

Surface Water Detection Method for Water Resources Management

Abdulmalik T. Assaf*1 , Khamis N. Sayl*1 and Ammar Adham*

Abstract

Small significance earth dams during the dry period for locals at most semi-arid cannot be overestimated. Water stored in the same of these dams is little or no lack of domestic water and drinking water for residents during dry periods. The main limitation is the lack of knowledge of the storage quantities of small dams in the study area and knowing this form of field data regularly is costly and needs a long and arduous time. Remote sensing and geographic information systems (GIS) can be used in this study due to their ability to measure and analyze the amount of water stored in some small reservoirs. In this paper, the Water Natural Difference Index (NDWI) is used to detect the surface area as the base to estimate small reservoir storage capacities. The model equation created by this study provided a tool to know the amount of water available per day in the small reservoirs during the dry season and thus was able to obtain clear pictures of the water resources system by the planners. This method may help the planners and water managers will quickly make decisions on how to utilize and manage the available water given the various competing uses.