

Management Policy of Water Table in Dry Zone of Sri Lanka to Subsidise the Pain of Non Rice Crop Cultivators for the Food Productivity Improvement', RJSITM

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Abstract: The growth of population in time span leads to very high and uncontrolled extraction of ground water in the dry zone of Sri Lanka. This leads the water table to go very low in non-monsoon seasons. This gives the poor farmers who cultivate non rice crops, very big burden in pumping cost for food production and domestic use. This burning issue has to be addressed by scientifically proved change of policy of distribution of available acute water resource in equitable manner among the paddy cultivators and others like non rice/paddy cultivators. To recommend a scientific decision tool a research was carried out to model a pilot catchment of around 200 square kilometer in Vavuniya in the northern Sri Lanka. A complete water balance of all the available surface water, ground water was studied by putting all the parameters connected to this pilot catchment in to a mathematical model formulated. This model was calibrated to predict the system response. Various options were analysed with their economic feasibility and final conclusion arrived. Keeping 25% of the storage of irrigation schemes at any time will gain an average of 40% to 60% of the loss of water table in any consecutive seasons in almost 80% to 90% of the catchment area under consideration. This outcome of the research has given very concrete guideline for the bureaucrats to take decision during the finalization of cultivation calendars of surface irrigation schemes in dry zones of Sri Lank