This paper discusses the quality and availability of the thermal spring water at Mahapelessa in the Hambantota district which could be harnessed for therapeutic purposes also the infrastructure development necessary through which there would be social benefits. The study included conducting opinion surveys, field & sit investigations, laboratory tests and conceptual design layouts. The opinion surveys indicated that a large percentage believe that bathing in the thermal waters would be a cure to certain specific ailments and this was supported by chemical and field measurements of the water which indicated that it possessed the properties which exist in thermal waters elsewhere providing these facilities.

The major dissolved minerals of Mahapelessa thermal waters (~ 46º C) have iconic concentrations (ppm) of Na (1100), Ca (550), K (30), Cl (2500), Hco^3 (25-60). And minor constituents of S(0.32), Fe(0.07), Mn(0.04), Cd(0.02) with TDS (5200) and pH 7.6. These levels are therapeutically acceptable.

The subsurface structure by geophysical methods indicate a NE-SW trending low resistive region at a depth range of 25 – 45 m that could be potentially holding thermal waters. Geophysical methods of gravity, self potential and magnetics suggest that thermal waters to be also localized at a depth of ~ 250 – 300 m.close to the spring.

The study also provided conceptual design layouts, estimating the costs of facility development to bring about health and social benefits specially to the Sri Lankan population and in particular to the residents of the area thereby determining the feasibility of the proposal to be implemented.