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## **Impacts on Irrigation Infrastructure Development Projects on Agriculture sector: A Case study in Iranamadu Irrigation Scheme of Sri Lanka**

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Agriculture sector development to ensure food security for escalating population inevitably requires Irrigation infrastructure development. Recognizing this fact, both Government and Donors make significant investments in irrigation development in developing countries. In the recent times, the funding agencies show lack of motivation in investing on irrigation development projects due to high likelihoods of uncertainty on the return of investments. To convince them about the positive impacts and to attract them, an impacts needs to be assessed on irrigation development and management. As such, this case study was undertaken in recently developed Iranamadu Irrigation Scheme, which is the largest reservoir in the Northern Province, to irrigate 8698 ha of paddy and other field crops by both gravity and lift irrigation facilities benefitting 7000 farmers. With the intervention of Asian Development Bank (ADB) and the International Fund for Agriculture Development (IFAD), investing 42 Mn USD, scheme has been rehabilitated and augmented recently. After the project completion in year 2018, significant improvement has been observed in agricultural development. This study is based on scientific parameter; cropping intensity, water duty and productivity which are the main indicators for the Irrigation investment. A scientific methodology is developed to compare parameters before and after project implementation in both *Maha* and *Yala* seasons, in order to examine the impact on the irrigation development programme. The results of the analysis revealed that positive impact is there immediately after project completion; especially cropping intensity has increased drastically by 0.40 (from 1.30 to 1.70), reaching 1.7 which is more than the national average for the major irrigation schemes, though irrigation impact is long term. The significant incremental benefit agriculture investment has a positive economical impact thus encourage agencies to invest more on irrigation development projects.

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