

A Study on Techno Economic Assessment of Drinking Water Supply Scheme in Salem Corporation

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ABSTRACT

Water is simple human right, most precious useful resource for economy and fitness. Sanitation is determinants of satisfactory of existence and man or woman's hygiene can have an effect on the whole community. Consuming liquid and cleanness be a fundamental fitness service. Salem Municipality which was formed in 1866 with an area of about 21sq km has been Techno-economic assessment TEA in principle is a cost-benefit comparison using different methods. Most important goal of our task be S toward study regarding the consumption water deliver details of Salem Corporation also specify the details about water supply scheme of Salem district.

Keywords: Assessment, Drinking water, Supply scheme and Salem corporation.

1. INTRODUCTION

Water is next to oxygen while being necessary for lifestyles. A number of this water is provided thru ingredients however maximum is fed on through beverages.

1.1 Techno Economic Analysis

An essential device for both research and commercial project development, TEA facilitates to evaluate the monetary feasibility of a method and presents direction to research, development, investment, and policy making. Figure 1 shows the district water resources map.

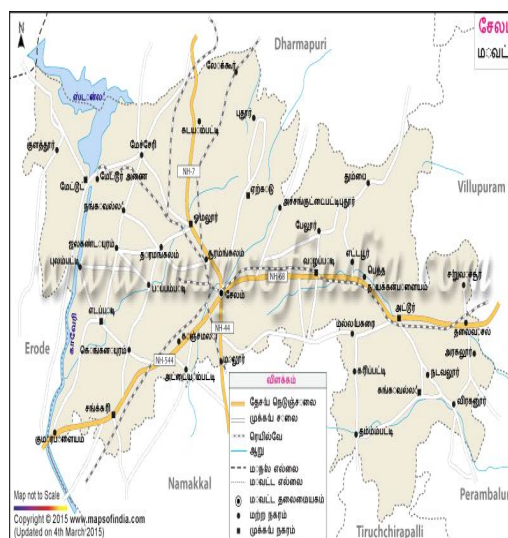


Figure 1 District water resources map

2. STUDY AREA

Salem district lies in the part of Tamil Nadu, positioned amongst 11°15'–12°00'N latitudes and seventy seven°35'–seventy eight°50'E longitudes. The complete geographical area is prepared 5207 km² out of which the Stanley reservoir covers a district of approximately 164.five km². The study is bounded via the districts Dharmapuri in the north, Namakkal within the south, Erode inside the west and South Arcot within the east pointers. Figure 2 shows the groundwater level map of salem district.

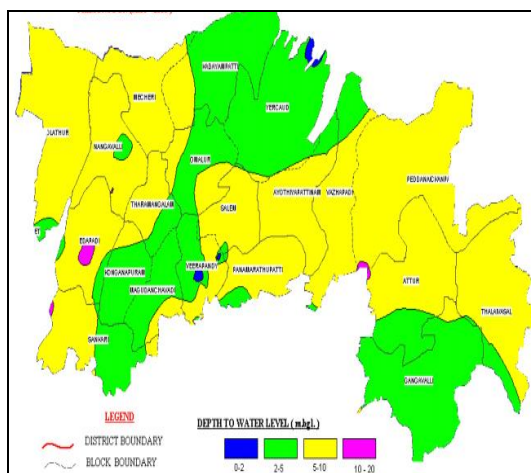


Figure 2 Groundwater Level map of Salem district

2.1 Rainfall

Table 1 shows the annual rainfall in salem district.

Table 1: Annual rainfall in Salem district (mm) (2011-15)

Actual rainfall in mm					Normal rainfall in mm
2011	2012	2013	2014	2015	
1078.6	831.5	830.80	857.7	1135	997.90

Total Hardness is determined in 60% of the samples exceeds more than permissible restriction. It is located that most of the people of the samples are characterized with the aid of privileged attention of NO³, SO₄ and F than the BIS permissible restrict.

3. DRIKING WATER QUALITY STANDARDS

Figure 3 shows the water sources.

