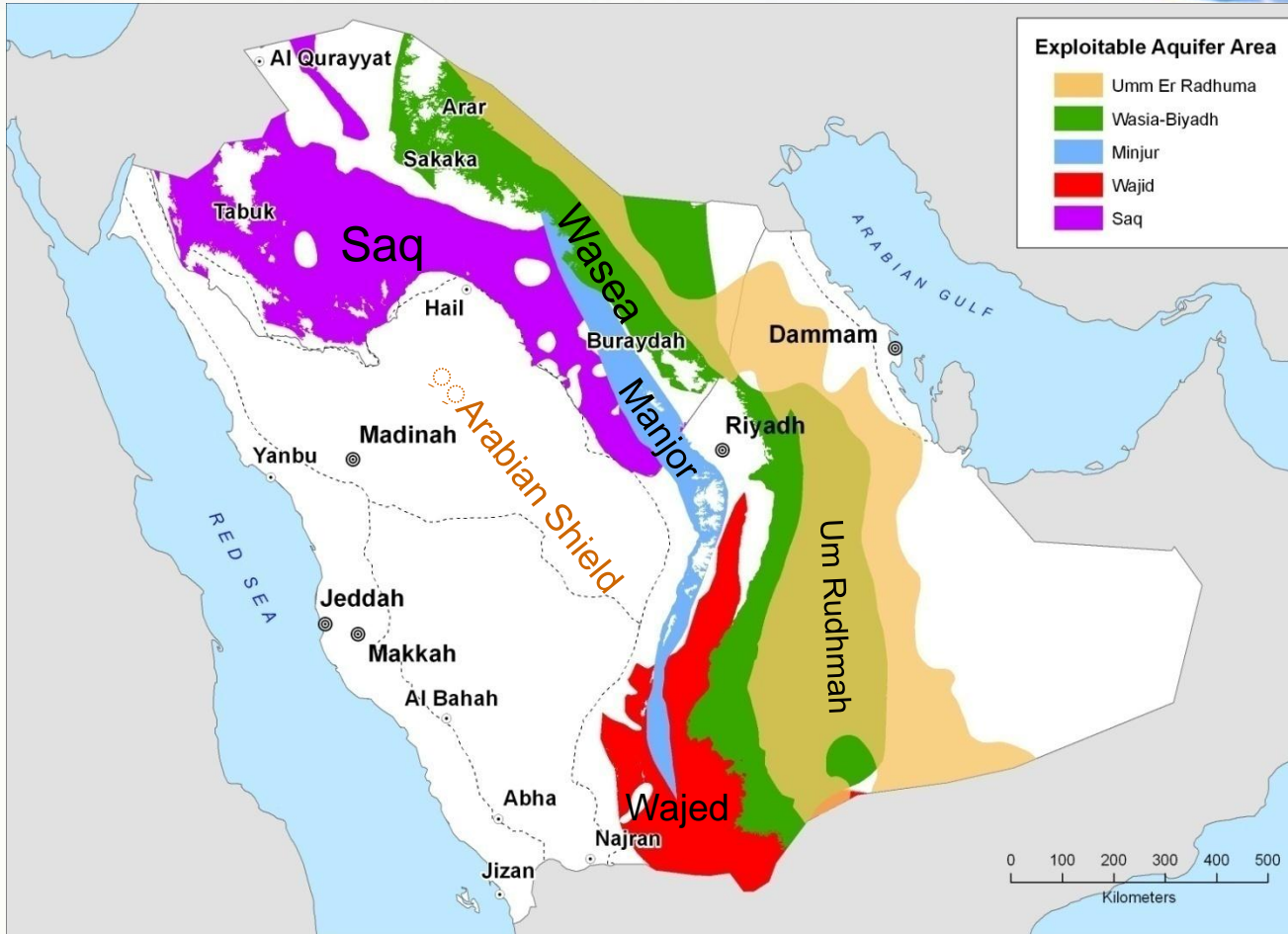


- It equals to 34% of the Nile flow.
- It equals the flow of Rhine River in Germany.
- It equals 16 years production of Desalinated water.
- It equals 2,616,000 daily tankers each of capacity amount to 20 m^3 .

90% of Agricultural sector consumption of water concentrated in such areas



Agricultural sector consumption of Water reached 542 BCM from 1975. to 2010 G. which equal the production of (SWCC) for 500 years.



The following regions use Aquifers storage for water supply: Riyadh, Qasim, Madinah, Eastern Province, Hail, Tabuk, Northern Borders, Najran, Asir and Al-Jouf

The abstracted water from Saq, Umm Erudhuma, Wajeed, Minjire Aquifers amount to (B13.8 BCM/year which constitutes 90% of non-renewable water use in the Kingdom and equal 6 times of municipal water consumption

Main Challenges of Water Sector :

Currently, The KSA faces three major challenges :

1. Water depletion is threatening the nation's future.
2. Saudi Arabia's agriculture sector is not sustainable nor efficient.
3. Municipal water supply services are high cost and suboptimal quality.

MOWE Vision:

To achieve sustainable, efficient, equitable and secure water future of the Kingdom of Saudi Arabia.

MOWE Mission:

To manage and develop the precious water resources of the Kingdom in a rational, integrated, efficient and sustainable way for the benefit of our current and future generations.

And Providing a high standard of water service delivery for the growing population.

Objectives of the National Water Strategy:

The National Water Strategy aims at the overriding goal of sustainable use of water with a focus on conservation, efficiency, equity and security. To reach this goal, five specific objectives are targeted:

Objective 1: To conserve and develop water resources for sustainability and efficiency.

