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Water Management in Korea

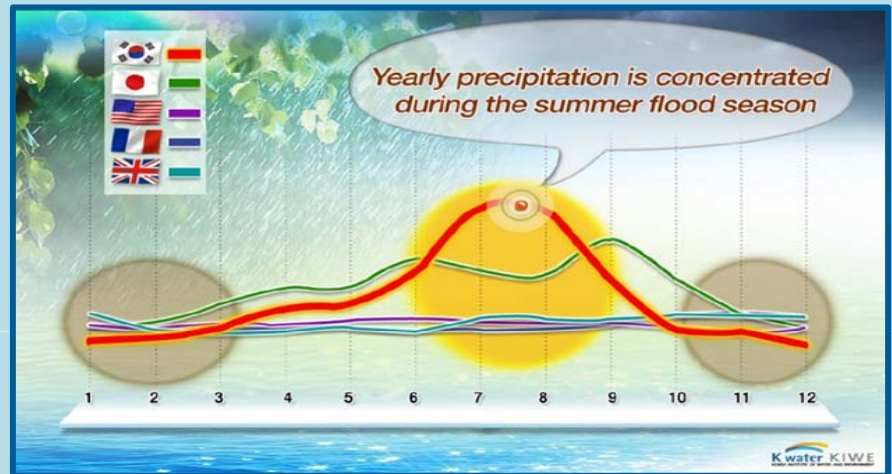
Progresses for IWRM

Dr. Min, Kyung-Jin

Water Status in Korea



Difficulties in Water Management

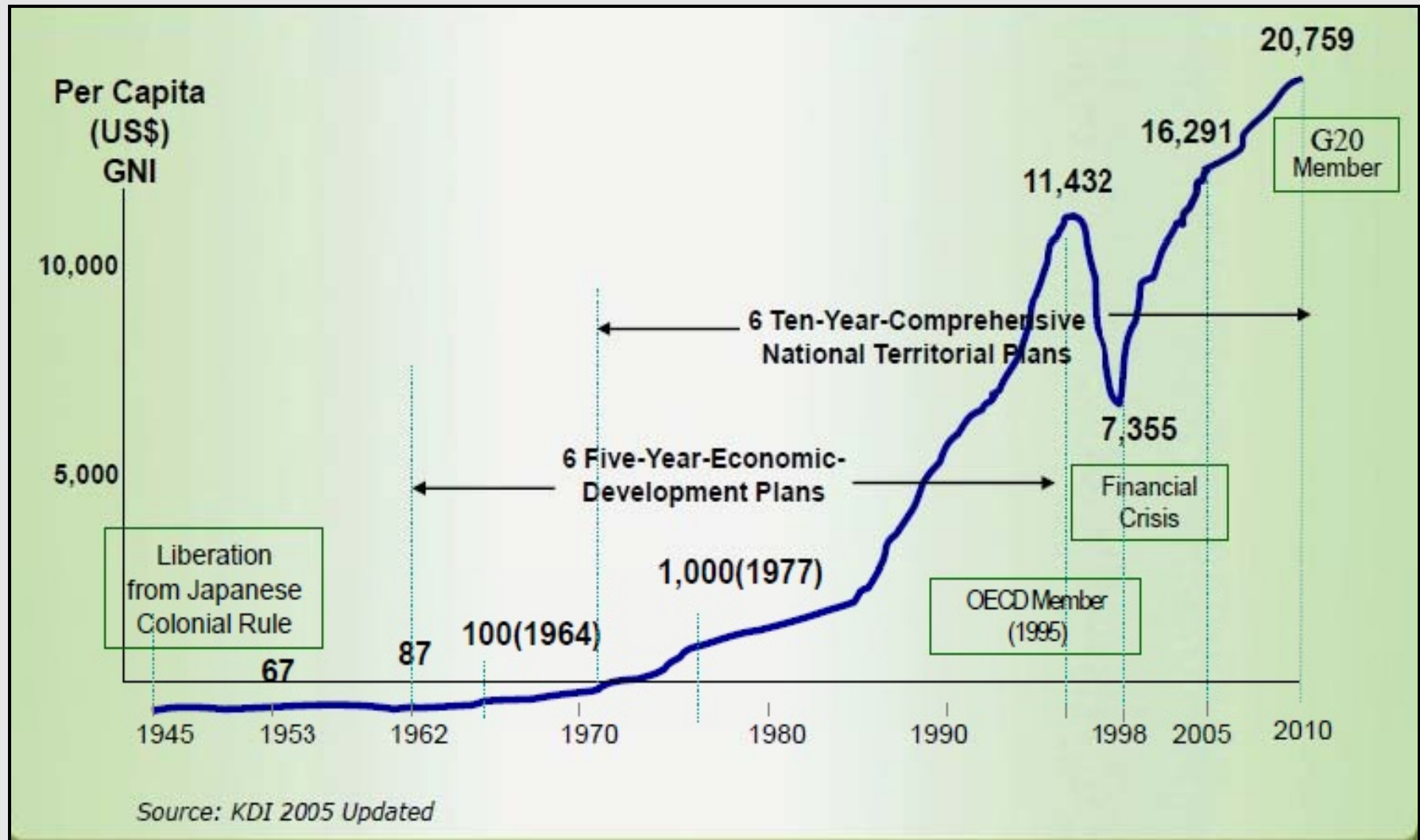


Integrated approach for water mgt was imperative in terms of water quality & quantity.

Korea's History toward IWRM



Economic Growth in Korea



History of Water Development

✓ Development of multipurpose dams for water supply, flood protection, hydropower

● *Soyanggang Dam (1973)*

● *Andong Dam (1977)*

1965-80
Industrialization

✓ Development of multi-regional supply systems

1981-90
Unbalanced growth

1991-2000
Phenol Accident

