

A Microsoft Excel Application to Simulate Water Harvesting in a Catchment

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Abstract

Due to the climate change the efficient use of fresh water has become a hot issue. One of the ways to collect water that could otherwise be wasted, is the water harvesting technique. These techniques have been known for centuries and widely applied in the Middle East. This paper presents a simple and easy-to-use water-balance based rainwater harvesting model called WHCatch. It has been designed to investigate the effects of water harvesting on the catchment scale. The catchment is divided into several sub-catchments which can store water for the purpose of water harvesting. The model has been created as a simple Excel workbook with some VBA-code for the computations. Results are presented in the same workbook as separate worksheets. Graphical presentations are created automatically. The capabilities of the workbook are presented and examples of in- and output are shown. Due to its flexibility, the model is suitable to show the effects of climate change as well. It is especially suitable to visualize the effects of measures.