

## **Irrigation Scheme Development and Management Strategy for Conflict Affected Northern and Eastern Province of Sri Lanka**

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**Abstract** — The Northern and Eastern Provinces comprises the whole of eight districts, namely Jaffna, Mannar, Vavuniya, Kilinochchi, Mullaitivu, Trincomalee, Batticaloa, and Amparai and covers an area of 18,881sq.km. The population is 2.9 million Agriculture, including fisheries, has been the principal economic activity in the province. Over 50% of the total work force in the province depends on agriculture for their livelihood. With the increase in population, industrialization and urbanization, demand for water has increased. The domestic and industrial water use has to be given due consideration than the agriculture water use. The industrial sector's share of the Gross Domestic Product was 23% in 1996, compared to about 19% for agriculture, forestry and fisheries in whole country. Preliminary calculations based on per capita water use for domestic needs, water requirement for the irrigation sector and projections for industrial and commercial water needs show a trend of increasing water demand. Even though the Government has been developing water resources (surface irrigation facilities as well as ground water extraction facilities) for the economic and social wellbeing of the community, it has found that the scope for further development is reducing gradually. Water resource augmentation is a limited option. Since new projects tend to be less technically feasible and less economically viable. Therefore the importance of conservation and efficient management of available water resources should be addressed properly. Groundwater is used in the domestic, agriculture, commercial and industrial sectors. Several government organizations, non-governmental organizations, commercial enterprises and private sectors are promoting the extraction of ground water without any control or restrictions. This problem of unregulated groundwater use has led to over-exploitation of shallow aquifers and water quality problems. The major demand management consideration with respect to groundwater is that groundwater use is unregulated and controlled only by natural occurrence, recharge and the degree of impact by other groundwater uses. This paper analyse little on overall potential of North-East and specific research finding on few Northern river basins and recommend some strategies for the water sector development. In the mean time a complete study on all the river basins in North is going on.