✓ Enlargement of Sewerage

2008~
Climate Change

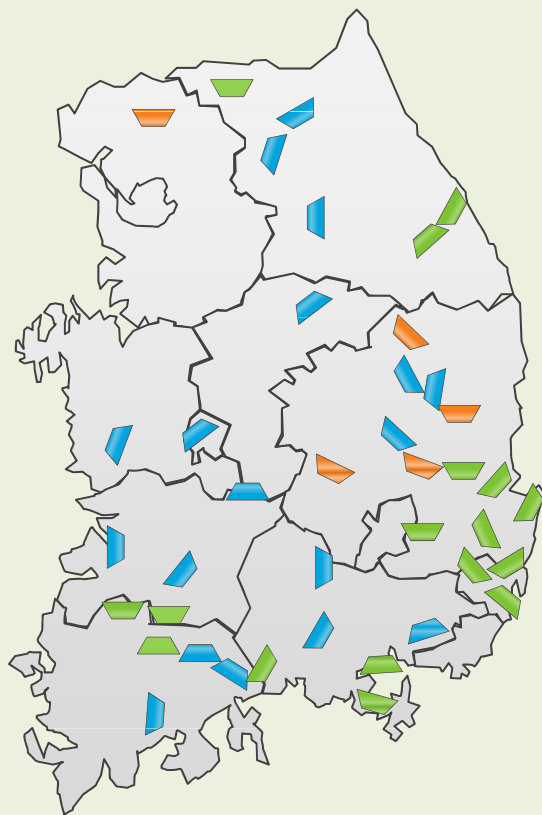
✓ Water & Green Growth

2001~2008
Sustainable Development

✓ Eco-friendly development & mgt of water resources

Industrialization: 1960s~1980s

-> Large dams were built to secure water resources and prevent flood



 **Multi-Purpose** (16 dams)

 **Providing Water** (14 dams)

 **Under construction**

Total Amt. of Water **13,072** million m³

Flood Controlled **5,066** million m³

Amt. of Water Provided **11,672** million m³

Amt. of Energy Generated **1,047,000** kW

Unbalanced Growth: 1980s~1990s


-> **Multi-regional water supply systems cover 50% of total water supply in Korea. [18 mil. m³/day]**

