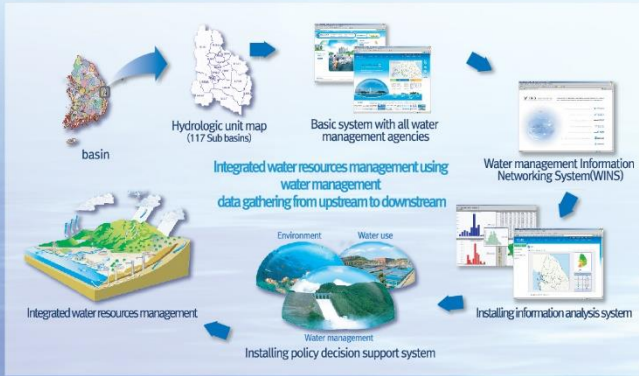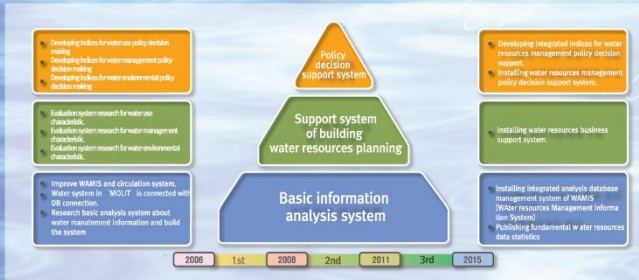## Concept map for water resources informationization

The main objective is setting up a policy decision support system based on not only utilizing diffused water-related data but also collecting and analysing various water resources information

basin

Hydrologic unit map (117 Sub basins)

Basic system with all water management agencies

Water management Information Networking System(WINS)

Integrated water resources management using water management data gathering from upstream to downstream

Environment   Water use

Integrated water resources management

Installing information analysis system

Water management

Installing policy decision support system

Master Plan for water resources informationization

Progression by dividing it into three areas(Information analysis systems, Business support system, Policy decision support system) for accumulated reliable data

Developing indices for water use policy decision making
Developing indices for water management policy decision making
Developing indices for water environmental policy decision making

Policy decision support system

Developing integrated indices for water resources management policy decision support.
Installing water resources management policy decision support system.

Evaluation system research for water use characteristic.
Evaluation system research for water management characteristic.
Evaluation system research for water environmental characteristic.

Support system of building water resources planning

Installing water resources business support system.

Improve WAMIS and circulation system, Water system in 'MOLIT' is connected with DB connection.
Research basic analysis system about water management information and build the system

Basic information analysis system

Installing integrated analysis database management system of WAMIS (WAter resources Management information System)
Publishing fundamental water resources data statistics

| 2006 | 1st | 2008 | 2nd | 2011 | 3rd | 2015 |

Installing water resources information systems for data gathering, data management and policy decision supporting

Provision of basic water resources information

Provision of statistical analysis information for water resources

Provision of indices for water resources management policy decision making

For future, For worldwide Installing national water resources information system

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Creative, Clean, Communicative

For future,
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Installing national water resources information system

For future, For worldwide
Installing national water resources information system

www.wamis.go.kr
www.wins.go.kr
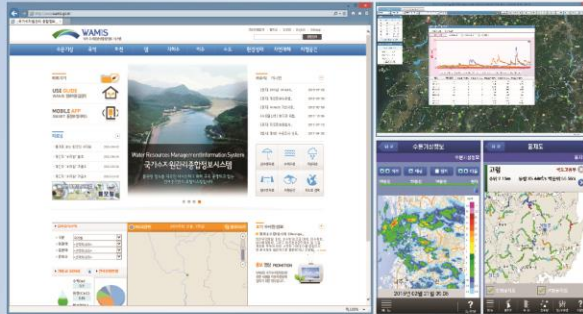www.river.go.kr

WAMIS | WINS | RIMGIS

MOLIT
Ministry of Land,
Infrastructure and Transport

WAMIS www.wamis.go.kr

WAter Resources Management Information System

What is WAter resources Management Information System(WAMIS)?

The portal system is providing information about collected, processed and analyzed water resource data which are distributed nationwide agencies.
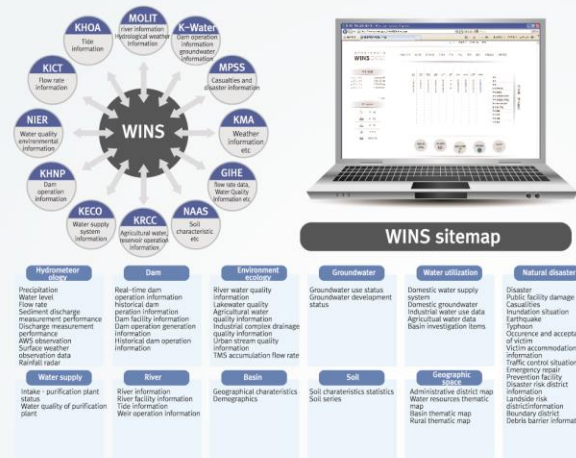

Service Items

- Provides 300 basic data items divided into 10 fields such as hydrometeorology, basin, river, dam, ground water and drinking water etc.
- Search services on water-related information by local government base(256), by hydrologic unit maps(117 basins) and by rivers (national and regional rivers).

