



# WATER SECTOR CHALLENGES AND THE NATIONAL EFFORTS FOR WATER MANAGEMENT IN EGYPT

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# Water Sector Challenges

- Population growth.
- Growing water demand-supply gap.
- Inadequacy of available governmental investments.
- Poor cost recovery.
- Pollution resulting from growing municipal, industrial and agricultural sectors.

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## Water Sector Challenges, cont.

- Excessive government involvement and bureaucratic control.
- Low level of awareness.
- Low level of stakeholder participation.
- Weak monitoring and assessment at the national and local level.

# Egypt Water Resources

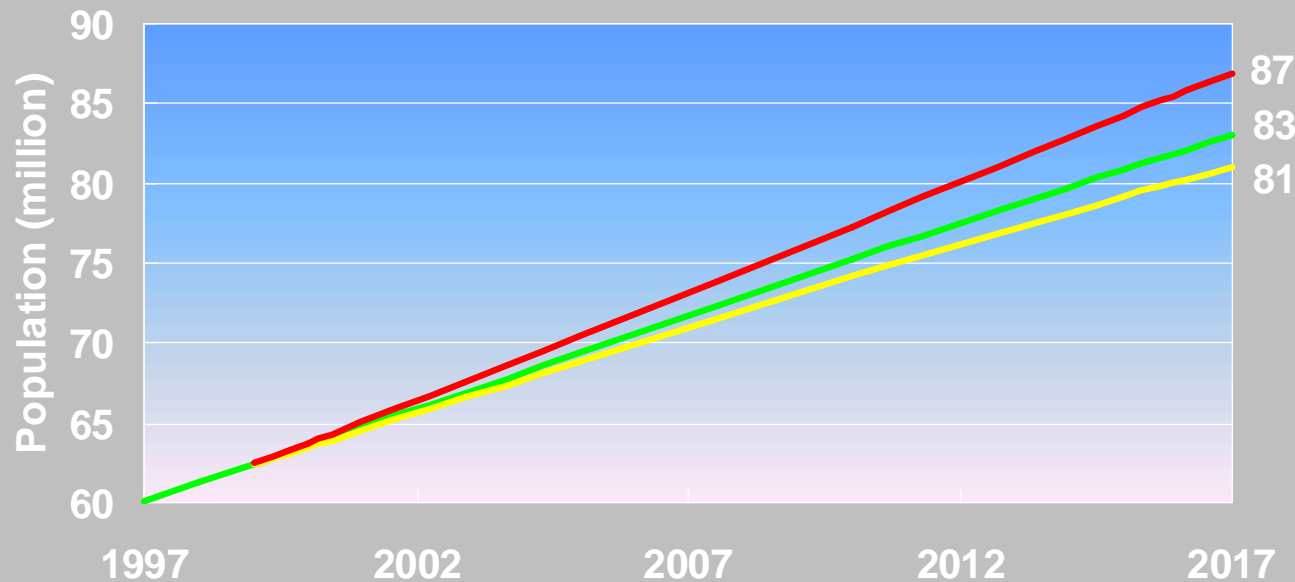
## Limited Resources

- River Nile 55.50 BCM/yr
- Rainfall “1.0 ~ 1.50 BCM/yr” on the Northern Coast and Sinai.
- Deep groundwater “1.0 BCM/yr” in Eastern, Western desert, Sinai and Northern Coast.
- **Untraditional Resources**
  - Reuse of drainage water.
  - Reuse of treated waste water.
  - Shallow Groundwater in the Valley and Delta.
  - Desalination of brackish and sea water.

