

Watershed Management and Implementation of TPLMS for Water in Korea

2007. 3.

Hyun-Joo

 Moon
Korea Environment Institute

Water Pollution Management Policy in Korea

■ Water Management Policy in Korea

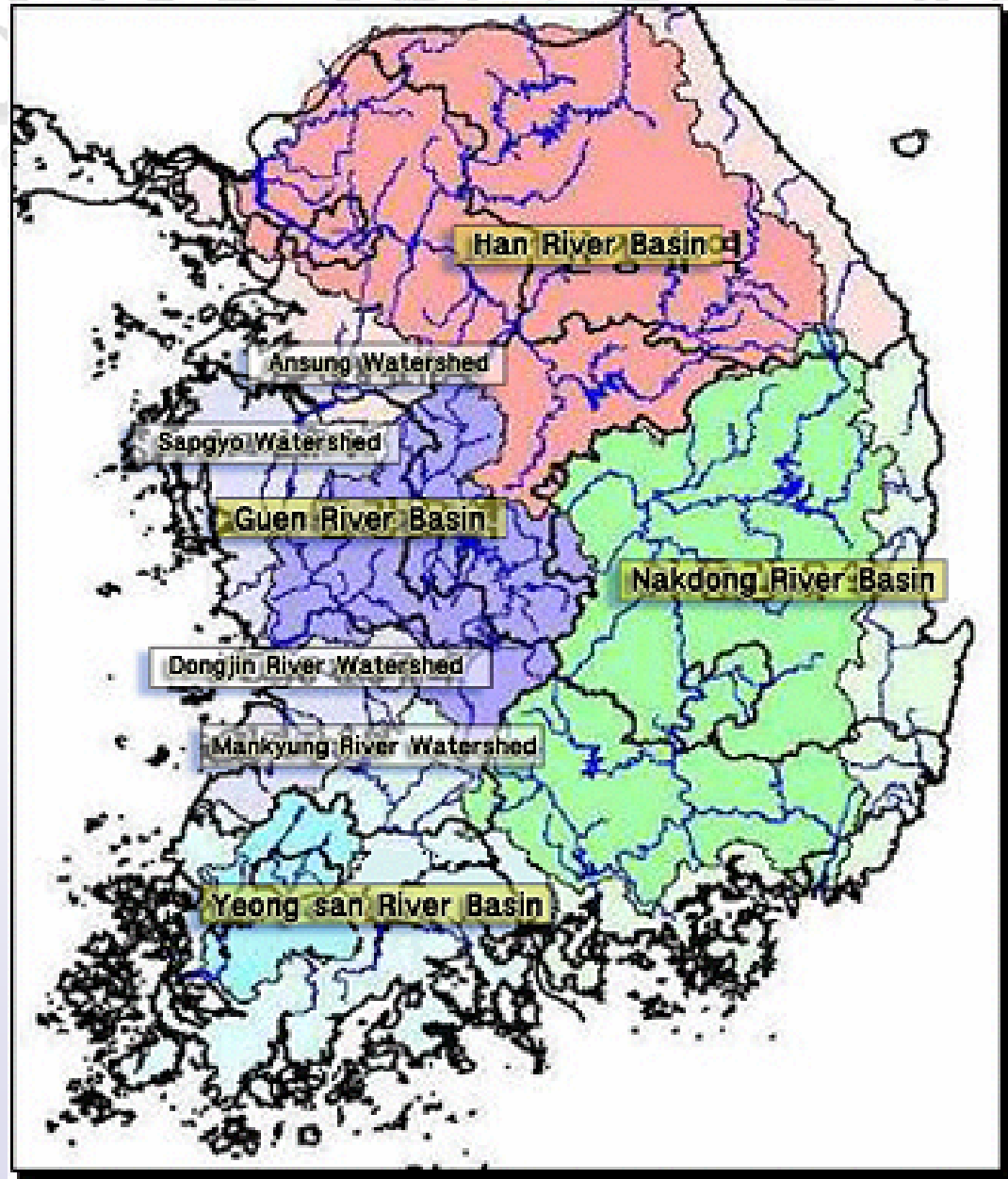
Until 1980s	Focused on the water resource development to support the increased water demands
Since late 1980s	Water quality control & major investments for treatment facilities

Difficulties

- Limitation of end-of-pipe approaches
- Difficulties in pollution source control
- Resident's resistance on tighter regulations
- Upstream-downstream conflicts on environmental regulation

