



Demonstration River Basins in Korea

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Description of Korean Watersheds

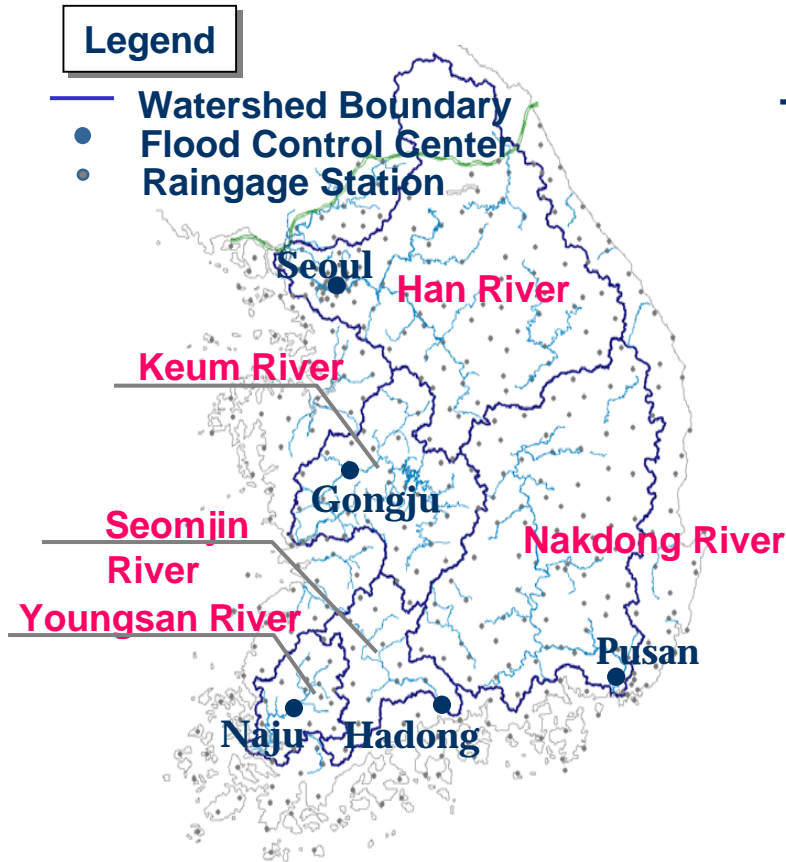


Table. Characteristics of the major watershed

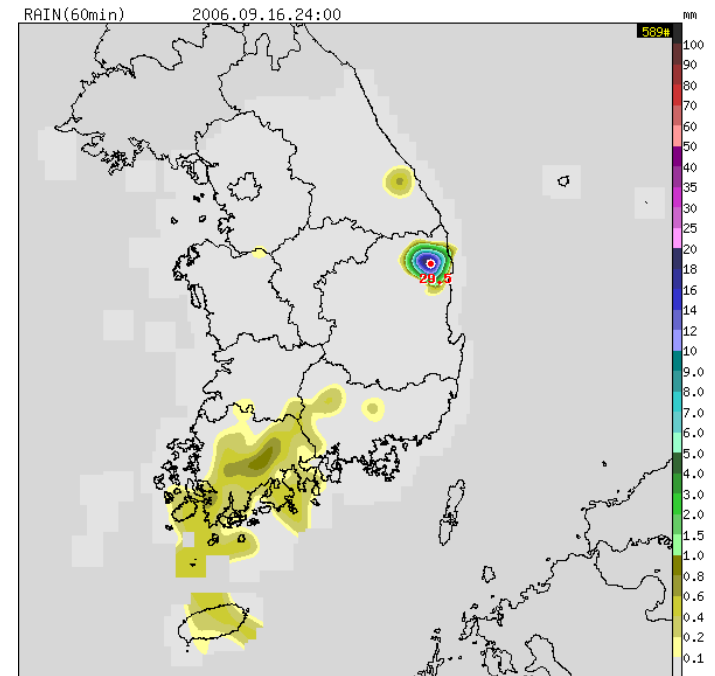
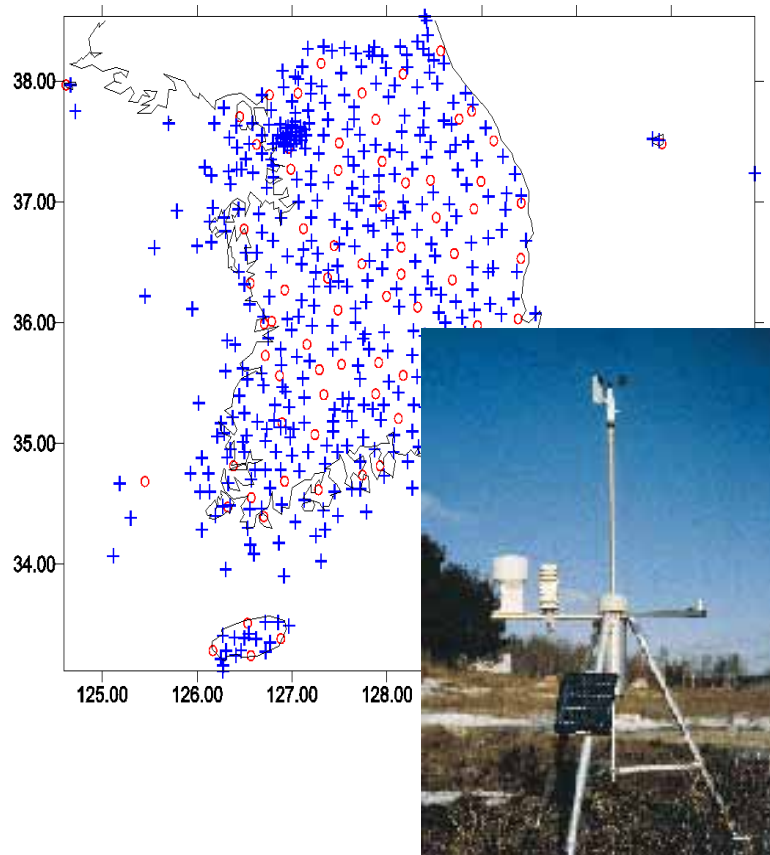
FCC \ Item	Area (km ²)	%	Raingage No.	Stage No.
Han R.	26,018	26.1	158	67
Nakdong R.	23,817	23.9	162	83
Keum R.	9,810	9.9	81	29
Seomjin R.	4,897	4.9	23	24
Youngsan R.	3,371	3.4	14	25
Total	63,016	68.2	438	228

