



सत्यमेव जयते

DROUGHT RELIEF SCHEMES
1968-69

An
Evaluation Report

ISSUED BY :
BUREAU OF STATISTICS & EVALUATION
GOVERNMENT OF PONDICHERRY

1971

INTRODUCTION

The report on 'Drought Relief Schemes (1968-69)' is the eleventh issue in the Evaluation series of the Bureau of Statistics & Evaluation, Pondicherry. This issue critically deals with the various drought relief schemes implemented by the Public Works Department during 1968-69.

The willing co-operation extended by the Public Works Department, Pondicherry, in providing all facilities for this study is gratefully acknowledged. The comments of the Director of Public Works, Pondicherry, are also appended to the report.

It is hoped that the present report will be quite useful to all those who are concerned with the Evaluation of Plan Schemes.

Place : Pondicherry
Date : 12th May 1971.

V. SUBBARAYALU,
Director.

REPORT ON DROUGHT RELIEF SCHEMES 1968-69

General :

Pondicherry region was worst hit by drought during the year 1968-69. Obviously, the drought, affected the area under crops to a great extent and also the other vital facility for human survival, namely drinking water. Water levels in the wells and tanks had receded and, in a few instances, completely dried up. Generally, Pondicherry region receives a normal rainfall of 1,174 mm., in a year. The rainfall data for the preceding five years are given below monsoonwise for comparative study.

<i>Sl. No.</i>	<i>Year</i>	<i>South-west monsoon</i>	<i>North-east monsoon</i>	<i>Winter period</i>	<i>Hot weather period</i>	<i>Annual total</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	1963-64	532.00	936.00	—	2.00	1,470.00
2.	1964-65	425.00	742.00	20.00	95.00	1,282.00
3.	1965-66	284.00	747.00	48.00	373.00	1,452.00
4.	1966-67	264.00	1,006.25	57.00	104.00	1,431.25
5.	1967-68	162.50	748.00	3.00	91.00	1,004.50
6.	1968-69	118.00	354.00	7.00	21.50	500.50

It will be evident from the above that, during 1968-69, the actual rainfall was below normal by as much as 57.3%. This was due to the fact that the South-West monsoon as well as the North-East monsoon failed to a very great extent.

A further analysis is also made in the table below with regard to the prevalence of drought conditions, by giving a comparative indication of the cropped area and production for the preceding five years in Pondicherry region in respect of paddy, ragi, groundnut and sugarcane.

(Area in hectares and production in metric tonnes)

Sl. No.	Year	Paddy		Ragi		Groundnut		Sugarcane	
		Area	Production	Area	Production	Area	Production	Area	Production
1	2	3	4	5	6	7	8	9	10
1.	1963-64	16,842	23,773	1,887	2,810	4,252	4,647	1,749	1,52,683
2.	1964-65	16,459	24,183	2,204	3,172	4,164	4,680	1,819	1,64,150
3.	1965-66	17,050	24,633	1,805	2,635	3,320	3,287	1,329	1,06,320
4.	1966-67	16,180	24,079	2,294	3,602	3,934	4,445	1,546	1,32,570
5.	1967-68	16,531	26,092	1,833	2,566	3,575	4,174	1,454	1,01,344
6.	1968-69	13,421	24,876	3,475	5,213	2,232	2,678	1,780	2,00,919

Production of rice had actually gone down by 1,216 tonnes during 1968-69 compared to 1967-68. Similarly area under paddy had also declined to 13,421 hectares during 1968-69 from 16,531 hectares in 1967-68.

It is, therefore, clear that drought had in fact affected the area under paddy as well as production of rice in the year 1968-69. However, the only redeeming feature during 1968-69, compared to 1967-68, was that the yield per hectare had increased. In terms of actual figures, the yield per hectare of paddy during 1967-68 in Pondicherry region was 1,578 kilos whereas, during 1968-69, it was 1,854 kilos. This again may be attributed to the high-yielding varieties programme that had been widely practised in the region. In fact, it was perhaps due to this phenomenon that the severity of drought had lessened to a considerable extent.

Methodology :

As regards the methodology, it is pointed out the particulars of work carried out under drought relief schemes were obtained from the Public Works Department which had implemented the scheme for drought relief. The two aspects of drought relief works were: (1) irrigation works and (2) provision of drinking water facilities. Under irrigation, the major work was desilting of tanks, while, in regard to drinking water, the major works were : (1) sinking of new wells, (2) provision of hand-pumps, (3) deepening of existing wells and bore-wells, (4) lowering of centrifugal pumps (5) sinking of new bore-wells and (6) changing of pumpsets. A list of tanks and the villages as well as the places where drinking water works were done is furnished in Appendix I.

Suitable questionnaires were evolved for the field study, separately for irrigation works and drinking water facilities. The field study was done by the staff of the Bureau of Statistics and Evaluation, Pondicherry.

