GOVERNMENT OF KERALA

# "REPORT ON EVALUATION STUDY OF AYACUT VERIFICATION OF MINOR IRRIGATION PROJECTS IN QUILON DISTRICT"

AGRICULTURE DIVISION
DEPARTMENT OF
ECONOMICS & STATISTICS

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Report on the evaluation Survey of Minor Irrigation Projects in Quilon District.

I. Introduction:

According to the decision of the committee constituted to review the progress of Ayacut verification and collection of accurate data relating to Minor Irrigation works - 51 Minor Irrigation Projects have been selected. This consists of 4 class I Minor Irrigation Projects and 47 class II M.I. Projects. The details such as area irrigated the origin of the schemes and date - original cost and date of completion, type of construction etc. relating to the schemes are collected.

Minor Irrigation works costing above Rs. 2 lakhs and upto Rs. 55 lakhs are classified under class I projects and those costing below Rs. 2 lakhs are classified under class II projects. Formerly class II M.I. projects were executed by the Irrigation wing of P.W.D., but since 1976 Government had ordered that the new works should be taken up only with people's participation. Such schemes are executed by District collectors under the technical assistance of Irrigation Department. But new class II Minor Irrigation works are executed by P.W.D. with Government Funds. Maintenance of class I Minor Irrigation works are done by the Irrigation Department. At present grant of Rs. 500/- per hectare of benefitted area are sanctioned for the maintenance of class I works. But class II works are maintained by Panchayats and an annual maintenance grant at the rates of Rs. 25/- per hectare of the benefitted area is sanctioned by the Government.

II. Sample Design and Methods of Selection

In Quilon district 2 class I Minor Irrigation projects and 2 lift irrigation (class I) projects and 47 class II M.I. Projects covering an area of approximate 10% of the Ayacut area reported by P.W.D. have been selected for the survey. This have been by giving probability proportional to size of the work and their numbers. Data on area irrigated and other particulars were collected by the Junior Statistical Inspectors after on the

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Spot verification in each survey numbers falling in the Ayacut region of the Minor Irrigation Projects.

Minor Irrigation class I projects including Lift Irrigation Projects and different categories of class II works viz., Chira, Kulam, Tank, deepening of Thodu and Cannals, cross bars etc. are included in the survey conducted in Quilon District.

The details of selection are furnished below.

| Category | Total No. in the district. | Total area irrigated in the District (in hect) | Total No. in the category selected for the survey | Total area irrigated by the selected category (in hectare) |
|---|---|---|---|---|
| **Class I** | | | | |
| 1. M.I. Projects | 15 | 463.59 | 2 | 26.20 |
| 2. Lift Irrigation project | 12 | 453.03 | 2 | 51.46 |
| Total | 27 | 916.62 | 4 | 77.66 |
| **Class II** | | | | |
| 1. Chira, Kulam, Tank etc. | 123 | 704.46 | 11 | 60.66 |
| 2. Thodu | 110 | 969.00 | 11 | 82.31 |
| 3. Cross-bar | 139 | 772.24 | 12 | 60.43 |
| 4. Others | 130 | 868.69 | 13 | 85.61 |
| Total | 502 | 3314.39 | 47 | 289.01 |

III. Schedules and Questionnaire:

The proforma for collection of details of crops grown and area benefitted in the Ayacut of the selected projects are appended. Two proforma have been generally used for the collection of data. Schedule I is used mainly for canvassing basic details relating to each minor Irrigation Projects selected for the study viz., date of commencement of the project, number of beneficiaries, original cost, expenditure for yearly maintenance etc. Schedule II is meant for collecting area irrigated each survey numbers falling in the Ayacut region of each project. Irrigation particulars

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are collected crop-wise viz., Seasonal, perennial and annual crops separately for the latest one year 1982-83. The data are collected by the field staff of the department and the consolidations of data are in the Headquarters.

IV. The results of the Survey

Analysis of the results of the survey are done separately for different categories of Minor Irrigation Projects.

1. Class I Minor Irrigation

a) Class I Minor Irrigation Projects other than lift Irrigation Projects.

b) Class I Minor Irrigation Projects lift Irrigation.

2. Class II Minor Irrigation Projects have been classified as follows

a) category (i) Chira, Kulam, Tank etc.

b) Category (ii) Thodu

c) Category (iii) Cross-bar and

d) Category (iv) Others.

