

Collecting aggregated groundwater data to identify highly stressed aquifers worldwide

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Abstract Assessment of global groundwater resources is the core mission of the International Groundwater Resources Assessment Centre (IGRAC) working under the auspices of WMO and UNESCO. In 2006, IGRAC set up a project about monitoring groundwater resources on a global scale to assess the current state of groundwater resources worldwide and its expected trends, and identify highly stressed or underexploited aquifers. Three important aspects of this project are: (1) setting up a network of regional and national groundwater experts committed to providing aggregated groundwater monitoring data; (2) a user-friendly web-based application for collection, processing, storage and dissemination of groundwater monitoring information; and (3) the choice of adequate groundwater variables, both observed and derived. This paper focuses on the architecture and functionalities of the innovative web-based application released and discusses the choice of (derived) variables serving various user groups requesting large scale regional and global groundwater related information (e.g. scientists, international agencies, policy/decision makers and financial institutions).

Key words groundwater monitoring; network; global assessment; variables; International Groundwater Resources Assessment Centre (IGRAC)