Objective 2: To improve governance and management to the highest level.

Objective 3: Provide water service to the Saudi people up to the level of developed countries whilst minimizing the fiscal burden.

Objective 4: To develop and introduce technological and institutional innovations.

Objective 5: To conserve and improve the environment

Because objectives 4 and 5 are cross-cutting throughout the strategy, they are integrated in measures to achieve objectives 1-3.

Design Frame of National Water Strategy:

1- A strategy for water resources management

Objective: Conserve and develop water for sustainability and efficiency

Outcomes: Non-renewable groundwater managed for sustainability

- Demand met by least cost sustainable supply
- Water use produces maximum social benefit
- Water security is assured.

Programs:

- Integrated water resources planning
- Demand side planning and management
- Supply side planning and management
- Phase-out center pivot irrigation system

Key Indicators and Targeted Outcomes 1:

Key Indicator	Unit	Baseline as of 2010	Target by [year]			
			2015	2020	2030	2040
Objective 1: Conserve and develop precious water resources for sustainability, bringing the highest benefit to Saudi society, both in this generation and for the future.						
The longer term outcomes targeted are that non-renewable groundwater abstractions are managed for sustainability, water demand is met by least cost sustainable supply, water consumption produces maximum social benefit, and Saudi Arabia's water security is assured.						
Use of non-renewable sources as part of <i>managed drawdown</i> not to exceed 5 BCM by 2030, broken down by each water management region	BCM	14.5	10	8	5	5
Regional water management plans are progressively in place, starting with the critical ones [-- #] by [date]	%	N/A	50	100	100	100
Optimize use of all possible renewable water sources [date]	%	N/A	60	70	80	90
Water supply for all services are metered (measured as percentage of volume of water produced for supply to all sectors)	%	N/A	40	60	80	95
Treated municipal wastewater recycled/ reused	%	30	60	80	100	100
Increase amount of recycled industrial waters to 90% by 2040	%	10	40	65	80	90
Progressively reduce per capita consumption in municipal water supply	lcd	238	200	180	170	170
Reduce average system (physical) water losses in municipal water supply	%	30	20	12	5	5

Design Frame of National Water Strategy:

2- A strategy to improve water governance and institution

Objective: Conserve and develop Water Resources for sustainability and efficiency.

Outcomes:

- A governance framework with clear lines of accountability
- An institutional set-up in which capable agencies work together in an integrated fashion in pursuit of set goals.

Programs:

- The legal and regulatory framework
- Governance and oversight
- Inter-agency planning
- Strengthening agencies
- Innovation, capacity and awareness

Key Indicators and Targeted Outcomes Objective 2 :

Key Indicator	Unit	Baseline as of 2010	Target by [year]			
			2015	2020	2030	2040
Objective 2: <u>Governance and management</u> to ensure that water is allocated and used in line with social and economic goals						
The longer term outcome targeted is that Saudi Arabia is managing its water resources in line with best practice IWRM principles as adapted to the specificity of the Kingdom						
NWS is adopted by 2013 and implementation is on track (annual reporting)	Y/ N		Y			
The <i>Supreme council for Water Affairs</i> is established and fully functional by 2013	Y/N		Y			
The new water law is passed and under implementation by 2013	Y/ N		Y			
Independent regulator for water resources and water services established and operational by 2013	Y/ N		Y			
Number of regions whose aquifers are fully regulated, starting with priority aquifers/ regions	#		2	3	5	8
Water Management Department of MoWE is operational by 2013	Y/ N		Y			
Projects Department of MoWE is managing all multi-governorate level projects and all larger projects by 2013	Y/ N		Y			

Design Frame of National Water Strategy:

3- A Strategy to improve water services

Objective: Deliver water services to the Saudi people up to the expected level of developed country whilst minimizing the fiscal burden.

Outcomes:

- Efficient and secure water supply and sanitation services to the entire population to the highest international standards.
- Protection for the vulnerable.
- Reducing net cost to the state.

Programs:

- Bulk water supply.
- Improving service delivery.
- Wastewater collection, treatment and reuse.
- Putting wastewater and sanitation on a business-like footing.
- Emergency water supply.

Key Indicators and Targeted Outcomes Objective 3 :

Key Indicator	Unit	Baseline as of 2010	Target by [year]			
			2015	2020	2030	2040
Objective 3: Bring <u>water services</u> to the Saudi people up to the level expected in a developed country, including through partnerships between public and private sectors, and ensuring security of supply						
The longer term outcome targeted is that water supply and sanitation services are provided to the entire population 24/7 and with no net cost to the state.						
Urban households connected to the network for water supply	%	78	85	90	95	95
Urban households receive continuous (24/7) water supply service	%	N/A	20	50	80	95
All Households receive water that meet SASO drinking water quality standard	%	80	90	100	100	100
Urban households connected to the sanitation network	%	58	50	65	80	95
Municipal wastewater treated to at least tertiary standards	%	35	50	60	70	100
Water supply for municipal use is metered	%	50	80	100	100	100
Non Revenue Water (NRW) is reduced to [--%] by [date]	%	N/A	25	15	7	7
Population benefiting from secure water supply as defined by <i>balanced water supply portfolio</i> for municipality reaches [--%] by [date]	%	N/A	50	75	100	100
Report on full cost of domestic water supply prepared each year starting 2013	Y/N	N	Y			
Cost recovery tariff (to cover at least the O&M cost for water & wastewater services) implemented	Y/N	N		Y		



THANKS