Fig. Distribution of the major watershed and FCC in Korea

Meteorologic Data Observation

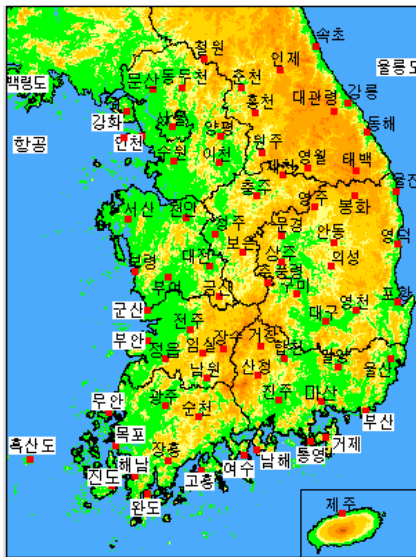
□ Automatic Weather Station (AWS) - Spatial

✓ Total number (2005): ground=539ea, sky=12ea



Automatic Weather Station (AWS) – Time series

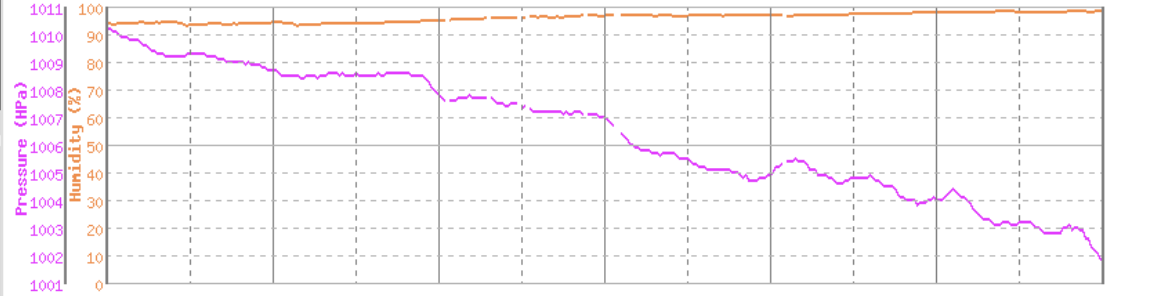
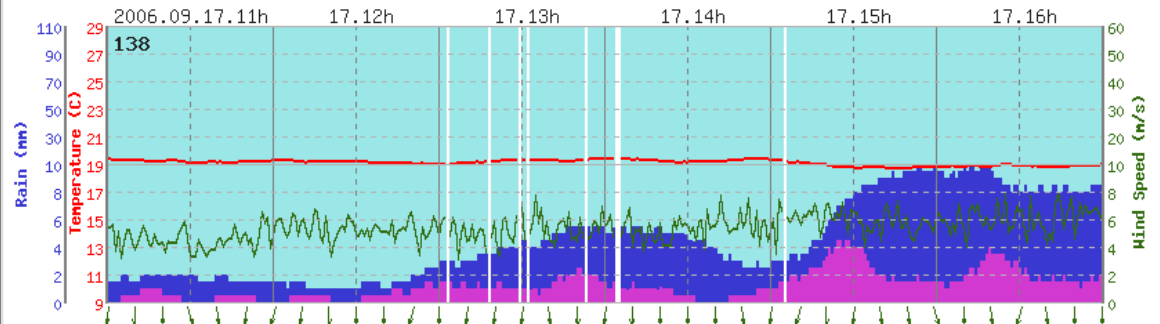
AWS 시계열 분석/매분 년월일시분 200609171700 확인 1H NOW HOME > AWS >