In all, 42 tanks in 31 villages were desilted. For each tank, at least three ryots who had arable lands in the ayacut of the particular tanks were contacted. The list of ryots was obtained from the Project Executive Officer, Villianur. Similarly, in respect of : (1) sinking of new wells, (2) deeping of the existing wells and bore-wells, (3) lowering of the existing centrifugal pumpsets, (4) sinking of new bore-wells and (5) changing of pumpsets, three persons who lived in the vicinity of the respective water works were contacted and information was recorded.

As regards hand pumps erected for drinking water purposes, one leading and knowledgeable person in the respective hand-pump area was contacted and views were recorded in the prescribed schedule.

Objective of the study :

The principal object of this study is to find out the extent of relief afforded to the public in mitigating the scarcity conditions. Incidentally, it is also the intention of this study to find out how far the public had re-acted favourably to the relief measures in general. Additional facilities and improvements, if any, suggested by them are also incorporated in this study in order to find out the adequacy or otherwise of the drought relief works implemented by the Public Works Department, Pondicherry.

A. FINDINGS OF THE STUDY

Irrigation Works :

Tanks and tube-wells are the two main sources of irrigation in Pondicherry region. Due to failure of North-East monsoon in 1968-69, the tanks in Pondicherry region did not get adequate water supply. Consequently, the area irrigated by tanks declined considerably from 4,894 hectares in 1967-68 to 2,742 hectares in 1968-69. In the table below, the area irrigated by tanks during 1968-69 and 1969-70, as obtained from the sample cultivators, is furnished :—

<i>Sl. No.</i>	<i>Year</i>	<i>Area under tank irrigation in the sample in acres</i>
1.	1968-69	1,156.25
2.	1969-70	1,441.50

It is obvious that there has been significant increase in area under irrigation during 1969-70, compared to the year 1968-69, in Pondicherry region, as reported by the sample cultivators consequent on the desilting of tanks under drought relief schemes.

The size of holdings of the sample cultivators in the ayacut of the respective tanks is given below :—

<i>Sl. No.</i>	<i>Size of holdings (in acres)</i>	<i>Number of cultivators</i>
1.	Less than 2	64
2.	2 and below 4	110
3.	4 " " 6	64
4.	6 " " 8	24
5.	8 " " 10	10
6.	10 and above	50
	Total ...	322

It will be observed that the majority of the cultivators who derived the maximum benefit out of desilting of tanks are having between 2 and 4 acres, the percentage of such beneficiaries to total sample cultivators worked out to 34.16%.

Period of availability of water from tank:*

It is imperative to compare the availability of water from tank for irrigation during the year 1968-69 with that of the year 1969-70. This will give a clear picture of improvement in tank irrigation consequent on desilting of tanks under drought relief schemes.

<i>Period of availability of water</i>	<i>(Area in acres).</i>	
	<i>1968-69</i>	<i>1969-70</i>
(1)	(2)	(3)
Throughout the season (five month) ...	592.00	1,041.50
Four months	2.00	73.50
Three months ..	279.25	215.25
Two months ...	249.50	107.25
One month ..	33.50	4.00
Total ...	<u>1,156.25</u>	<u>1,441.50</u>

There has been marked improvement in tank irrigation during 1969-70 over that in 1968-69. During 1968-69, only 592 acres received water throughout the season for paddy (II crop) while, during 1969-70, it has gone upto 1,041.50 acres. Similarly, tank irrigation was available only for 2 acres for four months during 1968-69, while it has gone up to 73.50 acres during 1969-70. There is however, decrease in water availability in regard to three months, two months and one month. However, the over-all position has improved quite significantly.

In the table below, the area under crops of the sample cultivators during 1968-69 and during 1969-70 is given to assess the improvement, if any, in the cropped area during 1969-70 over that of 1968-69.

Sl. No.	Name of crop	(Area in acres).	
		1968-69	1969-70
(1)	(2)	(3)	(4)
1.	Paddy I crop	625.00	639.00
2.	Paddy II crop	1,403.75	1,571.25
3.	Paddy III crop	24.00	34.50
4.	Ragi	81.50	52.00
5.	Groundnut	31.25	40.75
6.	Sugarcane	47.50	46.25
	Total	2,213.00	2,384.75

Evidently, the area under paddy II crop in the holdings of the sample cultivators had increased quite significantly during 1969-70 over that of the year 1968-69. This is an index of improvement due to desilting of tanks since tank irrigation is the main source for paddy II crop. The percentage increase is 11.93%. The overall increase in the percentage of crops is 7.76.