Processes : Conventional
Production Capacity : 800,000 m³/day
Serving for 2.5 million people in Metropolitan Seoul

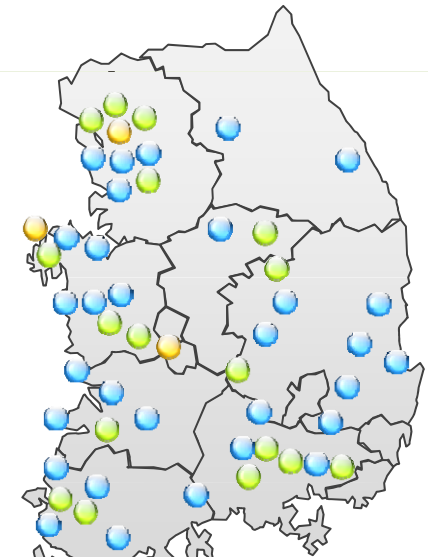
K water



 Regional and industrial water Supply network (in operation)

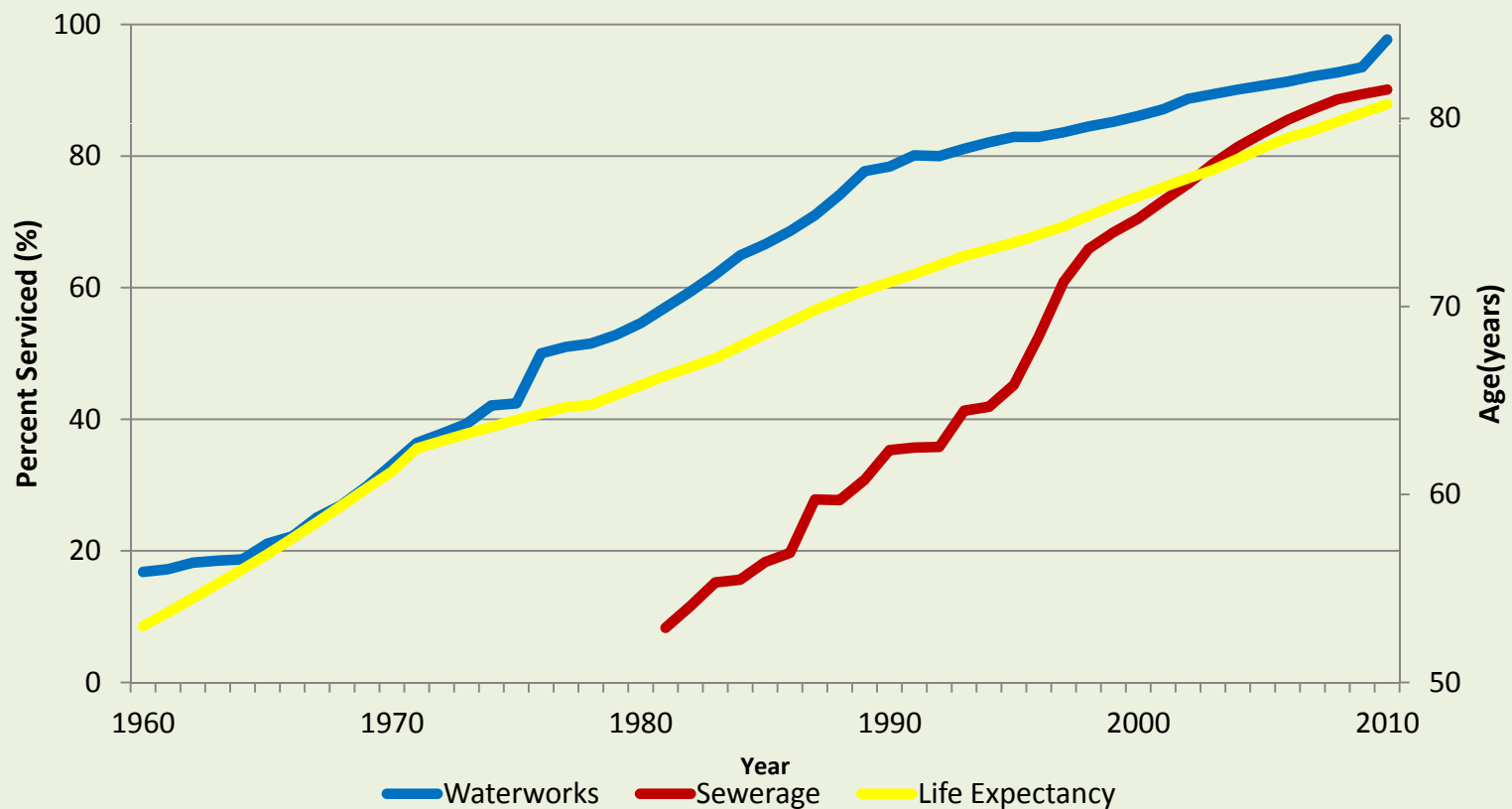
 Local water supply and sewerage network