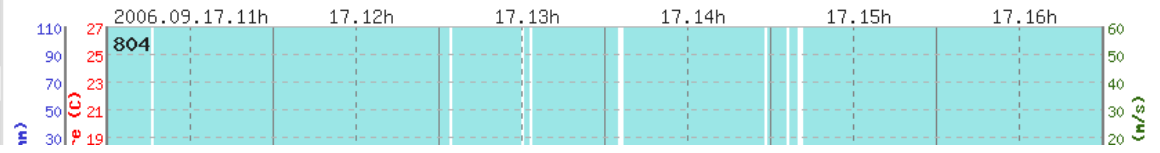
[매분분석자료] 포함 138 / 2006.09.17.17:00

{ 설명 } 하늘색 : 강우감지기 / 파란색 : 60분이동누적 / 분홍색 : 15분이동누적강수량

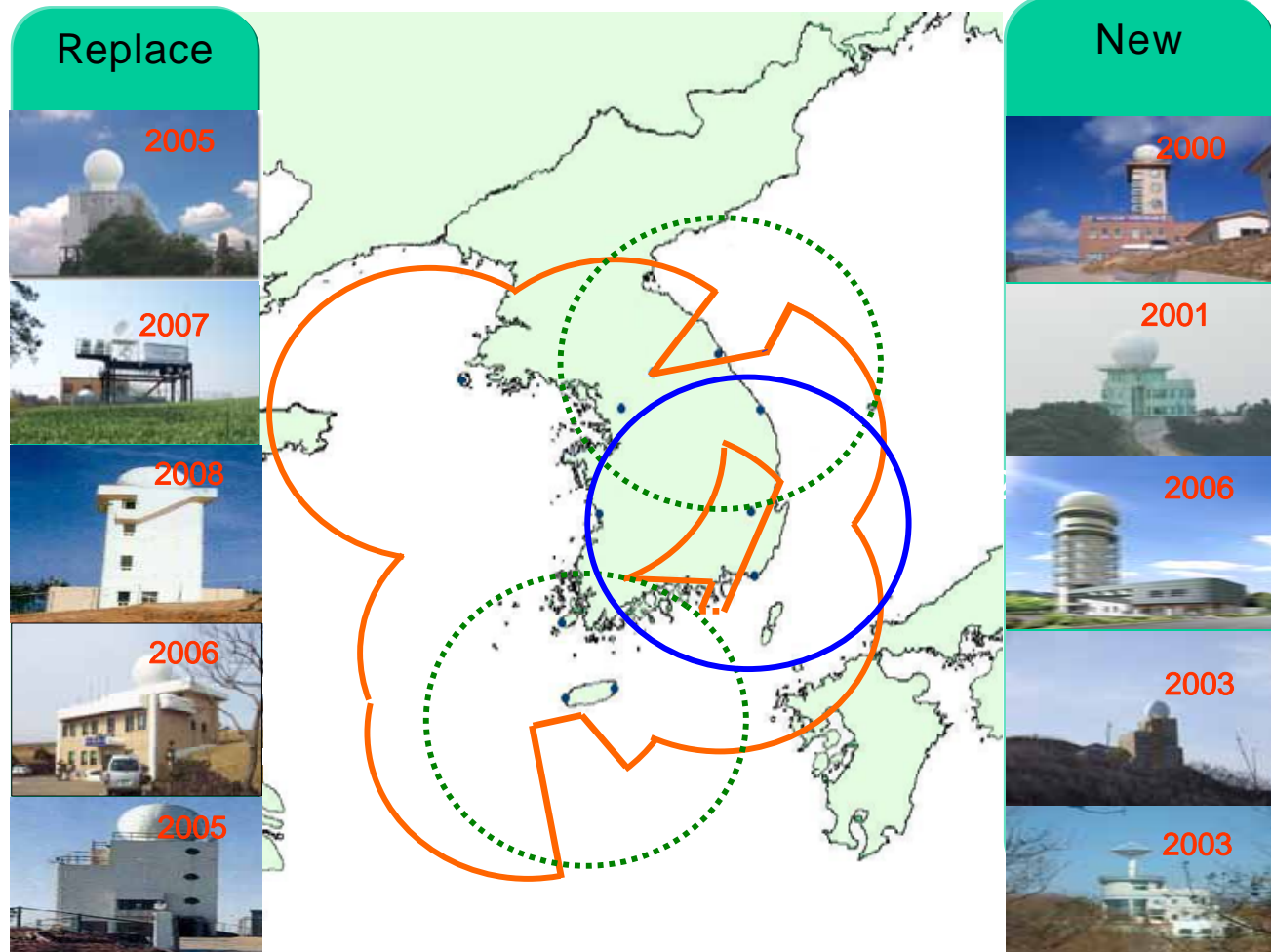
[경북남부동해안] 포함



[경북남부동해안] 청하



☐ Weather Radar Network



Hydrologic Data Observation

Raingage Station Distribution

Stage Station Distribution

Table. Number of telemeter stations

Item	Area (km ²)	%	Raingage No.	Stage No.
FCC				
Han R.	26,018	26.1	158	67
Nakdong R.	23,817	23.9	162	83
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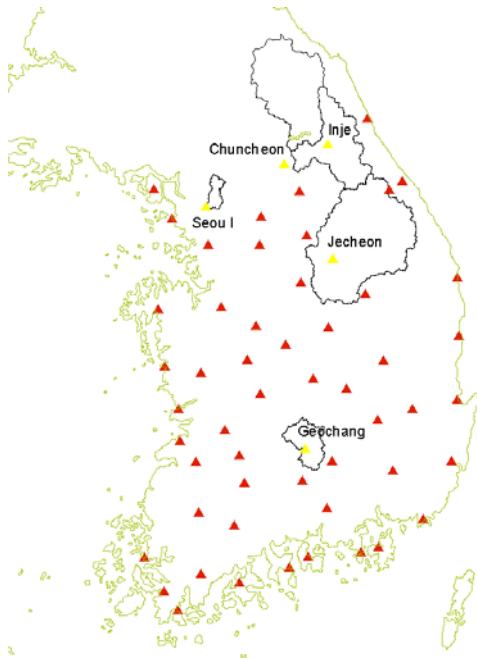
Legend

