# Your groundwater monitoring plan in 6 steps

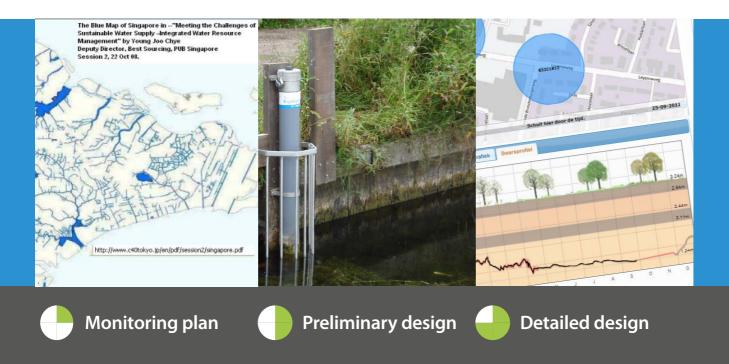
Groundwater data management within easy reach







## **Operational monitoring network in 6 steps**



#### **Monitoring plan**

- Determine monitoring objectives
- Which data is needed?
- Which information is already available
- Which data should be provided by the monitoring network?

#### Preliminary design monitoring network

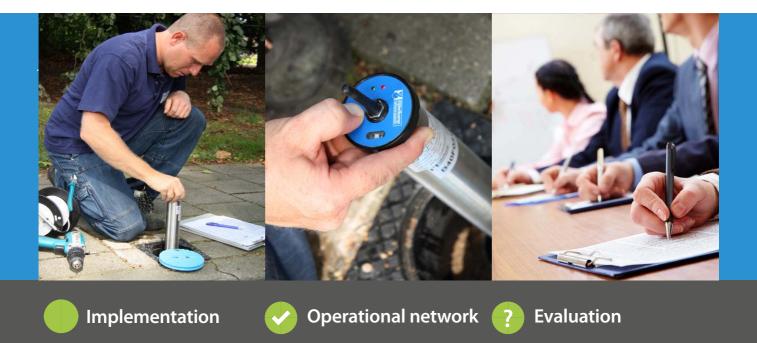
Main characteristics monitoring network

- Monitoring locations
- · Parameters (only groundwater levels or also water quality)
- Number of monitoring points
- Aquifers to monitor
- Budget
- Data communication
- Monitoring frequency

#### **Detailed design monitoring network**

Plan ready for implementation

- Specifications monitoring wells
- Specifications data communication
- Design database
- Data verification



#### Implementation

- Construction monitoring wells
- Data management (data verification and database)
- Contract for operation of the monitoring network

#### **Operational monitoring network (use of data)**

- Data validation (does the network provide all information and are the monitoring results logical?)
- Provide groundwater information for construction and research projects (database)
- Assessment of available groundwater (for example back up or supplementation to present drinking water resources)
- Information available in case of unforeseen problems (flooding etc.)
- Calibration and validation of groundwater models
- Ability to detect groundwater pollution

#### Evaluation of monitoring network (after a few years)

- · Does the network provide sufficient information?
- Does the monitoring network meet the objectives for which it was designed?
- · Increase or decrease the number of observation points





### **Groundwater projects** Worldwide

Dutch companies Eijkelkamp Agrisearch Equipment and Witteveen+Bos are worldwide active on numerous groundwater related projects.



Monitoring the quality and fluctuation of groundwater

Cyprus



Research for implementing a groundwater and surface water network

Uzbekistan

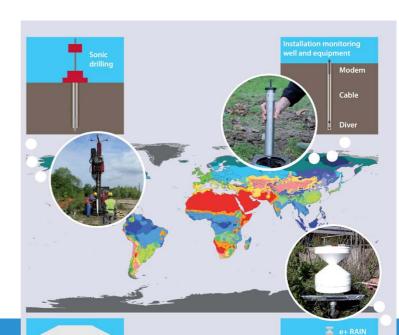


Monitoring over 1.000 points for the prevention of structural groundwater problems



Survey for construction works

Azerbaijan



Modem

Cable

Dive

Data presentation

**The Netherlands** 



P.O. Box 4, 6987 ZG Giesbeek, The Netherlands T +31 313 88 02 00 E info@eijkelkamp.com I www.eijkelkamp.com



P.O. Box 233, 7400 AE Deventer, The Netherlands T +31 570 69 79 11 E info@witteveenbos.com I www.witteveenbos.com

#### Worldwide presence

Eijkelkamp Agrisearch Equipment and Witteveen+Bos have worldwide presence via partners and branche offices.