The opinion of the ryots who are having lands in the ayacut of the desilted tanks regarding improvement or otherwise of the irrigation works done was ascertained and recorded. These views are tabulated below :—

Sl. No.	Views of the sample cultivators	Percentage reporting
1.	No benefit	33.54
2.	Slight improvement	57.45
3.	Much benefit	9.01
		100.00

As necessary corrolary to the opinion regarding satisfaction or otherwise of the improvements work, views were ascertained in respect of adequacy of the work done. The same is presented in the table below :

<i>Sl. No.</i>	<i>Views on work</i>	<i>Percentage reporting</i>
1.	Satisfactory	... 3.11
2.	Not satisfactory	... 81.98
3.	Inadequate	... 12.42
4.	Work not done	... 2.49

It is clear that only 3.11% of the sample cultivators are satisfied with irrigation work. This is a very bad reflection. The principal deficiencies pin pointed by the sample cultivators are as follows :—

- (a) Defective contour bunding.
- (b) The level of the outflow canal for the discharge of surplus water is such that it could not allow storage of an optimum quantity of water in the tank.
- (c) Defective and old sluicing arrangements have neither been repaired nor re-built to enable effective regulation of water release.
- (d) Attention has not been bestowed on the maintenance works of the supply canals.

B. DRINKING WATER FACILITIES

Provision of drinking water facilities in scarcity area was done primarily by tapping the subsoil water to the maximum possible extent. The different kinds of work done in Pondicherry region are furnished in the following table :—

<i>Sl. No.</i>	<i>Type of work</i>	<i>Number of villages</i>	<i>Number of works done</i>
(1)	(2)	(3)	(4)
1.	Digging of new open wells ...	17	21
2.	Sinking of new bore-wells ...	9	12
3.	Providing handpumps ...	69	206
4.	Lowering of pumpsets ...	15	16
5.	Deepening of existing open wells	42	85
6.	Deepening and cleaning of existing bore-wells and providing suitable pumps ...	21	25

It is significant to note that, while changing pumpsets in 25 places, in 24 places turbine pumps were provided, so that if water level goes down the turbine pumps would lift water up to 120 feet. In fact, this change-over was timely and deserves appreciation to that extent.

In order to assess the actual utility of the works done, it is also necessary to ascertain the views of the informants as regards improvements and proper location of the facilities. In the table below, these two vital aspects of the works are given.

<i>Sl. No.</i>	<i>Items of work</i>	<i>Number of sample informants</i>	<i>Percentage of sample informants reporting improvement</i>	<i>Percentage of sample informants reporting proper location</i>
(1)	(2)	(3)	(4)	(5)
1.	Digging of new open wells ..	56	66.07	33.92
2.	Sinking of new borewells ...	24	33.33	33.33
3.	Providing handpumps ...	196	51.02	37.75
4.	Lowering pumpset ...	54	66.66	—
5.	Deepening of existing open wells ...	235	78.72	—
6.	Deepening and cleaning existing borewells and providing suitable pumpsets ...	25	96.00	—

The main reasons for dissatisfaction are poor maintenance and improper location.

Maintenance :

The efficacy of the drinking water facilities provided, is contingent on proper maintenance. In the table below, the views of the respondents on the proper maintenance are given.

<i>Sl. No.</i>	<i>Type of work</i>	<i>Percentage reporting proper maintenance</i>
(1)	(2)	(3)
1.	Digging of new open wells ...	33.92
2.	Sinking of new bore-wells ...	29.66
3.	Providing hand-pumps ...	46.42
4.	Lowering of pumpsets ...	53.70
5.	Deepening of existing open wells	47.65
6.	Deepening and cleaning of existing bore-wells and providing suitable pumpsets ...	96.00

Except where deepening and cleaning of the existing bore-wells and providing suitable pumpsets, is concerned, maintenance is generally reported to be quite unsatisfactory.

There is obviously definite and urgent need to bestow sufficient attention to the proper maintenance of the works already done. Otherwise the whole purpose of the drought schemes would be defeated and the works carried out would risk providing in function. Public Works Department does not have staff at that level. Local bodies can appoint local people for this purpose.

Average cost of work :

An analysis of the average cost of each work is furnished below :—

<i>Sl. No.</i>	<i>Type of work</i>	<i>Number of works</i>	<i>Total expenditure</i>	<i>Average cost per work</i>
(1)	(2)	(3)	(4) Rs.	(5) Rs.
1.	Digging of new open wells	21	75,856	3,612.19
2.	Sinking of new bore wells	12	1,68,936	140.78
3.	Providing handpumps	206	31,810	154.41
4.	Lowering of pumpsets	16	8,229	514.31
5.	Deepening of existing open wells	85	31,656	372.42
6.	Deepening and cleaning of existing bore-wells and providing suitable pumpsets	25	2,14,293	8,571.72

A perusal of the above table gives the impression that the average cost in respect of sinking of new bore-wells appears to be on the high side. It is further pointed out that, in regard to handpumps, the average cost is worked out for 206 handpumps and not for 204 handpumps, as revealed by the survey reports.

SUMMARY OF CONCLUSIONS

A. Irrigation works :

1. That there has been severe drought conditions during 1968-69 in Pondicherry region has been established and the area under paddy and production of rice have gone down considerably.

2. 42 tanks were desilted in 31 villages and water supply for irrigation purposes has been augmented on account of drought relief schemes. The percentage increase as ascertained from the sample cultivators, is 24.61.