- Watershed Boundary
- Telemeter raingage station

Legend

- Watershed Boundary
- Telemeter stage station

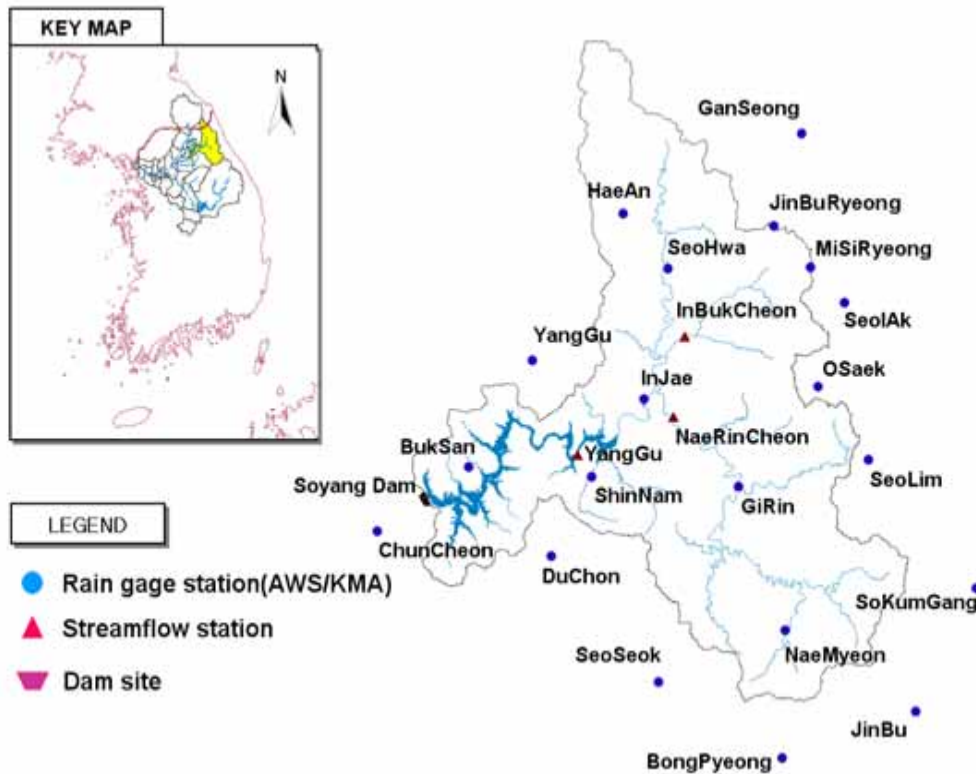
Introduction to Demo River Basins



□ Main Issues of WRE on Korean Watershed

- Integrated Water resources management
- Natural disaster prevention problems(Flooding/ Drought)
- Riverine eco-system with biodiversity
- Climate change impact assessment on water resources
- Interaction between atmosphere and surface processes

□ Soyang River Basin



Characteristics of Soyang basin

Location	App. 128°E, 38°N
Basin Areas	2703 km ²
Catchment Lengths	166.2 km
Elevation	252-1563
Land Use	Mountain
Annual MAP	1380mm