# Why ?

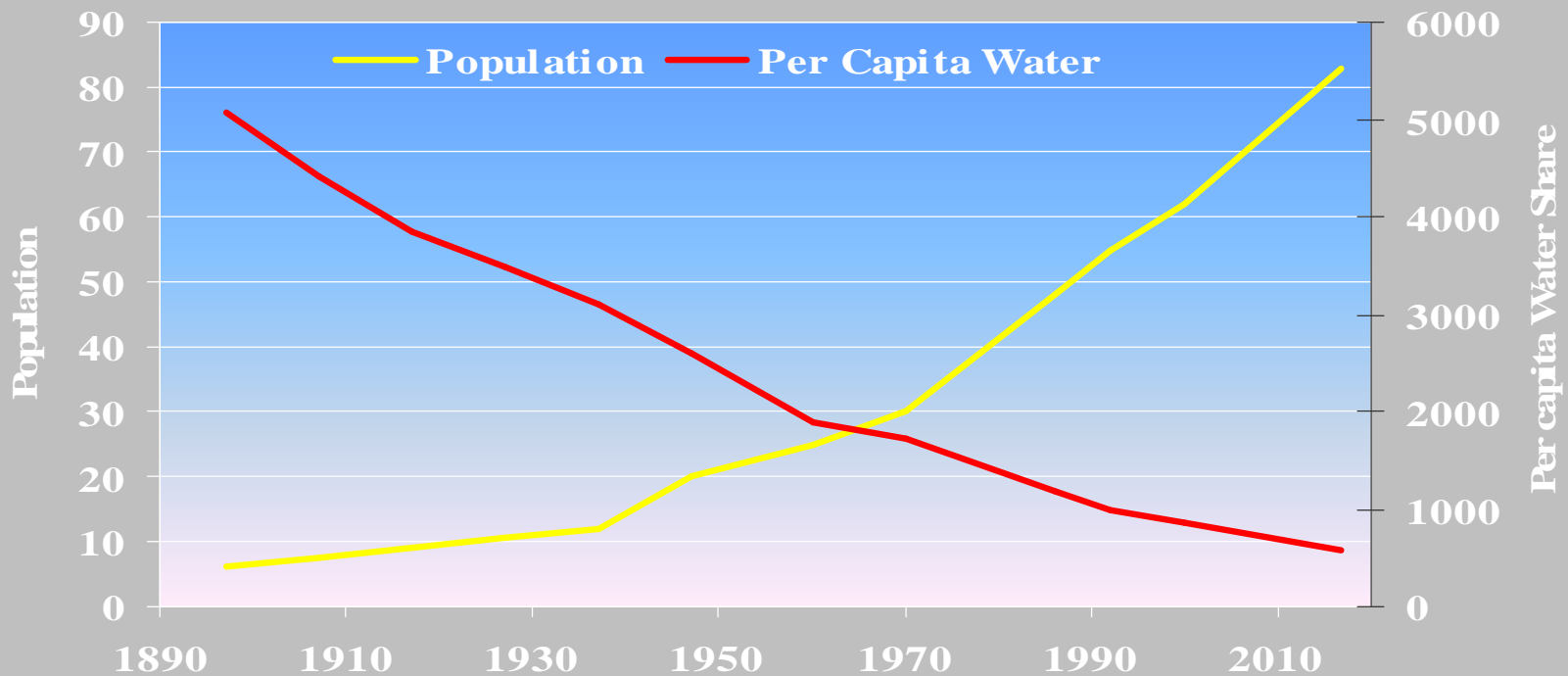
## Growing Demands

- Growing demand as a result of population growth and higher living standards.
- Growing demand as a result of agriculture horizontal and vertical expansion.
- Growing demand as a result of industrial growth.



# Problem Statement

- Water quota decrease from 1893m<sup>3</sup>/cap in 1959 to 935 m<sup>3</sup>/cap in 1996, 750 m<sup>3</sup>/cap in 2010 and expected to be 580 m<sup>3</sup>/cap in 2025.
- Agricultural area/cap decreases from 0.85 fed. In 1900 to 0.13 fed in 2000.
- Environmental deterioration (water quality)
- Water distribution problems at field level.



# Previous Water Policies

- Water Policy 1975
- Water Master Plan 1980
- Water policy 1982

Supply Management

- Water Policy 1997

Supply & Demand  
Management

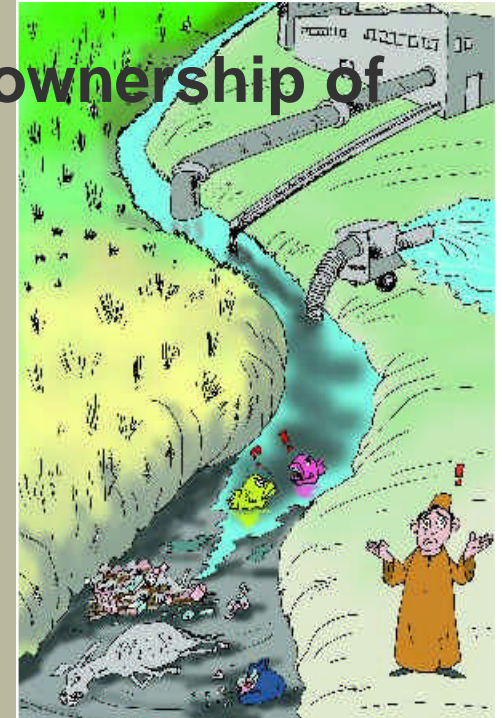
- National Water Resources

Plan 2005

IWRM

# Basic Principles

- Water is finite, vulnerable and essential resource which should be managed in an integrated way;
- Water resources management should be based on a participatory approach, involving all stakeholders;
- All water is a common resource, no ownership of water
- Cost recovery
- Polluter-pays principle;



# **Pillars About IWRM**

- **Water supply and demand management**
- **Water quantity and quality management**
- **Economic instruments and financing of water programmes (PPP & Cost Recovery)**
- **Institutional reforms and new roles of concerned institutions at all levels**
- **Legal amendments and enforcement of water laws and regulations (New Law)**
- **Involvement of all stakeholders at all stages**
- **New Challenges such as Climate Changes**

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# HOW TO REDUCE THE GAP

- Tackling fragmented water service delivery concerns.
- Empowering water users for participation in the planning and implementation process.
- Facilitating greater private sector investments in irrigation infrastructure.
- Redefining the role of public agencies through (e.g. Integrated Irrigation Management)