3. Desilting of tanks is but a routine work for good maintenance of tanks and the work done under drought relief works can at best be regarded as such. In other words, desilting work was perhaps precipitated due to drought conditions during 1968-69.

4. The total expenditure under desilting of tanks is Rs. 5,63,634, including liabilities.

5. The period of availability of water has increased considerably consequent on the desilting of tanks under drought relief works.

6. The survey also reveals that small land-owners have derived more benefit out of desilting of tanks than bigger land-owners.

B. Drinking water facilities :

1. Quite legitimately, all possible types of resources were tapped in order to provide drinking water facilities under drought relief schemes. Precisely, six types of work were carried out.

2. According to survey reports, 204 handpumps have been installed as against 206 furnished by the the Public Works Department.

3. Even among the 206 handpumps, it has been reported that only 74 pumps or 35.92 are properly located and only 100 informants or 48.54 have expressed real improvement in water supply. This is a sad state of affairs. In fact, a few of the handpumps installed stand as a monumental relic just to remind that drought works were undertaken. Glaring examples are the one opposite the General Hospital, Pondicherry and the other just outside the western wall of the Pondicherry bus stand. In a few other cases, water never came even on the second day after installation.

4. As regards digging of new open wells, 37 informants (or 66.07%) have expressed improvement while only 19 (or 33.92%) have reported proper location.

5. Only 8 informants (or 33.33%) have expressed improvement on account of sinking of new bore-wells, while 8 (or 33.33%) have expressed satisfaction as regards proper location.

6. 36 informants (or 66.66%) have accepted improvements on account of lowering of pumpsets.

7. Out of 235 informants, 185 (or 78.72%) have remarked that there is real improvement in regard to drinking water on account of deepening of the existing open wells.

8. There is urgent need and necessity to gear up the administrative machinery for proper maintenance of the facilities already extended.

9. In respect of handpumps it is felt that those hand-pumps that are practically useless should be removed, and kept in the Public Works Department godown for future use, in case of recurrence of drought. This step will at least save further wastages to the public exchequer.

10. It would have been better if the people in the locality were asked to attend to the drought relief works by assigning them the respective contract work. This would also have spared the Public Works Department of the undue and unwanted criticism that has sparked off consequent on the ill-located and ill-maintained water works programme.

APPENDIX I

I. Places of desilting of tanks :

1. Improvements to Sedarapet big tanks.
2. Improvements to Sedarapet small tanks.
3. Improvements to Keezhasathamangalam tank.
4. Improvements to and strengthening the tank bund of Kirumampakkam Perieri and Chinneri.
5. D. C. R. for Panayadikuppam Sitheri.
6. Improvements to Panayadikuppam tank.
7. Improvements to Manamedu tank.
8. D. C. R. of Karayambuthur Odaperi tank.
9. Raising and strengthening the tank bund of Murungapakkam.
10. Improvements to Korkadu tank.
11. D. C. R. of Kaduvanour tank.
12. D. C. R. of Perungalore Perieri and Sinneri.
13. D. C. R. of Madukarai tank.
14. D. C. R. of Thettampakkam tank.
15. D. C. R. of Madagadipet tank.
16. D. C. R. of Tirukkanur tank.
17. Improvements to Suthukeny tank.
18. Sedarapet supply channel.
19. Improvements to Sorapet perieri.
20. D. C. R. of Keelparikalpet tank.
21. D. C. R. of Katterikuppam tank.
22. D. C. R. of Thirubuvanai tank.
23. D. C. R. of Olandai tank.
24. D. C. R. of Thiruvandarkoil tank.
25. S. R. to the right flank to calingulah and sluices of Madukarai tank.
26. Raising and strengthening the tank bund of Thondamanatham Odaperi.
27. Raising and strengthening the tank bund of Embalam Vannan Eri.
28. Raising and strengthening the tank bund of Embalam Eri.

29. Raising and strengthening the tank bund of Karikalampakkam tank.
30. Raising and strengthening the tank bund of Embalam Sitheri tank.
31. Raising and strengthening the tank bund of Kariamanikam tank.
32. Raising and strengthening the tank bund of Koonichempet tank.
33. Raising and strengthening the tank bund of Karasur tank.
34. Raising and strengthening the tank bund of Archiwack tank.
35. Raising and strengthening the tank bund of Mangalam tank.
36. Raising and strengthening the tank bund of Sorapet pudu Eri tank.
37. Raising and strengthening the tank bund of Eripakkam tank.
38. Improvements to Tirukkanur Chinneri.
39. Repairs to masonry portion to Sedarapet small tank.
40. Improvements to Sorapet Aripanthangal.
41. Improvements to Sooramangalam tank.
42. Raising and strengthening the tank bund and repairs to sluice of Kunichempet Paja Eri.

