

GROUNDWATER MANAGEMENT:

EU APPROACH

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Groundwater management: EU Requirements

**Objective: Achieve good status
(chemical and quantitative)
by 2015**

- Protect, enhance and restore groundwater systems
- Ensure a balance between abstraction and recharge
- Prevent the deterioration of the status
- Prevent or limit the input of pollutants

Groundwater management: EU Requirements

- Progressively reduce ground water pollution
- Control over the abstraction of groundwater + authorisations
- Control of artificial recharge
- Direct discharges of pollutants are prohibited subject to a range of provisions
- Implementation of measures necessary to reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity

Groundwater management: EU Requirements

Quantitative status

- The level of groundwater is such that the available groundwater resource is not exceeded by the long term annual average rate of abstraction
- Groundwater not subject to anthropogenic alterations
- Alterations to flow direction resulting from level changes should not cause saltwater or other intrusion

Chemical status

- Concentration of pollutants should not exhibit the effects of saline or other intrusions
- Concentration of pollutants should not exceed quality standards applicable under any EU legislation
- Concentration of pollutants should not result in failure to achieve the environmental objectives associated to surface waters or depending terrestrial ecosystems

Process

- Characterisation
 - Initial (preliminary)
 - Further
- Review of impacts on groundwater and authorisations
- Monitoring and assessment of the status
- Measures

Characterisation

Initial

- Assess uses and the degree of risk of failing to meet the objectives for EU groundwater
- Use existing hydrological, geological pedological, land use, discharge, abstraction, etc.
- Identify: boundaries, pressures (including diffuse and point sources of pollution, abstractions, artificial recharge), character of overlying strata, systems depending on surface waters or terrestrial ecosystems

Characterisation

Further

- Needed for systems identified as being at risk
- More precise assessment
- Select information on:
 - Geological characteristics
 - Hydrological characteristics (conductivity, porosity, confinement)
 - Characteristics of superficial deposits
 - Inventory of associated systems
 - Directions and rates of water
 - Annual average rate of overall recharge
 - Characterisation of chemical composition (contribution from human activity)

Review of impacts and authorisations

- Impact of human activity
- Impacts of change in groundwater levels
- Impact of pollution on groundwater quality

Monitoring and assessment of the status

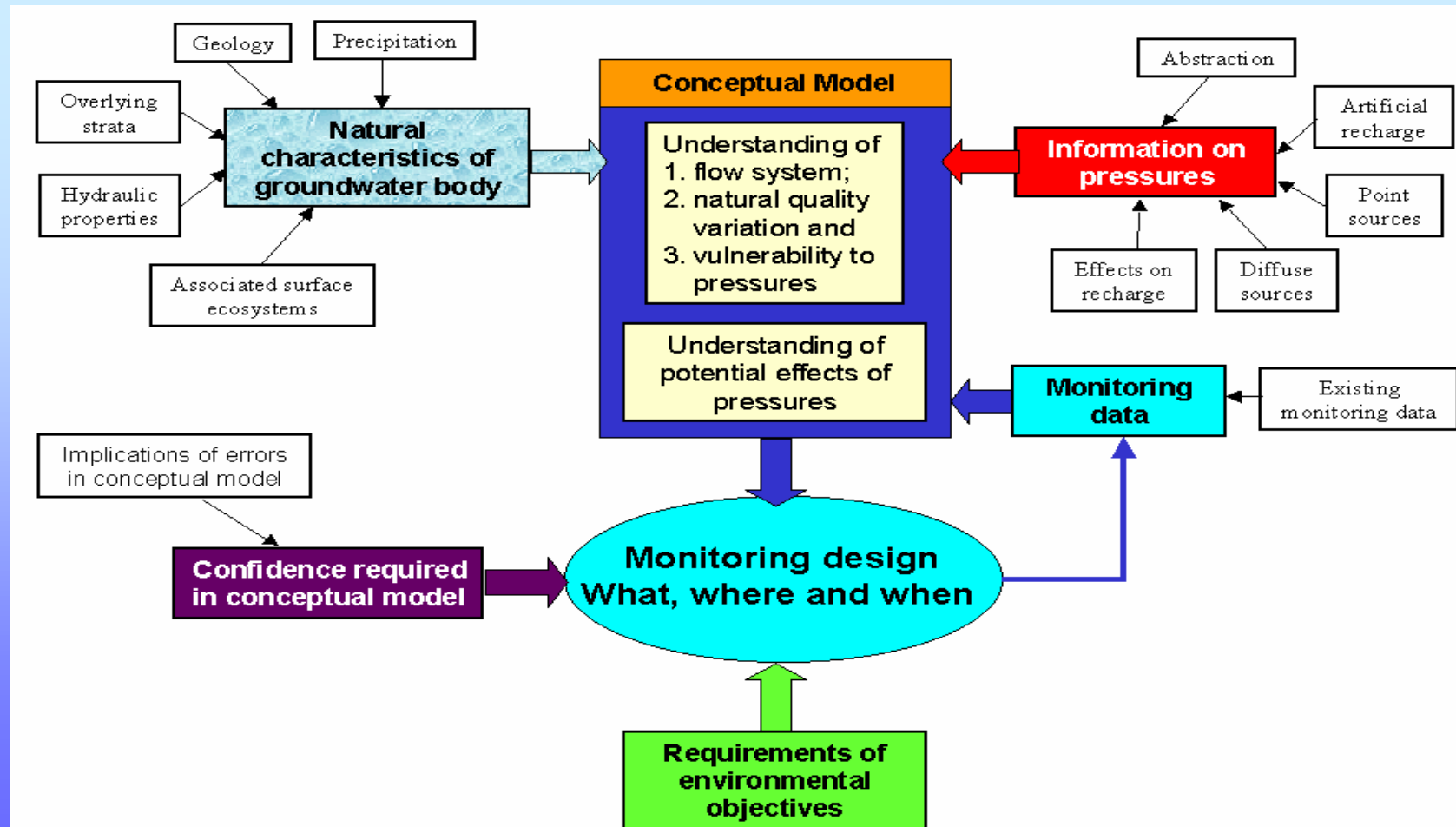
Quantitative status

- Level monitoring network
- Density and frequency of monitoring sites
- Interpretation and presentation of quantitative status

Chemical status

- Monitoring network
- Surveillance and operational monitoring
- Identification of trends in pollutants
- Interpretation and presentation of chemical status

Characterization, pressures and monitoring



Measures :

Basic and Supplementary

- To be establish by every River Basin District
- Take into account the results of the analysis of the characterisation
- Consider all requirements stemming from legislation

Measures :

Basic and Supplementary

Basic

- Controls over the abstraction
- Controls of authorisations
- Prevent and control pollution discharges
- Adverse impacts
- Rejections

Supplementary

- To provide additional protection or improvement of the waters

A satellite-style map of the Mediterranean region, showing the Mediterranean Sea, the Iberian Peninsula, the Balkans, and the northern part of Africa. The text "THANK YOU FOR YOUR ATTENTION" is overlaid in the center in a bold, yellow, sans-serif font with a black outline.

**THANK YOU FOR YOUR
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