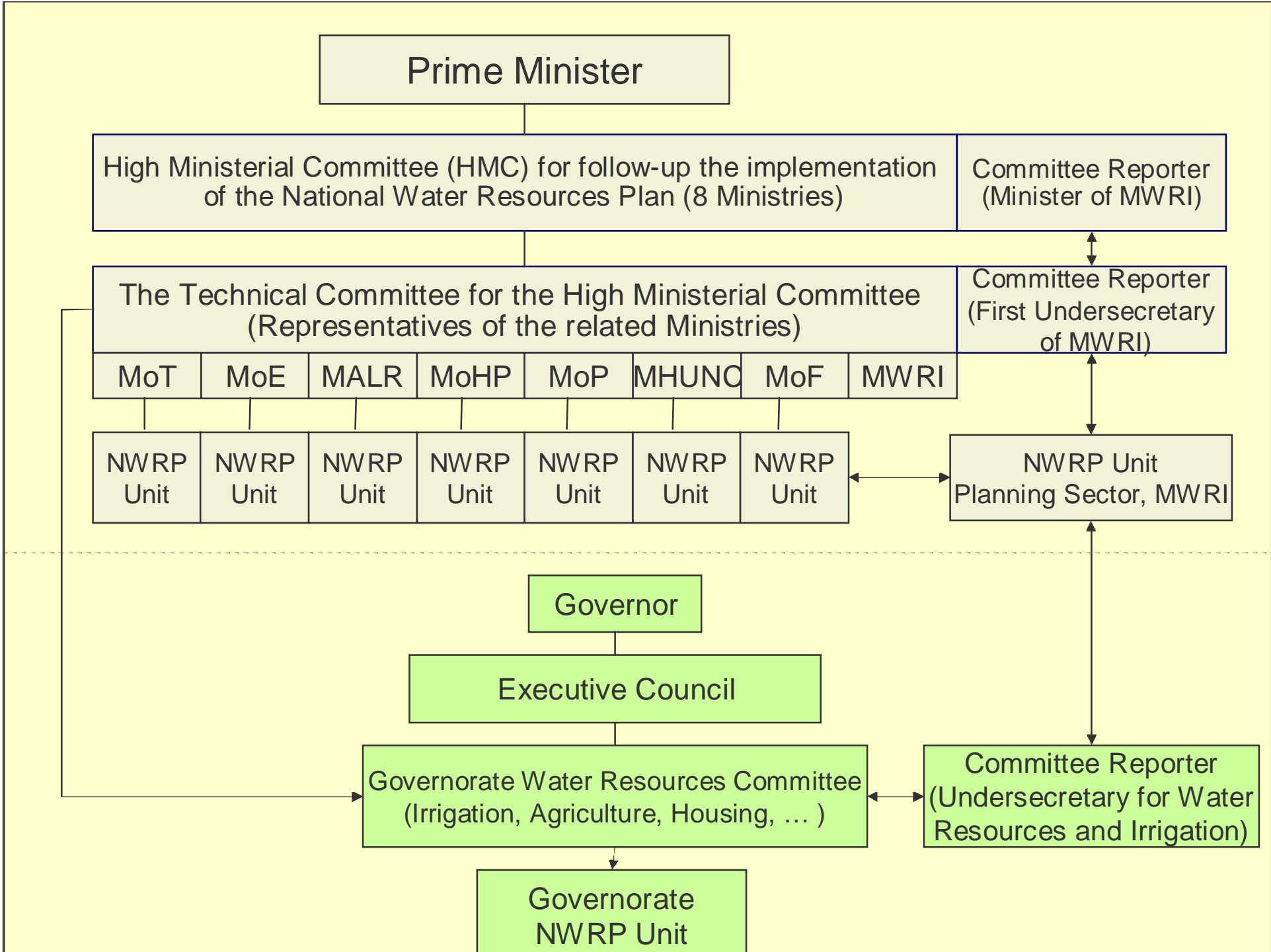
**planning  
together**



# Example

●	Responsible
○	Co-operating partner
x	Consulted partner

Recommended Measures/Actions			Stakeholders													Implementa				
			N. Water Council / MWRI	Min.of Water Res.& Irrig.	Min.of Agric.& Land Recl.	Ministry of Industry	Ministry of Environment	Ministry of Housing	Ministry of Health	Ministry of Electricity	Min. of Transportation	Ministry of Planning	Min. of Local Developm.	Ministry of Tourism	NGOs, etc.	WUAs / Water Boards	Directorates/Decentr.Org.	Private Sector	No. of the measure	Type of measure
Develop more resources	Nile bas.	Continue co-operation with the Nile countries	○	●														120	pol+	3,898
	Groundwater	Groundwater development Western Desert		●	○												X	35	inv.	3,500
		Groundw.developm. Sinai and Eastern Desert		●	○												X	119	stud.+ inv.	807
		Development brackish groundwater for agriculture and aquaculture		●	○												X	37	stud./pilot	650
		Increase management of shallow groundwater		●	○		X	X							X		X	121	man.	0
		Rainfall/flash fi.	Stimulate rainfall harvesting along Northern coast		○	●												X	40	man.
		Flash floods harvesting in Sinai and Eastern Desert		●								○					X	41	stud.+ inv.	302
	Desalination	Increase brackish / salt water desalination		○									○				●	49	inv.	768



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Thank

*you*