II. Lowering of pumpsets and pipe connection etc., in the existing wells.

Nettapakkam Commune :

- | | | |
|-----------------|-----|--------|
| 1. Moolapakkam | ... | 2 Nos. |
| 2. Suramangalam | ... | 2 " |

Bahour Commune :

- | | | |
|------------------------|-----|-------|
| 1. Manamedu | ... | 1 No. |
| 2. Keelaparikalapet | ... | 1 " |
| 3. Chinna Arachikuppam | ... | 1 " |

Villianur Commune :

1. Kilasathamangalam	...	1 No.
2. Kilasathamangalampet	...	1 "
3. Melasathamangalam	...	1 "
4. Keezhoor	...	1 "
5. Uthiravahinipet	...	1 "
6. Villianur Periapet	...	1 "
7. Konerikuppam	...	1 "

Mudaliarpet Commune :

1. Murungapakkam	...	1 No.
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Ariankuppam Commune :

1. Peria Veerampattinam	...	1 No.
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Total	...	<u>16 Nos.</u>
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*III. List of villages where deepening of wells was taken up under drought relief :**Oulgaret Commune :*

Number of wells deepened.

1. Saint Paulpet	...	2 Nos.
2. Pethuchettypet	...	2 "
3. Sellaperumalpet	...	1 "
4. Muthulingampet	...	3 "
5. Sinnakalapet	...	1 "
6. Muthupillaipalayam	...	1 "
7. Pillaichavadai	...	4 "
8. Pitcharampet	...	2 "
9. Pudupet	...	1 "
10. Periakalapet	...	6 "
11. Ganapathychettykulam	...	2 "
12. Sinnakosapalayam	...	1 "

*Oulgaret Commune—Contd.*No. of wells
deepened

13. Boomianpet	...	2	Nos.
14. Arumarthapuram	...	3	..
15. Marie Oulgaret	...	2	..
16. Lawspet	...	2	..
17. Kuruvadikuppam	...	7	..
18. Pakkumudayanpet	...	1	..
19. Thattanchavady	...	2	..
20. Sanjeevarayanpet	...	1	..

Mudaliarpet Commune :

1. Pappanchavadi	...	1	..
2. Ottanpalayam		1	..
3. Nynar Mandapam	...	1	..

Bahour Commune :

1. Koravelimedu	...	1	..
2. Irulanchandy	...	3	..
3. Aranganoor	...	3	..
4. Manapet	...	4	..
5. Kirumampakkam	...	6	..
6. Valluvarpet	...	1	..
7. Pillayarkuppam	...	3	..
8. Peria Arachikuppam	...	1	..

Ariankuppam Commune :

1. Theduvanatham	...	1	..
2. T. Palayam Cherry	...	1	..
3. Thennampalayam	...	1	..
4. Odavely	...	1	..

<i>Villianur Commune :</i>	<i>No. of wells deepened.</i>
1. Anandapuram	... 2 Nos.
2. Thattanchavady	... 1 "
3. Ulavoikal	... 1 "
4. Usudu	... 1 "
5. Valluvenpet	... 1 "
6. Porayurpet	... 1 "
7. Ariapalayam	... 1 "
8. Sedarapet	... 2 "
Total	... <u>85 Nos.</u>

IV. List of villages where open wells were provided :

<i>Villianur Commune :</i>	<i>Number of wells</i>
1. Anandapuram	... 1 Nos.
2. Sivaranthagam	... 1 "
3. Krumpanayagampalayam	... 1 "
4. Aathuvoikalpet	... 1 "
5. Thattanchavady	... 1 "
6. Konerikuppam	... 1 "
7. Keelagharaharam	... 1 "
<i>Ariankuppam Commune :</i>	
8. Pudukuppam	... 1 "
9. Abishegapakkam	... 1 "
10. T. Palayam	... 1 "
<i>Oulgarai Commune :</i>	
11. Swamipillaithottam	... 1 "
12. Pudupet	... 1 "
13. Ganapathychettykulam	... 1 "
14. Periyakalapet	... 2 "
15. Pudupet	... 1 "
16. Karuvadikuppam	... 1 "

Bahour Commune :

		<i>No. of wells.</i>
17. Komandemedu	...	1 No.
18. Pudukuppam	...	1 „
19. Pillaiyarkuppam	...	1 „

Mannadipet Commune :

20. Vinayagampet	...	1 „
Total	...	21 Nos.

*V. List of handpumps installed under drought relief :**PONDICHERRY :**1. Vambakerapalayam : (9 Nos.)*

Main Road	...	2 Nos.
Near sea shore	...	6 „
Somampalayam	...	1 „

2. Ouppalam : (21 Nos.)

Kalavai Street	...	1 „
Sunnambukalavai	...	1 „
Ponambalamkoil	...	1 „
Near Siva house	...	1 „
Near Church	...	1 „
Lavatory	...	1 „
Main Road	...	1 „
Nadupet	...	4 „
Vanarapet	...	2 „
Vanarapet (School)	...	1 „
Back of Railway	...	1 „
Pura Koil	...	1 „
Radio Centre	...	1 „
Near toddy shop	...	1 „
Davidapet	...	1 „
Periapalayathal	...	1 „
Bus Stand	...	1 „

3. *Mudaliarpeta* : (13 Nos.)