1(a) Class I Minor Irrigation Projects other than lift Irrigation Projects.

Class I. Minor Irrigation Projects other than Lift Irrigation Projects selected for Ayacut verification in Quilon District are -

1. Improvement of Kaipallichalil padam to Champakadavu in Thevalakkara Panchayat
2. Drainage facilities to valakom field in Ummanoor panchayat

Total area verified under the above, two M.I. Projects (class I) are 26.20 hect. It is observed that about 89% of the area is brought under Irrigation and only 11% is lift unirrigated. Total area irrigated is 23.35 hect. and area unirrigated is 2.85 hect.

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NET AREA IRRIGATED CROPS WISE IS GIVEN BELOW

| Name of crop | Area benefit under irrigation (hect.) | Percentage | Area unirrigated (hect.) | Percentage |
|---|---|---|---|---|
| 1. Paddy | 20.81 | 90% | 2.26 | 10% |
| 2. Seasonal crops | - | | - | |
| 3. Annual and Perennial crops | 2.54 | 81% | 0.59 | 19% |
| Total | 23.35 | 89% | 2.85 | 11% |

I (b) Lift Irrigation Projects (Class I)

The following Lift Irrigation projects are selected for the verification of Ayacut area.

i. Lift irrigation scheme, Adichannallur
ii. Lift Irrigation to Kanjirattu kadavu field in sooranad North panchayat.

About 28.51 hect. land is brought under the above lift irrigation scheme;. But only 56% of the area is benefitted these scheme. ~~15x97%xxf~~ 15.97 hect, of land of paddy crop is benefitted by this.

2) Minor Irrigation (Class II) projects

47 class II M.I. projects we selected for the verification of Ayacut giving proper representation to the different categories of class II works.

Following is the number of class II work selected for Ayacut verification.

i. Chira, Kulam, Tank etc. : 11 nos.
ii. Thodu : 11 nos.
iii. Cross bar : 12 nos.
iv. Others : 13 nos.

Total area benefitted by the above class II projects are given in Table 1 appended. It shows that only 56% of the

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area reported by P.W.D. is benefitted by the category chira, kulam, tank etc. About 78% of the area reported by P.W.D. is benefitted by Thodu, 92.5% of the area is benefitted by Cross-bar and 85.5% of the area is benefitted by other class II M.I. projects.

Table II given cropwise breakup of the area irrigated by these projects selected for the survey. The data reveals that about 82% of the total area is benefitted by these projects. 95% of the area benefitted under paddy crop. Winter paddy is very much benefitted by them. It is found that out of 2525.02 hect. of winter paddy crop 2314.92 hect. are benefitted by these schemes. Summer paddy crops, seasonal and perennial crops are also benefitted by them.

Different category class II M.I. Projects benefitted crop wise is given below.

| Category | paddy | | | Seasonal and perennial crops |
|---|---|---|---|---|
| | Autumn | Winter | Summer | |
| 1. Chira, Kulam, Tank etc. | 12% | 15% | - | 20% |
| 2. Thodu | 31% | 31% | - | 30% |
| 3. Cross-bar | 37% | 28% | - | 32% |
| 4. Others | 20% | 26% | 100% | 18% |

From Table III we get season wise gross area irrigated under paddy crop. It is seen that about 219 hect. Autumn Paddy. 358 hect. of Winter Paddy are benefitted by Chira, Kulam, Tank etc. 450 hect. of Autumn Paddy and 710 hect. of Winter paddy are benefitted by the category Thodu. 675 hect. of Autumn Paddy and 658 hect. of winter paddy are benefitted by cross bar and 362 hect. of Autumn paddy and 709 hect. of Winter paddy are benefitted by the other Minor Irrigation Projects.

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Area of land under paddy irrigated and flood projected cropwise category wise are given below.

| Crop (paddy) | Chira, Kulam Tank | | Thodu | | Cross-bar | | Other | |
|---|---|---|---|---|---|---|---|---|
| | I (hs) | F.P. (hs) | I (hs) | F.P. | I (hs) | F.P. (hs) | I (hs.) | F.P. (hs). |
| Autumn | 219 | - | 230 | 220 | 295 | 280 | 160 | 202 |
| Winter | 358 | - | 395 | 315 | 539 | 119 | 507 | 202 |
| Summer | 0.25 | - | - | - | - | - | 0.44 | - |

I - Irrigated F.P. - Flood protected

Cropwise not area irrigated is given in table IV. The data reveals that only 63% of the net area under crop are irrigated by there projects. Area under paddy crop is mainly benefitted by them. 95% of the irrigated area is under paddy crop. Net area irrigated or flood protected by annual and perennial crops are negligible.