 Regional and industrial water supply network (under construction)



Environmental Protection : 1990s~2000s

-> Sharp increase of sewerage and steady growth of waterworks



Eco-friendly Management : 2000s



Green grass planting on dams & Ecological Passageways



Natural fish ways



Water & Green Growth from the 2010s

Four River Project



Institutional Development for IWRM



Institutional Development in the 1960s

The Five-Year Economic Development Plans (FEDP)	<u>The 1st FEDP (1962-1966)</u> <ul style="list-style-type: none">- Overcoming a vicious circle of poverty- Expansion of exports- Development of infrastructure <u>The 2nd FEDP (1967-1971)</u> <ul style="list-style-type: none">- Modernization of industrial structure- Exports of USD 700 mil.- Induction of foreign loans
The Comprehensive National Territorial Development Plans (CNTDP)	
The National Water Resources Plans (NWRP)	



Institutional Development in the 1970s

The Five-Year Economic Development Plans (FEDP)	<u>The 3rd FEDP (1972-1976)</u> <ul style="list-style-type: none">- HCI- Development of 4 great river basins
The Comprehensive National Territorial Development Plans (CNTDP)	<u>The 1st CNTDP (1972-1981)</u> <ul style="list-style-type: none">- Efficient use of the national land- Enlargement of infrastructure
The National Water Resources Plans (NWRP)	<u>The Ten-year Water Resources Development Plan (1970-1980)</u> <ul style="list-style-type: none">- Stable water supply for irrigation & industrialization/flood control- Enlargement of hydro-electric power generation- Construction of single & multi-purpose dams



Institutional Development in the 1980s

The Five-Year Economic and Social Development Plans (FESDP)	<u>The 5th FESDP (1982-1986)</u> <ul style="list-style-type: none">- Social and economical stabilization- Balanced development between classes and regions <u>The 6th FESDP (1987-1991)</u> <ul style="list-style-type: none">- Establishment of free, competitive market systems- Increase of quality of life & balanced development
The Comprehensive National Territorial Development Plans (CNTDP)	<u>The 2nd CNTDP (1982-1991)</u> <ul style="list-style-type: none">- Expansion of develop. possibility into whole regions- Improvement of national living environment- Dam construction- Water supply target : 80% of population- Sewerage target: 35%
The National Water Resources Plans (NWRP)	<u>NWRP (1981-2001)</u> <ul style="list-style-type: none">- Dam construction for stable water supply- River improvement for flood prevention fr 30% to 70%



Institutional & Organizational Change



New Institutions

- > Comprehensive Plan for Clean Water Supply in 1989
- Comprehensive Water Management Plan in 1996
- Comprehensive Water management Plans for 4 Rivers in 1998
- Counter Measure Areas in Paldang and Daechyeong
- > Budgets, Legal Authorities, Organizational and Functional Structures