Savanapeta	...	2 Nos.
Karamanikuppam	...	1 "
Thottakal (Kuppam)	...	2 "
Orleanpeta	...	2 "
Attupatti	...	3 "
Nellithope	...	2 "
Iyyanarkoil	...	1 "

4. *Pondicherry* : (21 Nos.)

Sahib Street	...	2 "
Bathar Sahib Street	...	1 "
Sinnasubraya Pillai Street	...	1 "
T. V. Nagar--Pudunagar	...	3 "
West Boulevard (Raja)	...	1 "
North Boulevard (M.G. Road, Barathi Street)	...	1 "
Vairakiamandapam	...	1 "
Hospital Lane	...	2 "
South Boulevard (Near P.O.)	...	1 "
Govindasalai	...	5 "
Newtone Talkies (Circle)	...	2 "
Opp. Botanical	...	1 "

5. *Muthialpeta* : (17 Nos.)

Savarayapeta Street	...	1 "
Rozarie Street	...	2 "
Veeramsamy Street	...	1 "
Salai Street	...	3 "
Oppo. to school	...	1 "
Bolni's Street	...	3 "
St. Anthony Street	...	2 "
Ecole Gardens	...	1 "

5. *Muthialpet—Contd.*

Corner of Perumal & Savarayapet Street.	...	1	Nos.
Perumalpet	...	1	"
Alankuppam	...	1	"

6. *Solathandavankuppam : (5 Nos.)*

Nadu Street	...	1	"
Iyyanarkoil Street	...	1	"
Senkaniamman Koil Street	...	1	"
Mariamman Koil Street	...	1	"
Near Sea shore	...	1	"

7. *Vaithikuppam : (4 Nos.)*

Pillayar Koil Street	...	1	"
Near Sea shore	...	1	"
Corner of St. Francis Street	...	1	"
Near Radio Station	...	1	"

8. *Valakulam : (3 Nos.)*9. *Thiruvalluvar Nagar : (5 Nos.)*

Sabastean Koil Street	...	1	"
Chettykulam	...	1	"
Near Lavatory	...	1	"
Pudupalayam	...	1	"
Khumaragurupalam	...	1	"

10. *Manjaninagar : (4 Nos.)*11. *Kuruchikuppam : (4 Nos.)*

Rue Francies	...	1	"
Near School	...	1	"
Near New School (Thillai Nagar)	...	1	"
Parimala Mudaliar Thottam	...	1	"

12. *Oulgaret Commune* : (36 Nos.)

Ganapathy Chettykulam	...	4	Nos.
Periakalapet	...	6	"
Moolakulam	...	1	"
Pettichetpet	...	1	"
Lawspect	...	1	"
Pakumudayampet Kama	...	2	"
Pudu Vanniar Street	...	1	"
Rosenagar	...	1	"
Kiramanithope	...	1	"
Gandhinagar	...	2	"
Kothapalayam	...	2	"
Thattanchavadypet	...	1	"
Thattanchavady colony	...	1	"
Thilaspct	...	1	"
Kalarapet	...	1	"
Sithankudisai	...	1	"
Swamipillaithotam	...	1	"
Chinnayampet	...	2	"
Pudupet	...	2	"
Sellaperumalpet	...	1	"
Vivekanandanagar	...	1	"
Boomaiampet	...	2	"

13. *Villianur Commune* : (6 Nos.)

Near Cinema House	...	1	"
Near Church	...	1	"
Arumathapuram	...	4	"

14. *Ariankuppam Commune* : (31 Nos.)

Abishekapakkam	...	2	"
T. Palayam	...	4	"
T. Palayam Cherry	...	2	"
Nallavadu	...	2	"
Purunankuppam	...	3	"
Thavalakuppam	...	2	"

14. Ariankuppam Commune—Contd.

Manaveli	...	2	Nos.
Odaveli	...	2	"
Nonankuppam	...	2	"
Tholgate	...	2	"
Chettiarthope	...	1	"
Ramaiyathope	...	1	"
Anurathapuram	...	1	"
Eruchampalayam	...	1	"
Civalingapuram	...	4	"

15. Bahour Commune : (27 Nos.)

Sarkaseimedupet	...	2	"
Aladimedu	...	3	"
Itchmugadu (Varikuppam)	...	1	"
Varkaladiyapet	...	3	"
Pannithittu	...	2	"
Kandanpet	...	1	"
Kommandaumedu	...	1	"
Manapet	...	2	"
Pudukuppam	...	1	"
Kaduvanur	...	1	"
Vampapet	...	1	"
Kirumampakkam	...	4	"
Valuvanpet	...	1	"
Pillaiyarkuppam	...	1	"
Utchimedu	...	1	"
Total	...	206	"

VI. List of villages where bore-wells with suitable pumpsets have been provided :

Nettapakkam Commune :

	<i>Number of bore-wells</i>	
1. Ranganathampet	...	1 No .