Available data

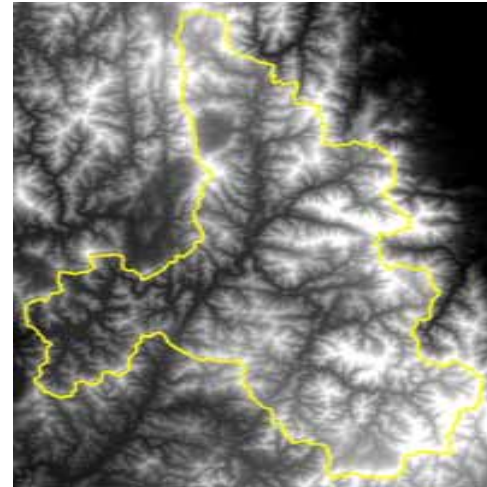
Raingauge St.	20
Stage St.	4

Evaporation Pan data

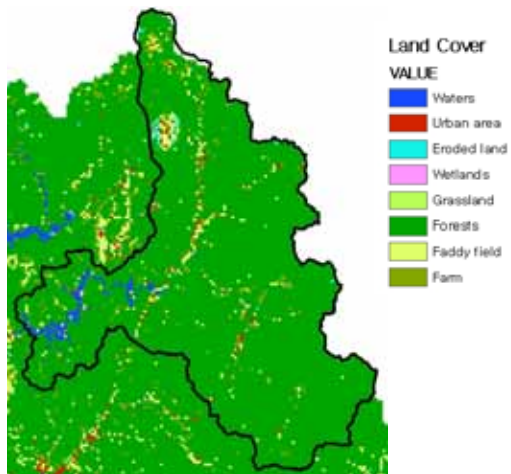
Fig. Study area of Soyang dam site



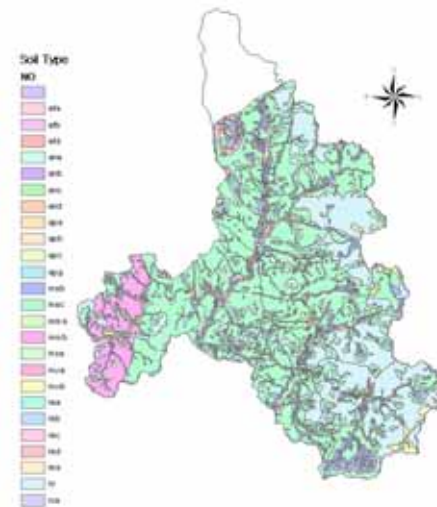
Soyang Basin



DEM



Land Cover



Soil Type

□ Hwa-Cheon Dam Basin

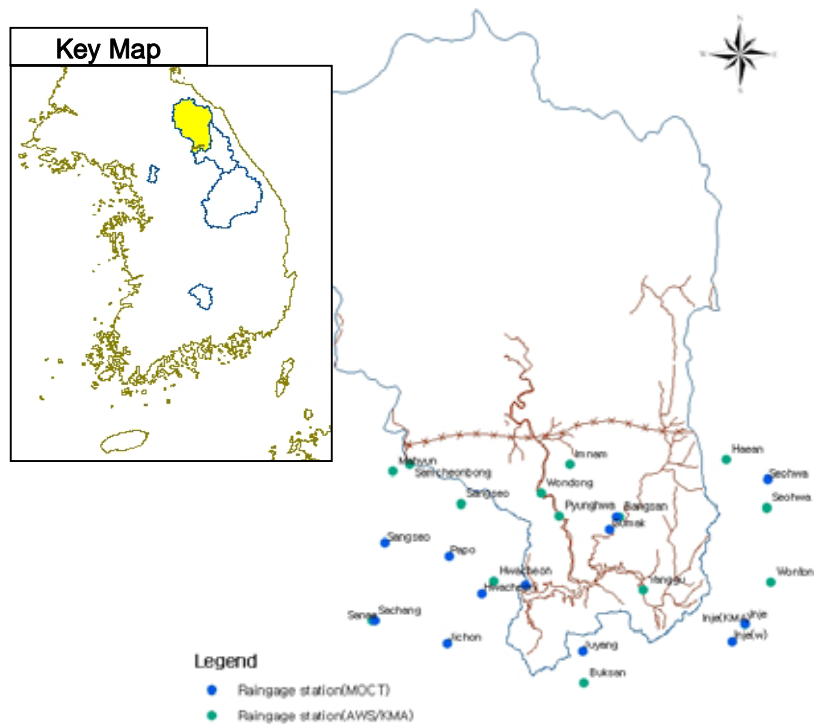


Fig. Study area of Hwa-Cheon dam site

Characteristics of Hwa Cheon basin

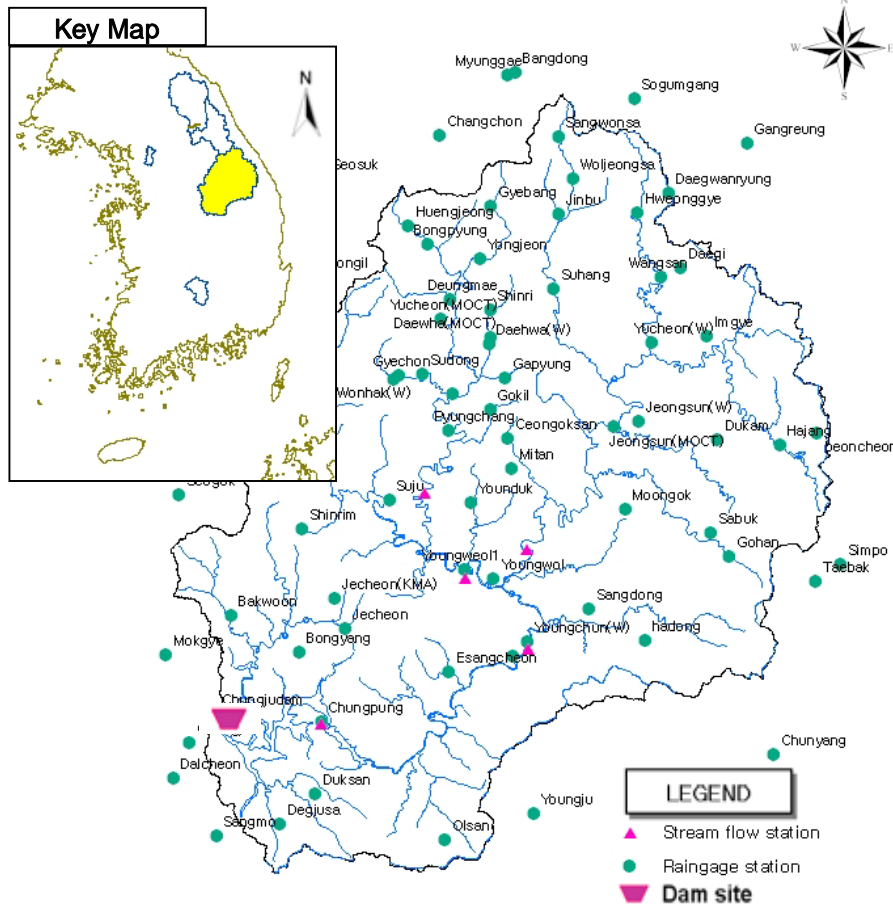
Location	App. 127°E, 38°N
Basin Areas	4076 km ²
Catchment Lengths	66.9 km
Elevation	252-1563
Land Use	Mountain
Annual MAP	1030mm

