

## **ASSESSMENT OF IRRIGATION PERFORMANCE IN MAHAWELI SYSTEM 'H', SRI LANKA WITH COMPARATIVE PERFORMANCE INDICATORS**

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Performance evaluation of an irrigation system is important to get better understanding about the system and to develop strategies to take appropriate management measures. This study was conducted to evaluate irrigation performance of Mahaweli system 'H' in the cultivation year 2010 and to compare the system performance in year 2010 with that of year 2005 which was evaluated in a previous research. Moreover, performance was compared with other rice based irrigation systems around the world. Operational, financial and cultivation performance data of cultivation seasons of 2009/2010 *Maha*, 2010 *Yala* and the annual data of the cultivation year 2010 were used during the study. Data were collected from the Residential Project Manager's office of System 'H' of Mahaweli Authority. According to the results, the highest amount of annual irrigation water delivery per unit command area (16,260 m<sup>3</sup>/ha) was reported in Meegalewa block. Relative irrigation supply of the system was 0.8 and this value was closer to the global average. Total management, operational and maintenance cost of the system was 5.7 US \$/ha and its global average is 75.6 US \$/ha. Average yield obtained, average output per unit cropped area and output per unit water delivery in the cultivation year 2010 were 5.75 MT/ha, 1009.6 US \$/ha and 0.078 US \$/m<sup>3</sup>, respectively. However, above values were difficult to compare with the irrigation systems in other countries as the paddy prices vary in the world. Paddy is the main crop cultivated in the system 'H' during *Maha* season and considerable extents of other field crops are cultivated in *Yala* season. Therefore, crop-wise evaluation is important to understand the system performance fully. However, according to the results of the study, it can be concluded that, the system is performing at an average level compared to the world standard and the performance has improved slightly in year 2010, compared to that of the year 2005.

**Keywords:** Irrigation, Mahaweli system 'H', Performance indicators