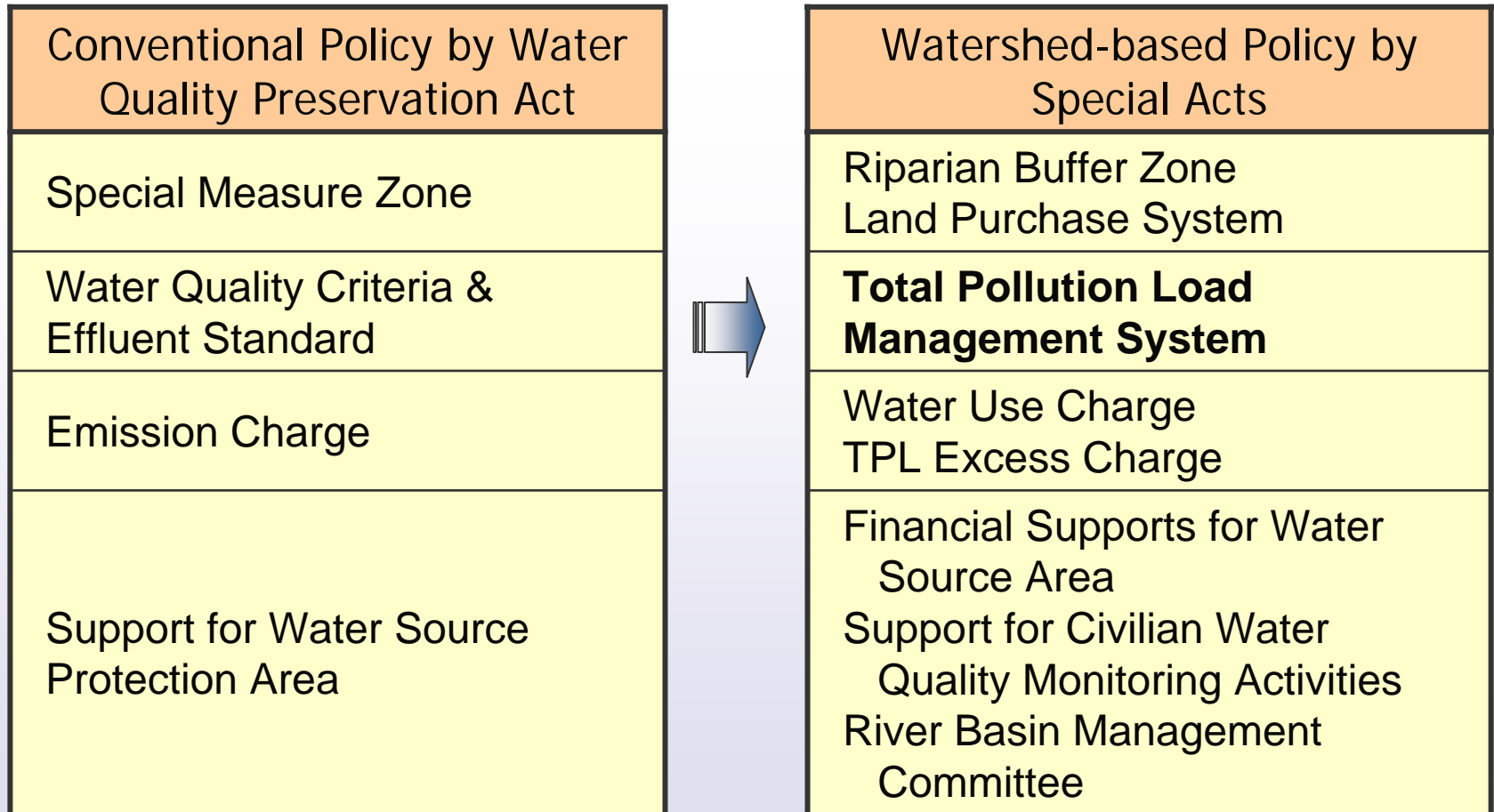
⇒ Comprehensive Water Management Measures for the Four Major River Basins

Main Watersheds in Korea



Water Pollution Management Policy in Korea

■ Changes of Water Quality Management Schemes



Establishment of Watershed Management System in Korea

■ Special Measures for Four Major Rivers

- Strong resistance of residents & regional government / conflict between up- and down-stream region
- Approach for 'agreement' with the community through more than 420 public hearings, explanatory meetings and panels for convincing the residents of its need for the system

* Special Measures

- Reaching a compromise should be based on the agreements between interest groups (esp. upper and down stream)
- Community culture based on enhanced community participation
- 'Water-use charge' base on user pay principle for reasonable cost-sharing and secure funds for watershed mgt.
- 'Butter zone system' & TPLMS as an effective measures for watershed mgt.
- 'Basin management committee' as a decision-making body / 'watershed environment office' as an executive body