Available data

Raingauge St. 24
Stage St. 1

Evaporation Pan data

Choong-Ju Dam Basin



Characteristics of Choong Ju basin

Location	App. 128°E, 37°N
Basin Areas	6662 km ²
Catchment Lengths	321.9 km
Elevation	0-1561
Land Use	Mountain
Annual MAP	1149mm

Available data

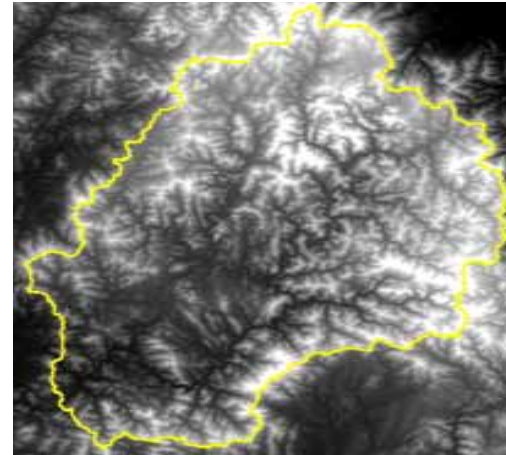
Raingauge St. 73
Stage St. 6

Evaporation Pan data

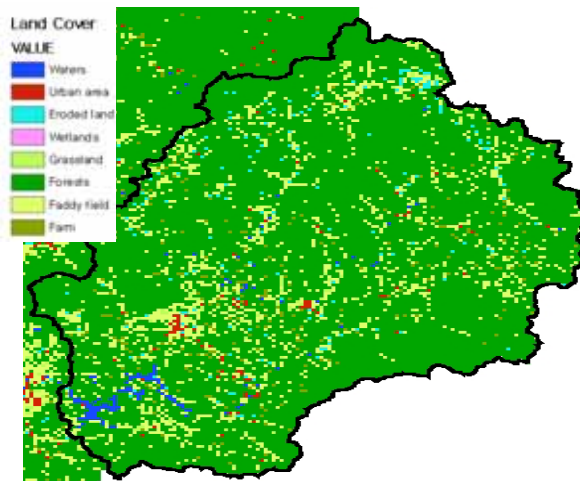
Fig. Study area of Choong Ju dam site



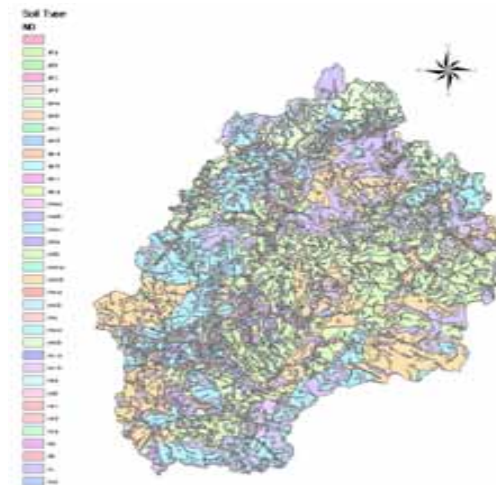
Choong-Ju Watershed



DEM

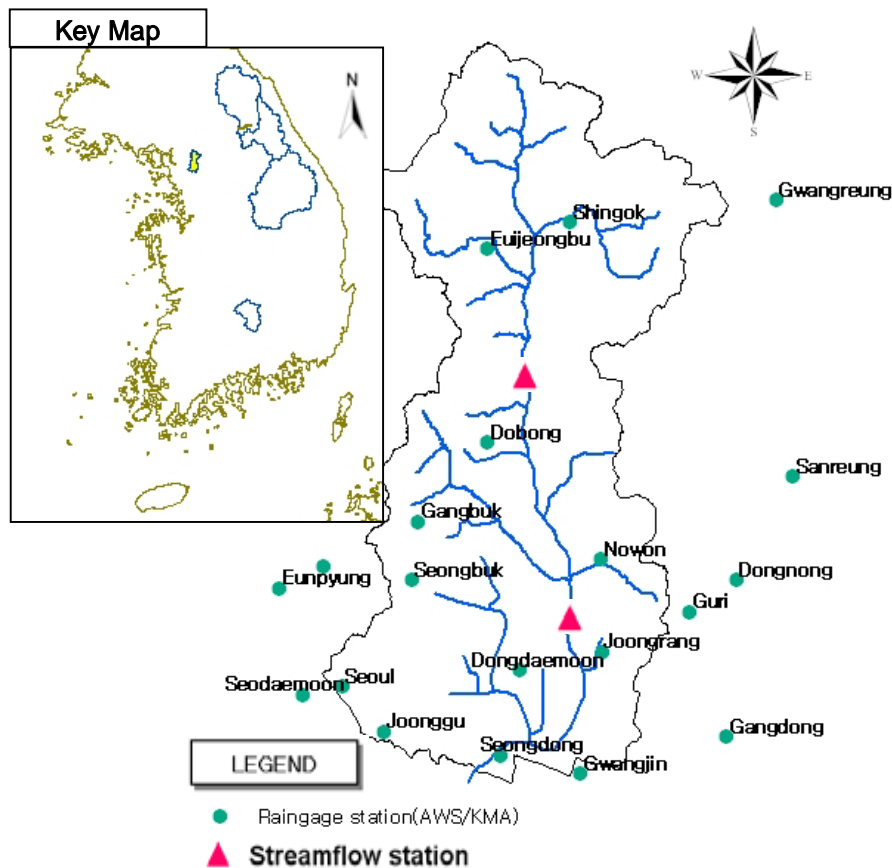


Land Cover



Soil Type

Jung-Rang River Basin



Characteristics of Jung Rang basin

Location	App. 128°E, 38°N
Basin Areas	299 km ²
Catchment Lengths	37.17 km
Elevation	0-750
Land Use	Urban, Mountain
Annual MAP	1266mm

