

FROM THE EDITOR...

The Mahaweli Water Security Investment Program (MWSIP), Sri Lanka's largest infrastructure development initiative, is the final phase of the broader Mahaweli Development Programme (MDP). Under this program, the water stored in the Moragahakanda and Kaluganga reservoirs have to be conveyed to the designated areas in the North Central and Northern Provinces for agriculture and other purposes. The conveyance waterway from the Moragahakanda is called the North Central Province Canal Project (NCPCP). The first 20 km of the waterway from the Moragahakanda runs parallel to the existing old ElaheraMinneriya Yoda Ela (EMYE) on a higher elevation contour and gradually turns in a northerly direction along the centre spinal ridge that divides the river basins flowing to the eastern and western coasts of the island to end at Chennadikulam tank.



The NCPCP would be the most expensive and the longest (155 km approx.) waterway in Sri Lanka. The construction work is being undertaken under the NCPCP in two stages and is implemented by the MWSIP under the Ministry of Irrigation with ADB funding. A sum of around 600 million US\$ is committed for the construction of NCPCP Stage 1 (Upper Elhera Canel) work and is expected to be completed in 2026. The work involved for Stage 2 is yet to be finalized and would cost over 500 million US\$. Additional costs will be incurred for downstream development works, including the provision of irrigation facilities for agricultural lands.

The construction of the first 65 km of Upper Elhera Canal (UEC) includes the conveyance waterway of capacity 40 m³/s, with 27 km long Tunnel and the upstream and downstream canal sections, for conveyance of water from Moragahakanda reservoir to a Trifurcation structure at Yakalla close to Huruluwewa. From this Trifurcation structure, three branch canals will take off and the first will feed one Manankattiya, Eruwewa and Mahakanadarawa tanks in the Anuradhapura district. The second to Huruluwewa tank and the third branch will be an extension of UEC (NCPCP Stage 2), a further around 90 km up to Chennadikulam around Vavuniya, to feed new and existing tanks for development of mainly new lands. It is expected to convey around 500 mcm of water after Stage 1 and a further 500 mcm after Stage 2, a total of around 1000 mcm at final completion. Accordingly, only around 50% of the tunnel capacity will be utilized on completion of Stage 1.

The canal sections should be completed at the time when the Tunnel is progressing satisfactorily with 2 Tunnel Boring Machines (TBMs), is finished. This package is the largest investment and the most technically challenging of all MWSIP construction works, covering 27.7 kilometers of Tunnels. The scope of work includes Tunnels 3 & 4 with lengths of 26.6 km and 1.1 km, respectively. Tunnel 3, totaling 26.6 km, is to be constructed using a Tunnel Boring Machine (TBM) for 20.2 km and New Austrian Tunneling Method (NATM) (drill and blast or other mechanical methods) from the Southern portal for a length of 6.4 km. Tunnel 4, totaling 1.1 km, is to be constructed by NATM, and replaces original designs of deep cut and cover canal, circular with horizontal invert, 1.1 km length, concrete lined (internal diameter 7.40 m). The construction of the canal is currently underway and will be commissioned in 2026, irrigating hundreds of acres of agricultural fields while fulfilling the water needs of North and North Central Provinces.

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