Maintenance of Minor Irrigation Projects

Annual maintenance of Minor Irrigation projects class I are usually done by P.W.D. An allotment of Rs 500/- per hectare of benefitted area is sanctioned for the ~~xxx~~ purpose. During the survey it is seen that no proper utilisations of fund is made for this purpose. Only annual maintenance of Lift Irrigation Schemes were done during the last three years. An amount of Rs 131155/- had been reported to be incurred for this purpose during the period under study.

In Minor Irrigation projects (Class II) annual maintenance are to be carried out by the Panchayats. The rate of allotment for class II Minor Irrigation projects for annual maintenance is Rs 25/- per hectare of benefitted area. No Panchayat had incurred any expenditure for this purpose.

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Survey

Summary and Conclusion

The result present in the report is based on the study of 4 class I Minor Irrigation Projects and 437 class II M.I. Projects located in different parts of Quilon district. Only 89% of the Ayacut area reported by P.W.D. are benefitted by these schemes. This is far below the expectation and this is due to the following reasons. (1) Most of the projects could not serve the need of the beneficiaries of the Ayacut area of the project concerned (2) The project have been started along time age and since no proper yearly maintenance was done full benefit of the works could not enjoyed by the beneficiaries. (3) The grant sanctioned for the yearly maintenance ~~xxxxxxxx~~ is so meagre that no agency is prepared to offer yearly maintenance of the works. In class II M.I. Projects the allotment is only Rs. 25/- hectare of the benefitted area. (4) Proper monitoring is not done by Irrigations Department or Panchayat department for the maintenance of class I and class II Minor Irrigation projects.

In order to overcome all these drawbacks and to make proper utilisation of the projects effective yearly maintenance are to be carried out. For this government should increase the rate of amount sanctioned for that purpose. To execute the yearly maintenance and proper utilisation of the projects a committee should be constituted with the government officials and representative of the beneficiaries of the projects concerned.

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QUILON DISTRICT

| Category | Total in the District | Total area irrigated in the District. ( in hect. ) | Total area in each category selected for the survey | Total area irrigated by the selected category ( in hect. ) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| M.I.Class I | 15 | 463.59 | 2 | 26.20 |
| L.I | 12 | 453.03 | 2 | 51.46 |
| Total class I | 27 | 916.62 | 4 | 77.66 |
| M.I.Class II. | | | | |
| 1. Chira, Kulam, Tank | 123 | 704.46 | 11 | 60.66 |
| 2. Thodu | 110 | 969.00 | 11 | 82.31 |
| 3. Cross bar | 139 | 772.24 | 12 | 60.48 |
| 4. Others | 130 | 868.69 | 13 | 85.61 |
| Total class II | 502 | 3314.39 | 47 | 289.07 |

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Table 1.

NET AREA IRRIGATED BY M.I.(CLASS II) WORKS IN QUILON DISTRICT (area in hect.)

| Category works | Total No.in the District (PWD) | Total No.selected for the survey | Total area irrigated according to P.W.D. | Total area irrigated (including F.P)as estimated from the survey. | Percentage of col.5 to col.4 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Chira,Kulam, Tank | 123 | 11 | 704.46 | 394.68 | 56.02 |
| Thodu | 110 | 11 | 969.32 | 754.14 | 77.83 |
| Cross bar | 139 | 12 | 771.24 | 712.84 | 92.45 |
| Others | 130 | 13 | 868.84 | 742.93 | 85.50 |
| Total | 502 | 47 | 3113.84 | 2604.59 | 83.65 |

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## Quilon District.

