

Abstract

Groundwater resources Mapping and Inventory

Efficient Use of subsurface information for Groundwater Mapping and inventory

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Ethiopia has achieved significant progress in tapping into the groundwater resources that amounts to up to 70% of the total water supply in the country. However, efforts in this area have often been met with challenges as indicated through the relatively low “borehole drilling success rates” (successful vs. dry or abandoned boreholes). Lack of local and regional geological and hydrogeological data and access to existing and organized information has been identified as part of the key impediments leading to such results.

This paper presents the benefits of groundwater data management systems in mapping and managing groundwater resources. Such a system should include tools and techniques that allow validation, storage, management, interpretation and visualization of groundwater related information, as well as be readily linked to surface water information systems in order to allow an integrated approach to water resources mapping and management. The paper points out the benefits of making use of such information to make data readily available to interested professionals and research institutions using the state-of-the art technology.

Case studies where such information system have been implemented and proven to be invaluable in mapping groundwater resources and in assisting communities in their efforts to attain a safe and sustainable water supply are also presented. The use of such system has also proven to be invaluable in minimizing problems that are related to common drilling and well completion activities and thereby improving the efficiency of efforts in providing a safe and sustainable water supply.