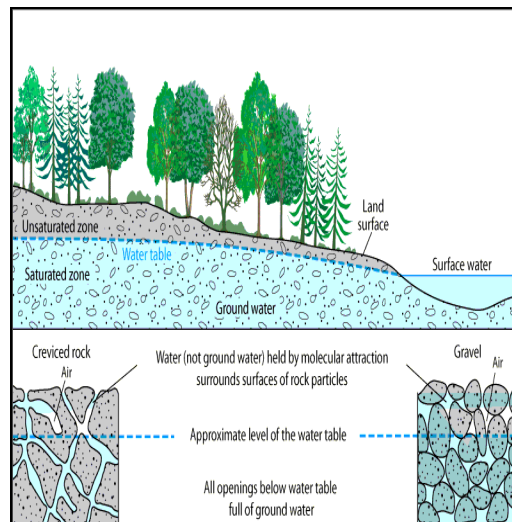


Figure 3 Water Sources

3.1 Drinking Water Quality

Consuming water quality standards describes the quality parameters set for drinking water. Table 2 shows the water quality standards.

Table 2: Water quality standards

S.No	Parameters	Drinking water Is: 10500 - 1991	
		Desirable	Maximum
1	Turbidity	5	10
2	pH value	6.5 to 8.5	No relaxation
3	Total hardness (as CaCO ₃)	300	600
4	Iron	0.3 mg/l	1.0 mg/l
5	Chlorides	250 mg/l	1000mg/l
6	Dissolved Solids	500mg/l	2000mg/l
7	Calcium	75 mg/l	200 mg/l
8	Arsenic	0.05	No relaxation
9	Mineral oil	0.01	0.03
10	Alkalinity	200mg/l	600mg/l

Safe drinking-water, as defined by means of the hints, does now not represent any considerable threat to fitness over a lifetime of consumption, inclusive of extraordinary sensitivities that may arise between life tiers. Figure 4 shows the methodologies of water supply projects.

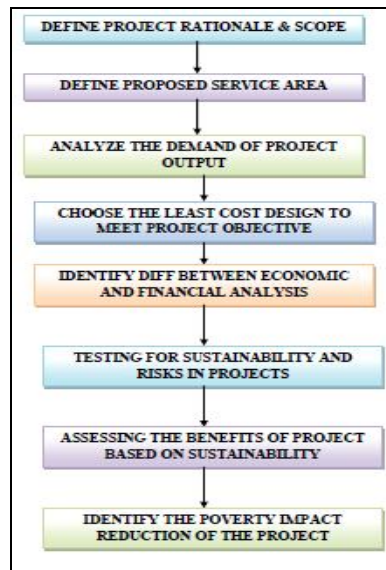


Figure 4 Methodologies of water Supply projects

3.2 Techno-Economic Assessment

Techno-economic evaluation TEA in precept is a value-benefit evaluation the usage of exceptional strategies. These assessments are used for responsibilities along with:

- Evaluate the monetary feasibility of a particular task.
- Inspect cash flows (e.g. financing issues) over the lifetime.
- Compare the probability of different technology scales and packages.
- Examine the financial nice of various era packages supplying the identical carrier.

3.3 Water Supply Scheme In Salem

It is proposed to absorb a dedicated Water supply Scheme to Salem corporation and additionally to transfer the prevailing manner facet villages being provided thru the Nangavalli Scheme to the TWAD Board Salem – Attur mixed Water supply Scheme. Both the Schemes will be maintained by means of the Salem agency. it's far proposed to supply 80 MLD for the current necessities and a 110 MLD for further needs.

3.4 Mettur Dam Details

The Mettur Dam placed throughout the river Cauvery in which it enters the plains. It offers irrigation and consuming water centers for more than 12 districts of Tamilnadu and for this reason is revered because the existence and livelihood-giving asset of Tamil Nadu. Table 3 shows the water supply scheme cost of mettur dam.

Table 3: Water supply scheme cost of mettur dam

Quantity to be drawn	23.45 mld	Estimate cost	Rs.158.64 Crore
Source	Cauvery river @ Mettur	AM cost	Rs.6.90 Crore
Mettur	Off take Well (23.45 mld)	Per Capita cost	Rs.5309/-
		Cost/KL	Rs.21.66

4. CONCLUSION

There's immoderate bodily infrastructure available for water deliver in nearly all of the study villages imposing standards like demands for driven technique, making the community make a contribution financially appear to give financial matters the over-riding priority.

- Due to this new water deliver machine the water call for of increasing population might be complete stuffed. The high-quality of water may even improve so the cost on water treatment could be decreased because of new and easy supply of Salem.
- The existing supply of water supply system is Cauvery River, which reasons economic loss and also emotional loss because of death of persons.

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