

THE EVALUATION OF GROUNDWATERS CHEMICAL STATUS AND POLLUTION TRENDS

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EXPERTISE THESIS ABSTRACT

In this study, the process of assessment of the chemical status of groundwater is aimed to be illustrated. In this context, by considering these steps in detail, the methods established in EU Directive for groundwater has been investigated. Conceptual models, groundwater quality standards, groundwater threshold values and approaches of the EU member states have been mentioned and suggestions for our country have been presented. Test methods that use for determining the groundwater status have been created, EU member states approaches about identifying the trends of groundwater pollution have been examined and evaluated. In addition to these studies, groundwater trend analysis that carried out in Spain has been investigated, in the light of information obtained through these studies, case studies of trend analysis have been carried out in two stations in the Büyük Menderes River Basin.

Also, in the concept of the study, detailed information regarding the terrestrial ecosystems that is dependent on groundwaters and an important step for the creation of conceptual model has been presented to the reader. In the scope of examined ASTM D5979-96 standard, “The method to be followed for the establishment of Conceptual Model of Groundwater Systems” has been established. An important guidance document including both status assessment and trend analysis processes for groundwater has been prepared for our country.

Key Words: Groundwaters, Conceptual Model, Status, Trend, Methodology, Water Framework Directive