



**I.R. Iran**

# Sub-regional Workshop on Urban Water and Sanitation Services in South and South-West Asia

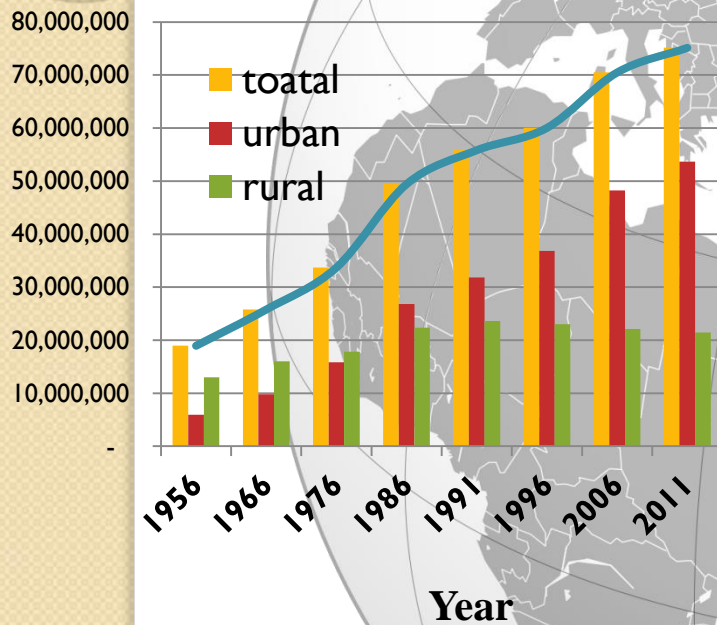
9-10 August 2017  
Kathmandu, Nepal

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# Iran's location in the world's map and neighboring countries

**Estimated Population in 2041  
~110,000,000**

## Population and rate of change in recent census



**Total terrestrial borders of the country are 5,170 km. and total water borders are 2,510 km**

•The Iranian population in the year 2011 was 75,149,669

Azerbaijan  
Turkey  
Turkmenistan  
Iraq  
Afghanistan  
Kuwait  
Saudi Arabia  
Pakistan

**Total water consumption: 96 BCM/year**

Underground	52 BCM/year	
Surface water	43.3 BCM/year	
Other	0.7 BCM/year	

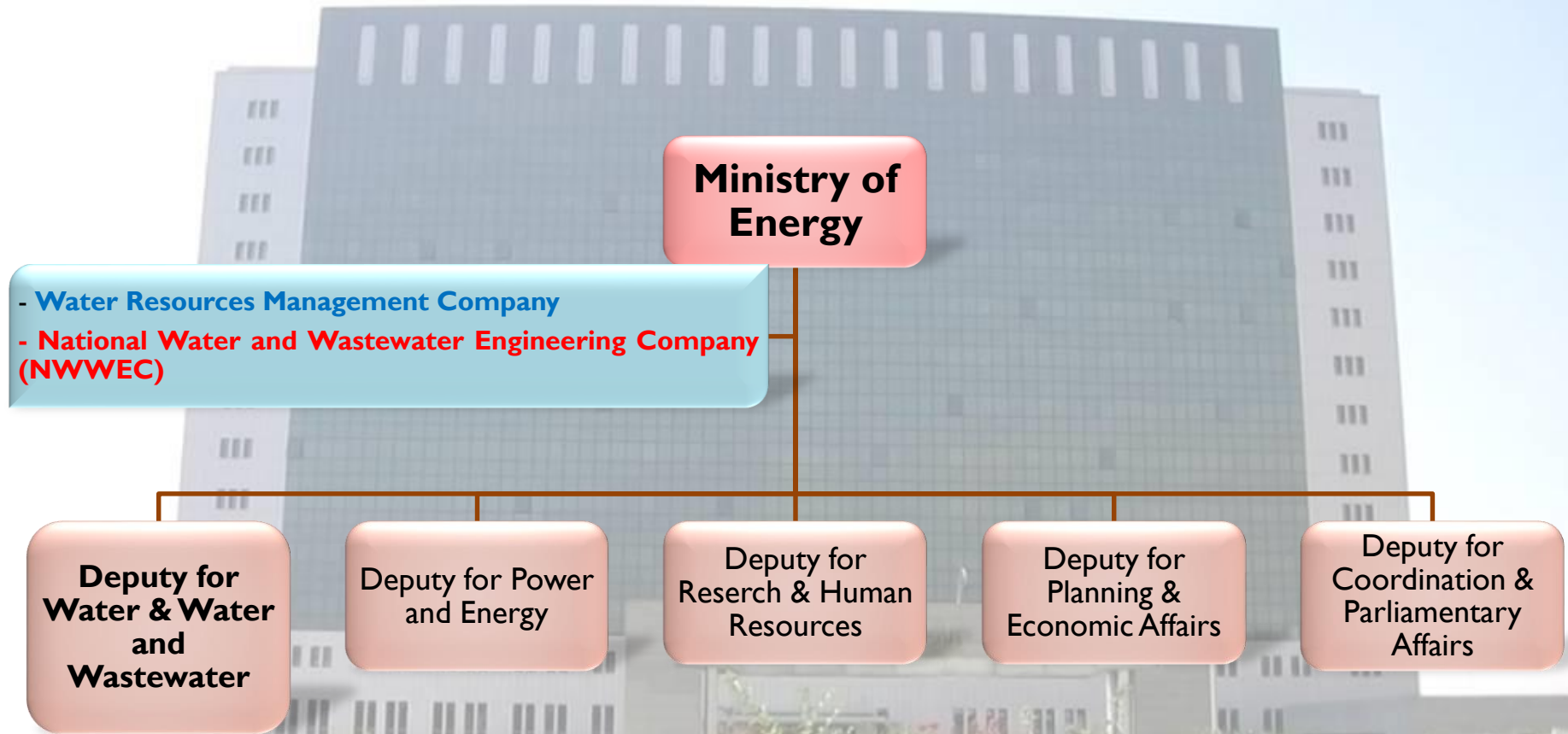
Agriculture	88.7 BCM/year	(92%)
Domestic	6 BCM/year	(6.3%)
Industry	1.3 BCM/year	(1.7%)