Mannadipet Commune :

2. Madagadipet	...	1 ..
3. Andiyarpalayam (Kalitheerthan-Kuppam)	...	1 ..
4. Madagadipet Palayam	...	1 ..
5. Lingareddy Palayam	...	1 ..

Oulgarai Commune :

6. Sanjeevirayanpet	...	1 ..
7. Telaspeta	...	1 ..

Villianur Commune :

8. Ourivaiyar	...	1 ..
9. Sendanatham	...	1 ..
10. Sulthanpet	...	1 ..
11. Manadipet	...	1 ..

Bahour Commune :

12. Kudiyruppu Palayam	...	1 ..
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Total	...	12 Nos.
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COMMENTS OVER THE EVALUATION REPORT ON THE DROUGHT RELIEF WORKS

The comparative study on the production of food-grains does not give the real picture of the drought conditions in 1968-69, as it is seen from the statement that only the production of groundnuts went down when compared to the yields in the previous years.

Certain mistakes are noticed in the list of places where the Drought Relief works were executed and are appended in the Annexure "A".

The field study by consulting three samples is found to be much inadequate. The real facts of improvements have not been brought to light and this inadequate sample study did not give any reliable results. The sample study with regard to the provision of hand pumps by studying the leading personalities of the locality is also not correct; the real users of the hand pumps should have been studied. The area under the tank irrigation and the size of the holdings of the cultivators may be furnished extensive, instead of ascertaining from the local minority sample cultivators, so that the correct percentage of improvement may be calculated.

Comparing the water availability position of the year 1968-69 with that of 1969-70 has given only the *Pseudo* percentage of improvement as the year 1968-69 was the year of drought. The correct percentage of improvement may be got by comparing the figures of 1969-70 with that of 1968-69 and 1967-68. So is the case of comparison of cropped area.

As regards the opinion of ayacutdars (of course the whole study is inadequate) on the desilted tanks its no emphasis that there is improvement. The Annexure "B" gives a clear picture of the benefits.

The statement that only 3.11% of the cultivators are satisfied with the execution of the work is not at all correct. It may also be added that the correct percentage of those who are satisfied with the work should not be worked out by consulting the meagre number of cultivators. The Annexure "C" details the quantum of work executed.

The places where Drought Relief Works were executed have been selected by the Drought Relief Committee and this Department was not the sole authority to select those places. As far as the pumpsets are concerned they were and are under the control of the municipalities and the concerned municipalities are responsible for the proper maintenance of them. A qualified man is required for the proper maintenance of these pump-houses. Moreover certain pump sets require the 400 volts power supply and it may not be possible for the Electricity Department to maintain the 400 volts power supply constantly.

As far as the hand pumps are concerned it is constrained to point out that the anticipated benefit has gone down due to the improper handling and theft of parts and due to the dependance of the municipalities and the beneficiaries on the Government even for the periodical changing of washers which costs even less than half-a-rupee.

The number of places where the deepening and cleaning of existing bore-wells and changing of suitable pumpsets was 31 and not as noted in the report.

Out of the 31 pumps 27 were deep well turbine pumps and four ejecto pumps. Hence, the cost of each work, works out to not less than Rs. 7,000 considering the cost of pumps which was Rs. 6,500 on an average. Similarly in the case of new bore-wells, the average cost of Rs. 12,066.85 should not be considered more as the cost of the pumpset itself was Rs. 10,000 on average.

Superintendent.

P. W. D.

ANNEXURE 'A'

<i>Places.</i>	<i>Number of pumps actually installed.</i>	<i>Number of pumps noted in the report.</i>
Solathandavancouppam ...	5	3
Balquis Street ...	3	1
Salai Street ...	3	1
T. V. Nagar — Pudunagar ...	3	2
Vaithicouppam ...	4	3
One more pump was installed at the Radio Station.		
Perumalpet — Muthialpet ...	1	
Alankuppam — Muthialpet ...	1	

ANNEXURE - 'B'

Statement showing the details of capacity of tanks before investigation and after execution of works under Drought Relief Programme, 1969-70.

<i>Sl. No.</i>	<i>Name of work</i>	<i>Old capacity of the tank</i>	<i>Amount of increase</i>	<i>Theoretical increase</i>	<i>Percentage increase</i>	<i>Remarks</i>
1.	D. C. R. of Korkadu tank C. R. No. 4/69-70—Est. Rs. 1,24,230	61.0893 M. Cft.	0'9 "	11.358 M.Cft.	18.60%	
2.	Improvements to Sedarapet big tank—DR. No. 102. DIII/ 69-70—Est. Rs. 62,600.	12.7994 M. Cft.	0'34"	1.3226 M.Cft.	10.39 %	
3.	Desilting - cum - reclamation work to Sedarapeth Small tank - D.R. No. 108-DIII/ 69-70—Est. Rs. 37,500.	2.7525 M.Cft.	1'0 "	1.0926 M.Cft.	39.68%	
4.	Improvements to Kizhasatha- mangalam tank-D.R. No. 97 CDIII/69-70—Est. Rs. 57,530	13.598 M.Cft.	1'12"	5.364 M.Cft.	38.9 %	
5.	Improvements to Karayam- pathur odaperi - D. R. No. 164 - D. III / 69 - 70—Est. Rs. 34,925.	34.82 M.Cft.	0'4 "	4.2604 M.Cf.	12.23 %	
6.	Improvement to Panayadi- kuppam tank - D. R. No. 98 D. III/69-70—Est. Rs. 76,630.	34.565	1'0 "	9.2334 M.Cft.	26.74 %	
7.	Improvements to Thirucanur sinneri D. R.—Est. Rs. 27,700.	6.902	1'0 "	3.066 M.Cft.	44.43 %	