Institutional & Organizational Change

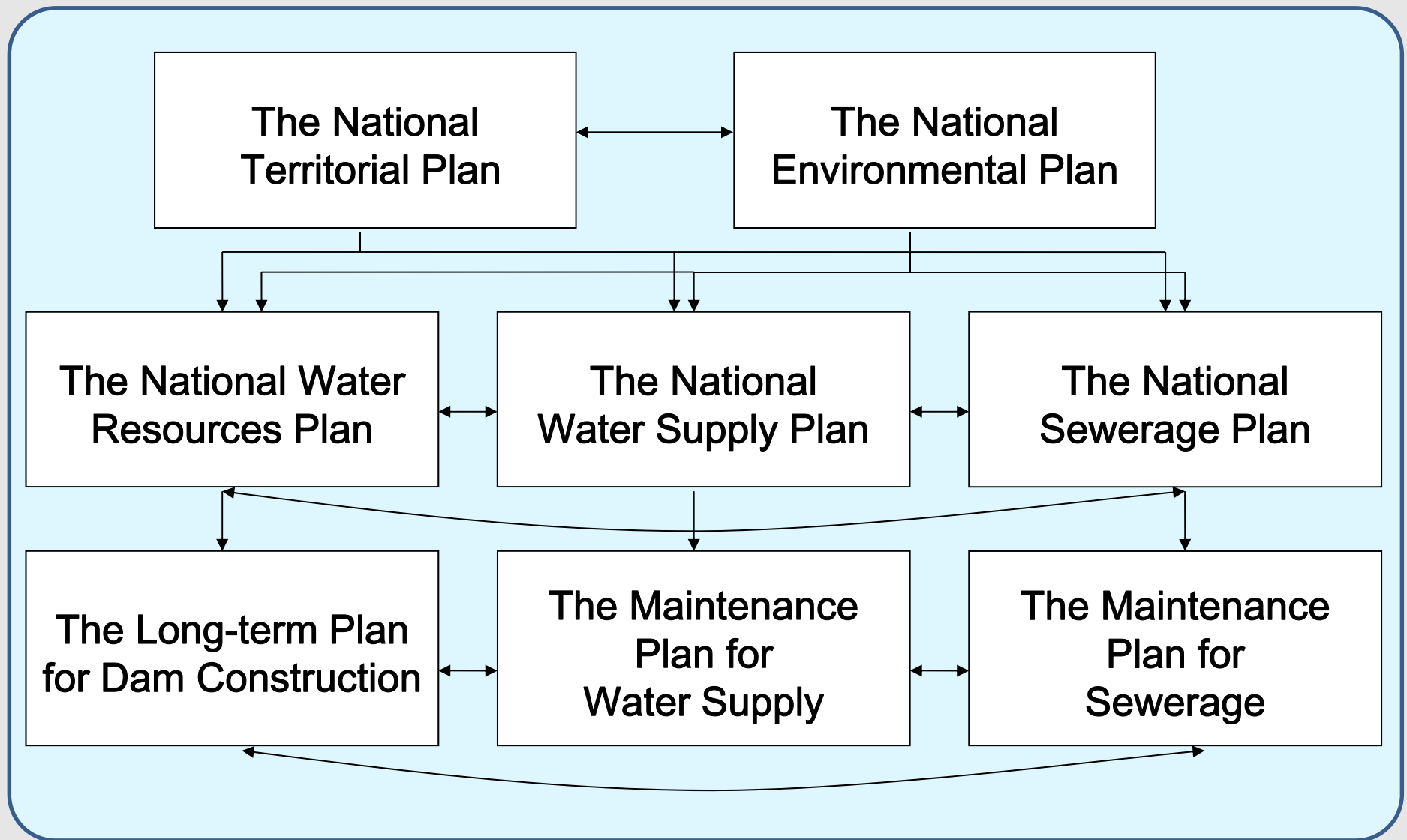


Establishment of PCSD

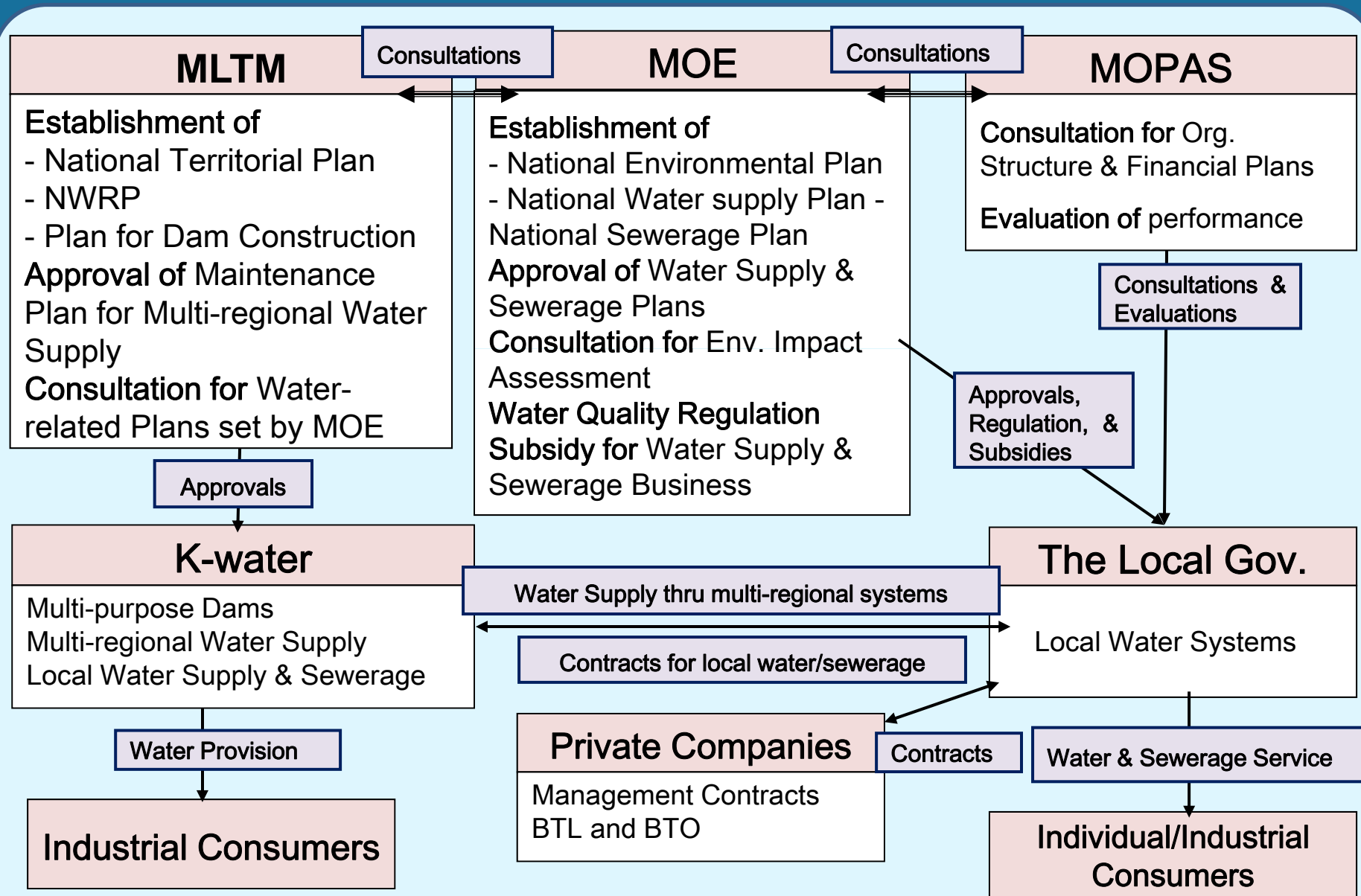
-> “To discuss environmental issues with firms and civic groups, (I will) establish the **Presidential Commission on Sustainable Development** and strengthen the pre- negotiation and coordination on economic policies and environmental policies” (Hankyoreh, 2000, p.2).



Current INSTITUTIONAL Structure for IWRM



Current ORGANIZATIONAL Structure for IWRM



Implications & Recommendations



Implications & Recommendations



 **Role of the State and the Market toward the Good Governance**

 **Organizational & Institutional Reform**

 **Policy Dialogue based on Scientific Analyses**

 **Promoting the Water Industry**

Thank You.

