

## **Modelling water resources in the Sana'a basin, Yemen, using a WEAP model**

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**Abstract** The Water Evaluation and Planning system (WEAP) provides database and scenario-driven forecasting, policy analysis, and resource management capabilities. A comprehensive set of adaptation strategies to address water scarcity has been investigated using WEAP, and the relative costs and benefits weighed using multi-criteria analysis (MCA) methods, with broad input solicited from stakeholders in Sana'a basin in Yemen. Results of the WEAP include information on: the groundwater storage in the aquifers, unmet water demand and demand site coverage. The results of this study will assist decision makers in the field of water resources planning and management in Yemen and similar countries in the region who seek to better manage their water resources and water forecasting for the future.

**Key words** resource planning; Water Evaluation and Planning System (WEAP); Sana'a basin, Yemen