農地入滲補注適合度評估地圖-以雲林為例

Assessment Map of Agricultural Land Infiltration Recharge Suitability: A Case Study of Yunlin

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摘　要

地下水使用量在台灣許多地區皆長期超過自然補注量，因此當地表水可用時，地下水補注管理(MAR, Managed Aquifer Recharge)考慮將多餘水量儲存至地下含水層以避免環境受損，而利用農地休耕期進行地下水補注則稱為農業地下水補注管理(Ag-MAR, Agricultural managed aquifer recharge)，本研究應用土壤農業地下水儲存指數（SAGBI, The Soil Agricultural Groundwater Banking Index)評估雲林地區之農業地下水補注潛力與適合度，透過深層滲透、根區停留時間、地形、水質和表土狀況等選址，以達到未來農業水資源之永續發展。

關鍵詞：農業地下水補注管理，土壤農業地下水儲存指數，雲林

Abstract

In many regions of Taiwan, groundwater usage has long exceeded natural recharge rates. Therefore, when surface water is available, Managed Aquifer Recharge (MAR) considers

storing excess water in underground aquifers to prevent environmental degradation. Utilizing fallow periods on agricultural land for groundwater recharge is referred to as Agricultural Managed Aquifer Recharge (Ag-MAR). This study applies the Soil Agricultural Groundwater Banking Index (SAGBI) to evaluate the potential and suitability for agricultural groundwater recharge in the Yunlin area. By considering factors such as deep percolation, root zone residence time, topography, chemical limitations, and soil surface condition, the study aims to achieve sustainable agricultural water resource development in the future.

Keywords: Managed Aquifer Recharge, The Soil Agricultural Groundwater Banking Index, Yunlin