Implementation of TPLMS

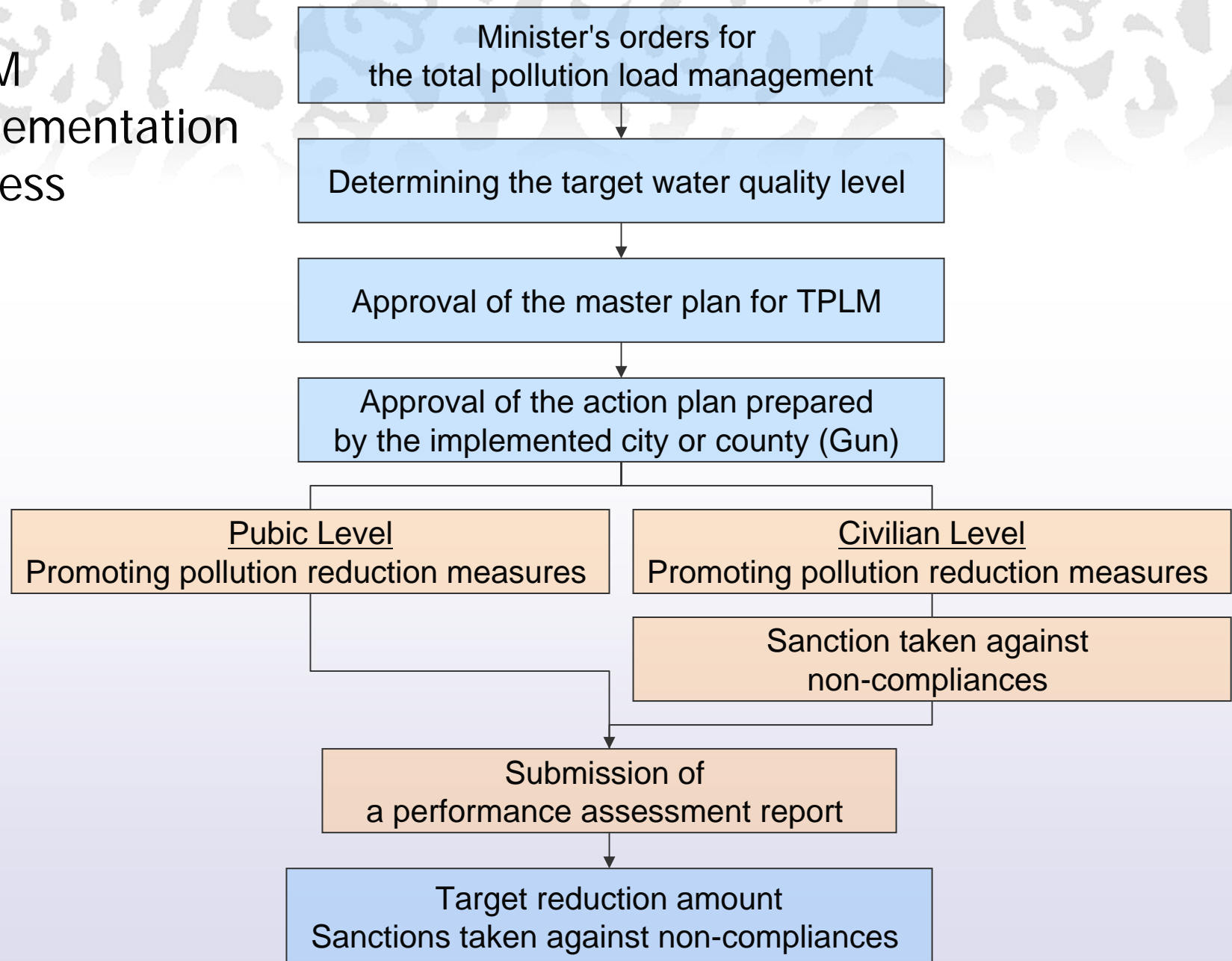
■ TPLMS for Water

- Determining the target water quality standard for each block of the water systems, and regulating or controlling the amount of pollutants discharged from the region within the maximum permissible load
- Implementation of TPLMS is voluntary in Han river basin while compulsory in the other three river basins