Available data

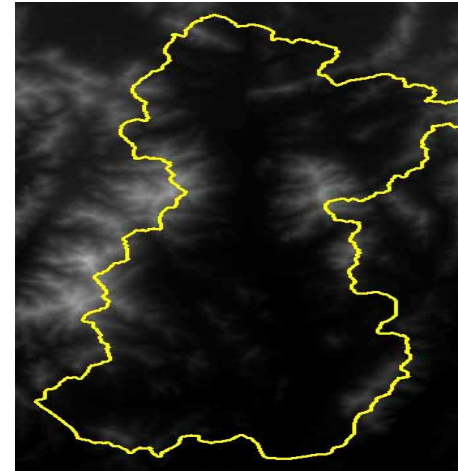
Raingauge St. 18
Stage St. 2

Evaporation Pan data

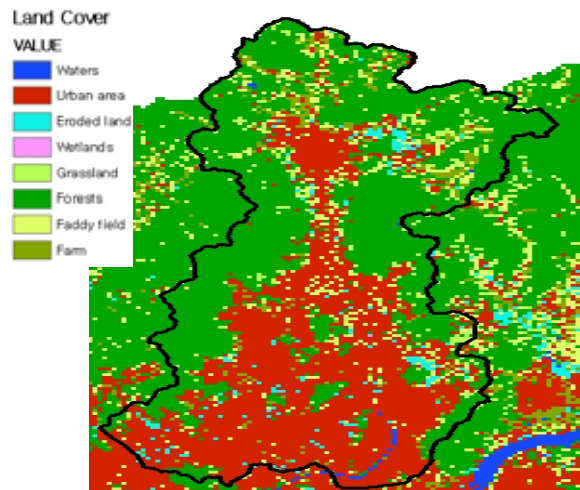
Fig. Study area of Jung Rang basin



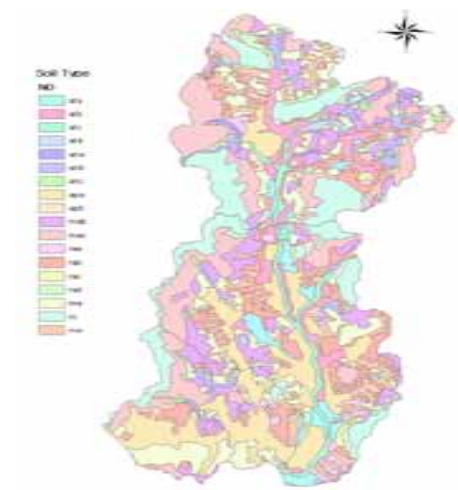
Jungrang Watershed



DEM

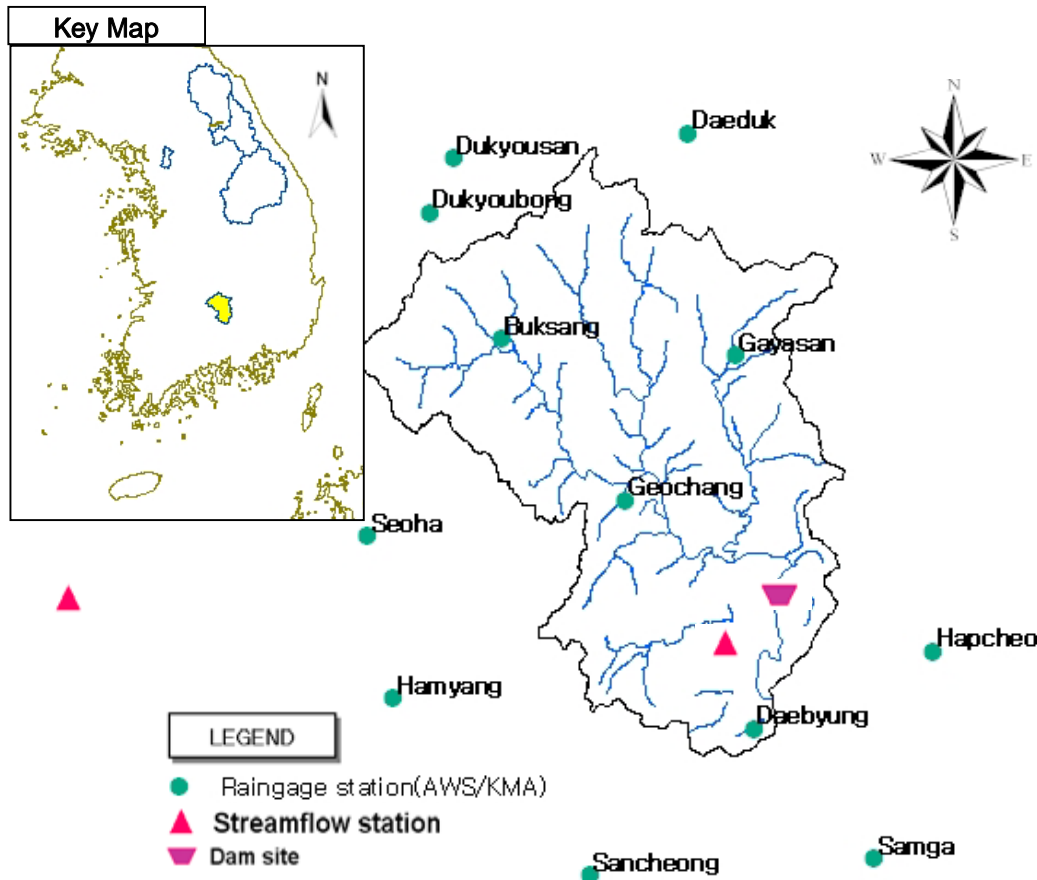


Land Cover



Soil Type

Hap-Cheon River Basin



Characteristics of Hap-Cheon basin

Location	App. 128°E, 38°N
Basin Areas	929 km ²
Catchment Lengths	63.12 km
Elevation	128-1490
Land Use	Mountain
Annual MAP	1278mm