- ❖ **Area: 1.648 million km<sup>2</sup>**
- ❖ **No. of provinces: 31**
- ❖ **Neighboring Countries: 15**

# Development Goals, January 2016

Description	Unit	Amount
Population under the coverage of wastewater systems	% of total population	42.3
Population under the coverage of Wastewater treatment plants (WWTP)	% of total population	22.4
Number of wastewater connections	In millions	5.9
Length of collection and transmission lines	km	55,500
Number of WWTP in operation	Unit	155
Nominal capacity of WWTP in operation	MCM/day	3.9
Actual capacity of WWTP in Operation	MCM/day	2.9

# The Organization of the Ministry of Energy





# The Organization of NWWEC

[www.nww.ir](http://www.nww.ir)

**National Water and Wastewater Eng. Co.  
(NWWEC)**

**Deputy for Planning and  
Development**

**Bureau for Design and  
planning**

**Bureau for supervision**

**Bureau for planning and  
development**

**Bureau for Procurement of  
Funds and Development of  
Non- Governmental  
Participation**

**PMU for Project benefited from  
World Bank , IDB and ECO loans**

**International Cooperations**

**BOO, BOT and Buyback Projects**

**Water Desalination Projects**

**Deputy for Operation**

**Deputy for Human  
Resource**

**Deputy for Coordination  
and Support**

For Water supply Project under Supervision of NWWEC

**Regional Water Authority  
Co.**

**31 Companies**

**Rural Water and  
Wastewater Provincial Co.**

**31 Companies**

**Urban Water and  
Wastewater Provincial Co.**

**35 Companies**



NWWC

**Lack of agricultural water efficiency  
Still a challenge**

# Water Policy

## Circular on amendment of consumption pattern.

- In view of the lower precipitation and droughts in recent years, this circular was drafted in a move to reduce the per capita consumption and water losses in the network (NRW) and to allocate lower quality waters (treated effluents, etc.) to other sectors (industrial, agricultural, environment, etc.).
- Eliminate and stop water abstraction from the illegal wells in agricultural and industrial Areas.
- Exploit the new water resources such as unconventional waters (sea water, effluent of WWTP, etc.) especially for industries and irrigation.
- Planning for use of desalination systems especially in Coastal Areas with high water stress.

# Wastewater: actions taken, overall policies

- The main objectives of wastewater plans are to protect the environment and improve the health and welfare of the society.
- To this end, effective actions have been taken over the last twenty years for collection and treatment of urban wastewater.

In general the main subjects of further investigations on wastewater plans include:

- Focus on recycling of effluents.
- Use of new technologies
- Use of effluents as a new water resource.
- Use of effluent to recharge groundwater resources and to prevent land subsidence.



# Policies for wastewater plans

- **New approach:**
- Construction of **decentralized** WWTP at the sites of residential, business and administrative complexes,
- Reuse of resulting effluents for non-sanitary consumptions in the buildings such as reuse for flush tanks, landscaping and fire hydrants.
- **Energy optimization** at WWTP
- **Reducing the surface area** of the sites for construction of WWTP
- **Improving the quality** and reducing the volume of generated **sludge**
- Reducing the negative impacts by preventing **carbon emission**
- Improving efficiency and the quality of effluent and **removing nutrients** from it.
- **Adapting** the treatment processes to **local conditions**