

# ABSTRACT

A study on salinity pattern of U-Tapao Canal, from February 1991 to March 1992, STC Meter was used to examine the salinity at surface, mid-depth and bottom, from low and high tidal time of full moon and dark moon in each month. The examination stations were set up every 2 kilometres along the distance of 20 kilometres from the canal's mouth. The results of study revealed that the salinity intrusion pattern of U-Tapao Canal was partially mixed. The longest distance from the canal's mouth in which salinity was found was 15 kilometres. This study found that the salinity intrusion into U-Tapao Canal was due to the amount of run-off, the amount of water pumped and the distance of dredging from into the canal. The preventive measures should be stop dredging of U-Tapao Canal and constructed an appropriate over-flow dam. The prediction equation for rising tide period and high water slack period are

$$S = 33.00 \text{ Exp } (-0.0075 QfX^{1.45} - 0.265 Qf^{0.5})$$

$$S = 33.00 \text{ Exp } (-0.0195 QfX^{1.6} - 0.422 Qf^{0.5}) , \text{ respectively.}$$