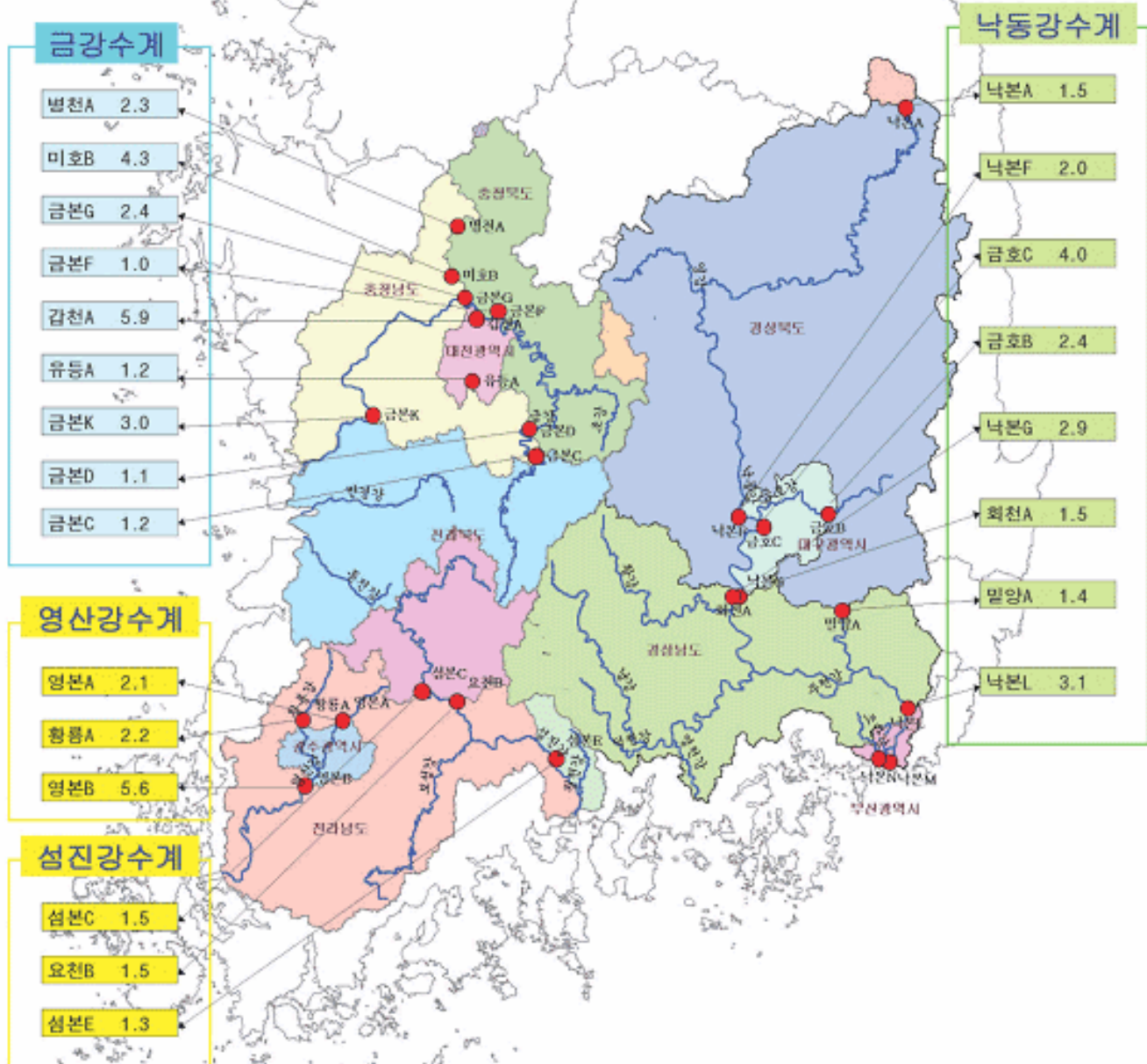
■ Implementation

- Target Setting: concerning use of water, distribution of pollution sources, state of regional development & environmental infrastructure, quantity & quality of water, and ecology
- Implementation Tools: (polluter) regulation, total pollution load excess charge (region) limitation in approval of development project, reduction of financial support
- Supporting: TPLM Center, training program

TPLM Implementation Process



Target Water Quality



Difficulties Encountered and Settlement of TPLMS

■ Institutional Issues

- Lack of incentive under voluntary implementation scheme
- The aim and approach to TPLM of local government differ from that of ME
- Lack of capacity prevents local government from implementing TPLM actively
- Differences in regional implementation conditions

■ Technical Issues

- Short of precise information on pollutant load and source / lack of sufficient monitoring data
- Limitation to determine target water quality standard
- Difficulties in reasonable allocation of pollution load quotas into individual polluters in the region (methodology, information, regional capacity of implementation)

Implications of Korean Experiences to Asian Countries

- Effective Problem Solving by Adapting Watershed Management System
 - Integrated watershed management system will ensure effective resolution of the water resource problem
- Promotion of Residents' Participation
 - Enhancing the residents' awareness and support effectively
- Active Development of Deregulated Environmental Management Plan
 - Environment-friendly living patterns & management, non-point source management
- Solving Possible Difficulties of TPLM Implementation
 - Establishing schemes to induce the active participation of local government / Capacity building for implementation



Thank you !

Hyun-Joo Moon

Korea Environment Institute

hjmoon@kei.re.kr, +82 2 380 7632

<http://www.kei.re.kr>