

ANALYSIS OF OPERATION AND MAINTENANCE OF
GIANT'S TANK SCHEME

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By

M.Thuraisingham B.Sc.(Eng.), M.I.E., C.Eng.

A Dissertation submitted in partial fulfilment of the Requirements
for the Degree of Master of Engineering



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Department of Civil Engineering,
Faculty of Engineering,
University of Moratuwa.

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M.Thuraisingham.

SUMMARY

Giant's tank is located in Mannar district of the Northern Province in Sri Lanka. This tank has 10 sluices, 3 taking off from the inlet channel and the balance 7 from the tank. This scheme consists 162 minor tanks which are balancing reservoirs for the irrigable area of 24,438 acres.

During dry periods, tailend farmers faced lot of water problems due to cascade type tanks distribution systems and improper maintenance of the scheme, mainly due to the shortage of funds.

Few years ago the Government of Sri Lanka decided to recover some of the Operation and Maintenance Cost from the farmers. It was estimated that the cost of operating and maintaining a major irrigation scheme is about Rs. 200 per acre. The government of Sri Lanka requested the farmers to pay Rs. 100 per acre and the government agreed to provide the balance. The government plan was to increase the farmers contribution by Rs. 20 each year for five years. According to this plan after the fifth year total cost of operating and maintaining the systems will be met out of the farmers contribution.

However the O & M fee collection was not successful. The farmers contribution dropped annually. As such the government decided to keep the farmers contribution at the initial Rs. 100 level. One of the reasons for not paying the O & M fee is that the farmers feel that the irrigation water is not equally distributed. This report suggests an alternate way to distribute the cost of operation and maintenance.



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ABBREVIATIONS

acs	Acres
C.I.E	Chief Irrigation Engineer
°	Degree
°C	Degree Centigrade
DAC	District Agricultural Committee
d/s	Down stream
E	East
'	Feet
ft.	Feet
G/T	Giant's Tank
hr	Hour
"	Inches
ID	Irrigation Department
IMD	Irrigation Management Division
INMAS	Integrated Management of Major Irrigation Settlements
I.E	Irrigation Engineer
kmph	Kilometers per hour
M.S.L	Mean Sea Level
m.	Meters
mm.	Millimeters
mm/d	Millimeters per day
N	North
NE	North East
O&M	Operation and Maintenance
O/T	Over-time
%	Percentage
R.B	Right Bank
Rs.	Rupees
SW	South West
sq. km.	Square Kilometers
sq. miles	Square miles
TA	Technical Assistant
TDO	Turnouts
U.S	United States
u/s	Up stream
W.SS	Work Supervisors
yrs	Years



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