AHIS - AUTOMATIC WATER INFORMATION SYSTEM

River basin authorities perform different roles including water planning, resource management and use, protection of the public water domain, concessions of private water usage rights, water quality control, design and construction of new water infrastructure, dam safety programs, data banks, etc.

Integrated water information systems are essential for carrying out all of these tasks. For this industry, SICE develops customized solutions for river basin management entities to obtain the information necessary for adequate management and operation.

AHIS OBJECTIVES

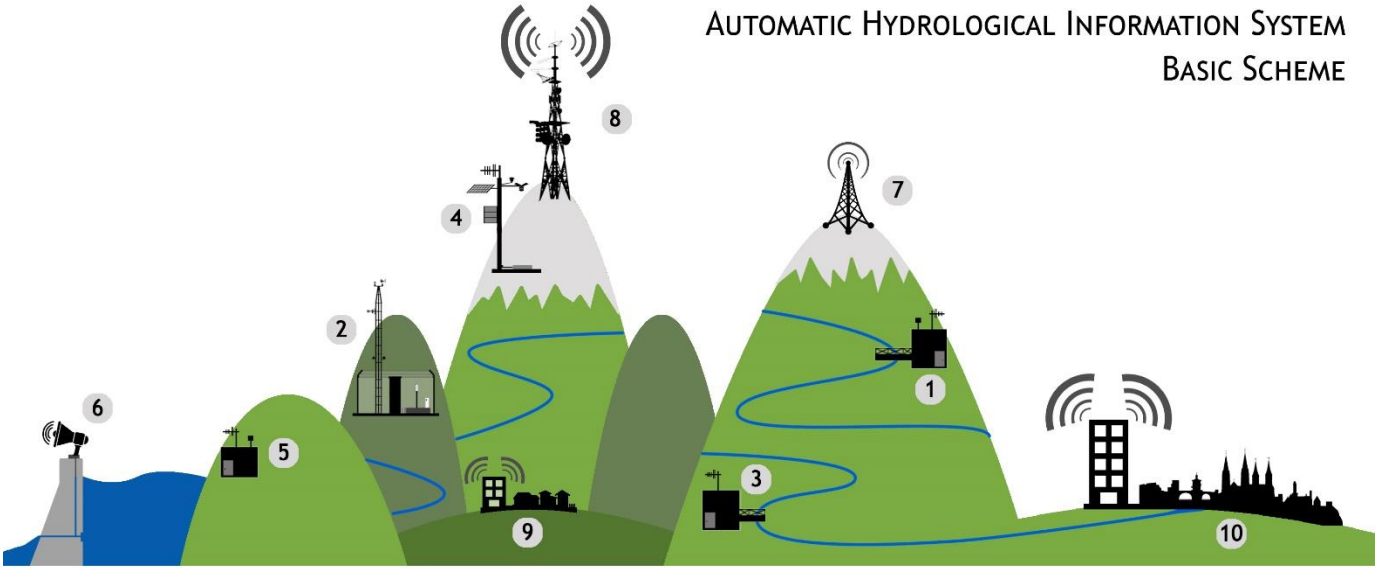
An AHIS is a vital system for water management. It is made up of on-site sensors, remote data collection stations, communication systems, databases, models, operational applications, web pages, etc...

An AHIS is a tool which manages water resources, flood warnings and dam security. SICE is responsible for the installation, maintenance and subsequent operation.

The AHIS' objectives are:

- Automatically supplying real time information on climatic, hydrological and water infrastructure condition variables which are significant and affect the hydraulic control and operation of the basin.
- Making short-term predictions on changes to river levels and flow and automatically generating alerts which allows the adoption of appropriate measures to minimize the damage caused by flooding.
- Making medium-term predictions on the availability of water resources, with the aim of improving its allocation for different purposes.
- Controlling and improving the use of reservoirs, catchments, channels and the main pipelines of the basin.

SICE INSTALLS ALL COMPONENTS OF AN AHIS



AHIS INFORMATION SYSTEM

Supplies data which is recorded and calculated using variables and states which are measured through the AHIS itself and other networks (AWQIS, Spanish Meteorological Agency).

Stores and manages the data associated with the maintenance of the AHIS infrastructure.

Activates alerts in accordance with data received on variables or states, classifying them in accordance with actions to be taken once the alert has been received.

Includes Decision Support Systems using modelling and simulation of basin and water infrastructure behavior and forecasts based on specific variables (levels, flow, supply deficit, etc.).

SICE can manage data from various systems from the Basin Control Centre (B.C.C), as an integrator tool of various systems existing in the basin, allowing operation by different users:

- Flood forecasting and water resource management (AHIS)
- Water quality information (AWQIS)
- Gauge network
- Groundwater
- Assistance in dam operation
- Inspection systems
- Operating regulations
- Security and monitoring systems
- Maintaining and preserving dams
- Operation of channels and irrigation
- Emergency center (Dam emergency plans)