Gross area irrigated-Cropwise as obtained from the survey (Area in hect.)

| work | Autumn I | Autumn F.P | Autumn U.I | Winter I | Winter F.P | Winter U.I | Summer I | Summer F.P | Summer U.I | Annual & seasonal Perennial crops I | Annual & seasonal Perennial crops F.P. | Annual & seasonal Perennial crops U.I. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| m, Kulam dy) | 218.75 (12%) | - | 373.37 | 358.00 (15%) | - | 67.63 | 130.0525 | - | 29.13 | 23.80 (20%) | - | 18.38 |
| h | 229.50 (31%) | 320.38 | 324.63 | 394.88 | 315.75 (31%) | 143.00 | - | - | .25 | 5.13 (30%) | 30.00 | 5.09 |
| s bar dy) | 395.27 (32%) | 279.92 | 406.80 | 538.91 | 118.89 (28%) | - | - | - | 132.27 | 9.07 (32%) | 28.30 | 26.30 |
| s dy) | 159.98 (20%) | 201.87 | - | 506.61 | 81.88 (26%) | - | - | 14.11 | - | 13.22 (18%) | 7.11 | 8.00 |
| al | 1003.50 | 802.17 | 1104.80 | 1798.40 | 516.52 | 210.13 | 0.25 | 14.11 | 161.65 | 50.92 | 65.41 | 57.77 |

Total - 5799.74

Total (I + FP) - 4767.80 Total paddy (I) - 4651.47

ss area irrigated as % to the total cropped area - 82

ly area irrigated as % to total gross area irrigated - 98.

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Table III.

Season-wise gross area irrigated - Paddy (Area in hect.)

| Seasons | Chira, Kulam, Tank | | Thodu | | Cross bar | | Others | |
|---|---|---|---|---|---|---|---|---|
| | I | F.P | I | F.P | I | F.P | I | F.P. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Autumn | 218.75 | - | 229.5 | 220.37 | 395.27 | 279.92 | 159.98 | 201.87 |
| Winter | 358.00 | - | 394.87 | 315.12 | 538.92 | 118.88 | 506.62 | 202.42 |
| Summer | 0.25 | - | - | - | - | - | 0.44 | - |

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Table: 4.

Quilon District

Net area irrigated-Cropwise as obtained from the survey.

| [illegible] work | Paddy | | | Tapioca | | | Other seasonal crops | | | Annual crops | | | Perenial crops | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | U.I | F.P | I | U.I | F.P | I | U.I | F.P | I | U.I | F.P | I | U.I | F.P |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | | |
| [illegible]ra, Kulam [illegible]k | 385.00 | 373.38 | - | 12.63 | 4.25 | - | 7.38 | 3.75 | - | 3.50 | 10.38 | - | | | |
| [illegible]du | 394.88 | 324.63 | 320.38 | - | 17.88 | - | 5.13 | 18.75 | 20.25 | - | 27.00 | 10.75 | | | |
| [illegible]ss bar | 538.92 | 406.80 | 279.92 | 5.69 | 4.30 | - | 2.77 | 4.15 | 10.15 | 0.61 | 17.84 | 18.15 | | | |
| [illegible]ers | 506.62 | 433.40 | 202.42 | 3.56 | 0.44 | - | 10.00 | 0.88 | 7.66 | 2.78 | 6.66 | 9.44 | | | |
| [illegible]l | 1798.42 | 1538.21 | 802.72 | 21.88 | 26.87 | - | 25.28 | 27.53 | 45.72 | 6.89 | 61.88 | 38.34 | | | |

% of net area irrigated to total net area under the crop - 63
% of net area irrigated under paddy to total net area irrigated - 95.

Table V.

Number of class II-Minor Irrigation works incurred maintenance expenditure during the last 3 years.

| | Chira, Kulam, Tank | | Thodu | | Cross bar | | Others | | Class I | | L.I | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Expenditure (Rs) Rs. | No. | Expenditure Rs. | No. | Expenditure Rs. | No. | Expenditure Rs. | No. | Expenditure Rs. | No. | Expenditure Rs. |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 0 | | Nil | | Nil | | Nil | | Nil | | Nil | | Nil |
| 1 | | Nil | | Nil | | Nil | | Nil | | Nil | | Nil |
| 2 | | Nil | | Nil | | Nil | | Nil | | Nil | | 125000 |
| 3 | | Nil | | Nil | | Nil | | Nil | | Nil | | 6155 |
| lected in each y | | | | | | | | | | | | 131155 |

al No.of works which undertook maintenance- 4
al expenditure Rs.

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