ANNEXURE 'C'

Statement showing the details of earth work provided
in the estimate and executed of the works under
Drought Relief Programme.

<i>Sl. No.</i>	<i>Name of works.</i>	<i>Quantity of E.W. as per estimate.</i>	<i>Quantity executed as per M. book.</i>
(1)	(2)	(3)	(4)
1.	Improvements to Sedarapet big tank ...	25051.46 m3	27182
2.	Improvements to Keezasathamangalam tank...	7843 m3	8137,254 m3.
3.	Improvements to and strengthening the tank bund of Kirumampakkam perieri and sinneri ...	41000 m3	26008.59 m3.
4.	D.C.R. for Panayadikuppam sitheri ...	4181 m3	5529 m3
5.	Improvements to Panayadikuppam tank.	19674 m3	26846 m3.
6.	Improvements to Manamedu tank ...	3285 m3	3992.05.
7.	D.C.R. of Karayambuthur Odaperi tank.	8773 m3	10256 m3.
8.	Raising and strengthening the tank bund of Murungapakkam. ...	12744 m3	7787.61 m3.
9.	Improvements to Korkadu tank ...	26845 m3	27000.99
10.	D.C.R. of Kaduvanour tank ...	3198 m3	4723.73 m3.
11.	D.C.R. of Perungalore perieri ..	5610 m3	4035.31 m3.
12.	D.C.R. of Thettampakkam tank ...	1602.3	2207.22 m3.
13.	D.C.R. of Madagadipet tank ...	—	—

(1)	(2)	(3)	(4)
14.	D.C.R. of Tirukkanur tank ...	6048 m3	6389
15.	Sedarapet Supply Channel ...	---	---
16.	Improvements to Sorapet Perieri ...	5669 m3	6718.85
17.	D.C.R. of Katterikuppam tank ...	3391 m3	5987.17 m3.
18.	D.C.R. of Thirubuvanai tank ...	951 m3	912.38.
19.	D.C.R. of Thiruvandar koil tank ...	737 m3	1313.78 m3
20.	S.R. to the right Flank to calingulah and sluices of Madukari tank ..	---	---
21.	Raising and strengthening the tank bund of Thonda manatha m Odaperi ..	933 m3	936.55.
22.	Raising and strengthening the tank bund of Embalam vannaneri...	6230 m3	5806.45 m3
23.	Raising and strengthening the tank bund of Kariamanickam tank.	4597 m3	5352 30.
24.	Raising and strengthening the tank bund of Koonichempet tank	15712 m3	15641.56 m3
25.	Raising and strengthening the tank bund of Karasur tank	3561 m3	5796.33 m3
26.	Raising and strengthening the tank bund of Eripakkam tank.	2499 m3	2445.50 m3
27.	Improvements to Thirukkanur Cinneri	—	—

(1)	(2)	(3)	(4)
28.	Repairs to Masonry portion to Sederapet small tank	—	—
29.	Improvements to Sorapet Aripamthangal	2026 m3	2164.15 m3
30.	Raising and strengthening the tank bund and repairs to sluice of Kunichemptet Rajaeri.	3759 m3	4629.37 m3
31.	Improvements to Sedarapet small tanks	22033 m3	18621. m3
32.	D.C.R. Madukarai tank	7465 m3	9045 m3
33.	Improvements to Suthukeny tank	6712 m3	7836.02 m3
34.	D.C.R. of Keelaparikalpet tank	8052	8215.50
35.	D.C.R. of Olandai tank	300 m3	—
36.	Raising and strengthening the tank bund of Embalam vaheeraneri	465 m3	work not done
37.	Raising and strengthening the tank bund of Karikalambakkalai tank	3262 ms	6626.58 m3
38.	Raising and strengthening the tank bund of Embalam sitheri tank	3600 m3	3965.25 m3
39.	Raising and strengthening the tank bund of Archiwack tank	2100 m3	2101.45 m3
40.	Raising and strengthening the tank bund of Mangalam tank	5330 m3	5043.60 m3
41.	Raising and strengthening the tank bund of Sorapet Pudhueri tank	2019 m3	2164.18 m3
42.	Improvements to Sooramangalam tank.	7120 m3	2772.43 m3