Menu	Service Items
Hydrometeorological information	precipitation, stage, weather, discharge, sediment discharge, flow duration analysis
Basin information	basin characteristics, human and social, basin resources, land development
River information	river transverse data, river rehabilitation rate, river facilities, river master plan report
Dam information	hydrologic information, quality information, stage-storage relation curve of dam
Groundwater information	groundwater use, alluvial /bedrock groundwater, groundwater quality
Water use information	amount of water use, domestic water, industrial water, agricultural water, water right
Water supply information	water supply facilities, intakes/purification performance, purification plant performance
Environmental ecology information	water quality, pollution load amount, environmental infrastructure, riverside spatial assessment, ecological environment
Natural disaster information	flood damage, inundation area, flood risk area, drought
Geo-spatial information	hydrologic unit map, water resources thematic map, basin thematic map, analysis thematic map

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WINS www.wins.go.kr

Water Management Information Networking System

What is Water Management Information Networking System(WINS)?

Water management information common utilization system provides water information created by each water-related organizations by on-line and one-stop.

WINS sitemap

Hydrometeorology	Dam	Environment ecology	Groundwater	Water utilization	Natural disaster
Precipitation Water level Flow rate Sediment discharge measurement performance Discharge measurement performance AWS observation Surface weather observation data Rainfall radar	Real-time dam operation information historical dam operation information Dam facility information Dam operation generation information Historical dam operation information	River water quality information Lakewater quality Agricultural water quality information Industrial complex drainage quality information Urban stream quality information TMS accumulation flew rate	Groundwater use status Groundwater development status	Domestic water supply system Domestic groundwater Industrial water use data Agricultual water data Basin investigation items	Disaster Public facility damage Casualities Inundation situation Earthquake Typhoon Occurence and acceptance of victim Victim accommodation information Traffic control situation Emergency repair Prevention facility Disaster risk district information Landside risk districtInformation Boundary district Debris barrier information
Water supply	River	Basin	Soil	Geographic space	
Intake · purification plant status Water quality of purification plant	River information River facility information Tide information Weir operation information	Geographical charateristics Demographics	Soil charateristics statistics Soil series	Administrative district map Water resources thematic map Basin thematic map Rural thematic map	

Service Items

- Water-related information which is generated by water-related government organizations and based in National water management information standards (2004) is cooperatively used through WINS. In the future, WINS will be expanded the target organizations and common utilization items to construct the international water-related information distribution system such as OECD and GEOSS etc.

Generated the Water management information System → Strengthen of international cooperation

1st construction	2nd, 3rd construction	Current	Vitalization service (connection with GEOSS)
■ Establishment of Direction of business ■ Establishment of Information distribution foundation ■ 14 kinds of data distribution (rainfall, water level, weather, water quality etc)	■ Connection with external service ■ 34 kinds of data distribution (add the items : dam operation, space Infor- mation, river, water, supply, groundwater etc)	■ Expansion of Target organization for distribution and data service items ■ Convenience of opera- tion and service complementationv	■ Expansion of Target data and organization for common use ■ Strengthen of Interna- tional cooperation ■ Standardization

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RIMGIS www.river.go.kr

RIver Management Geographic Information System

What is RIver Management Geographic Information System(RIMGIS)?

The total river information system – which constructs the spatial and relevant information on national rivers – designed to manage rivers efficiently and systematically and to provide the services to users

Service Items

National river digital map

- Map services that provide users with national rivers' spatial and relevant information
  - Display basins, rivers and river areas
  - Display river banks and river facilities

Master plan report on rivers

- Provide the master plan report on national and local rivers
  - Information by water basin/ administrative agency / administrative district
  - Information by establishment years / river class / river name
  - The computerized status of the master plan report on rivers

Flood Inundation map

- Provide basic data and digital map services to establish efficient flood control measures
  - Flood inundation maps for national rivers
  - Displays image- and GIS-based flood danger areas
  - Basic data to craft disaster information plans to manage insurances against flood and flood damages

River administration work

- The service of providing river management information to support the efficient administ- ration work for national rivers
  - River management books
  - The information on drawings and cross sections
  - Inquire the permission for river occupation
  - Manage detailed information on river facilities

River history management

- Manages and provides statistics on national and local rivers, the overview of Korea's rivers, and river history information
  - River statistics
  - The overview of Korea's rivers
  - River designation history
  - The master plan history for rivers
  - The river facility history
  - The lists of river facilities

River facility management Guideline on System computerization

- Providing guidelines for standards on computerizing river facility management books
  - Guidelines for standards on computerizing flood Inundation maps
  - Guidelines for standards on the outputs of the master plan of river (reports, analysis results, spatial information, etc.)