Available data

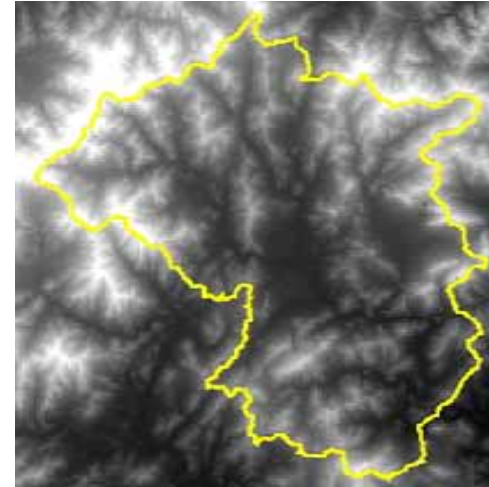
Raingauge St. 12
Stage St. 2

Evaporation Pan data

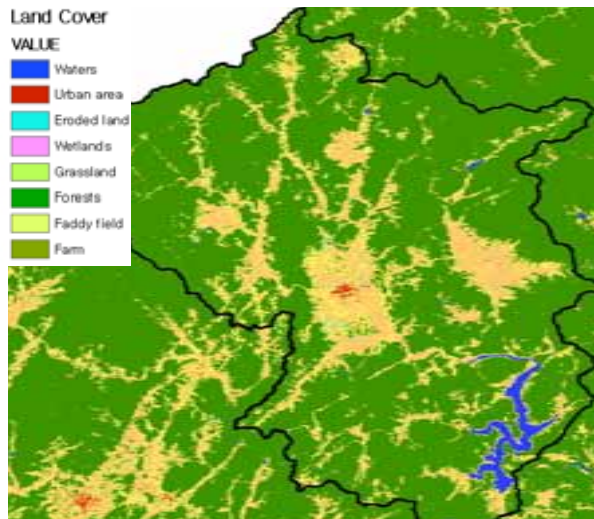
Fig. Study area of Soyang dam site



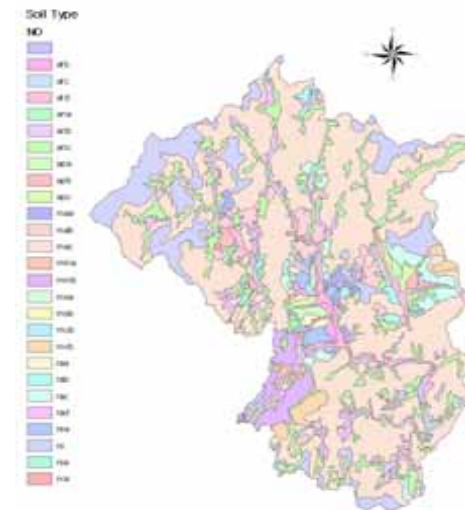
Hap-cheon Watershed



DEM



Land Cover



Soil Type

Concluding Remarks

- Introduce the major Korean watersheds
- Introduce hydro-meteorologic data observations with GIS
- Describe the characteristics of demonstration river basins in Korea
- Contributions and benefits of AWCI

