



सत्यमेव जयते

**REPORT  
ON  
MINOR IRRIGATION WORKS  
(ORISSA STATE)**

**COMMITTEE ON PLAN PROJECTS  
(IRRIGATION TEAM)**

**NEW DELHI**

**(October 1964)**

1965

PRINTED IN INDIA BY THE MANAGER GOVERNMENT OF INDIA PRESS SIMLA

## LETTER OF TRANSMITTAL

M. Thirumala Rao, M.P.,  
Leader,  
Irrigation Team.

Link House,  
3-Mathura Road,  
New Delhi.  
February 27, 1965.

My dear NANDA JI,

Irrigation Team has completed its studies of minor irrigation works in Orissa and a report thereabout is submitted herewith for your perusal.

Average annual rainfall in the State is about 58 inches. This normally enables a single rice crop to mature satisfactorily. For such single crop raising, need for irrigation is felt only when there is longish break in monsoon.

Population being sparse the State is generally surplus in rice. But, from its land and water resources Orissa can contribute much more to the national production effort, if double cropping is practised increasingly with the help of irrigation for which possibilities exist in the State both from surface and subsoil sources.

Unfortunately, the single crop concept is rooted so deeply in Orissa peasantry that even irrigation works that exist, are used mostly as supplemental means of irrigation for maturing just one crop. Advantage is generally not taken to raise a second crop with their help. Consequently, minor irrigation works are not looked after well and storage capacities of some of the old tanks in the State have depleted considerably over years.

No recording of irrigation and water rate assessment on minor irrigation works is done in the State. The exact utilisation extent of the irrigation potential available could not, therefore, be assessed. But actual commands of 80 projects re-surveyed recently by the State Rural Engineering Organisation showed that the projects could render service to only 77 per cent of the areas otherwise shown in their ayacuts. This too may not be getting irrigation adequately and properly as no water channels exist.

Again, deep tubewells sunk in the coastal districts of Balasore and Cuttack have not been utilised even partially. Of 21 tubewells built, only 9 Nos. were functioning during 1962-63. Over the year, their average irrigational performance works out to only 26 acres per tubewell, which is too low a figure. Apparently, the cultivators have not been pushed hard enough to produce more, even from such ready-at-hand irrigation resources as tubewells provide.

A common complaint, which inhibits progress in the field of agricultural development even in areas protected by irrigation works is the time old menace of letting cattle loose during winter months. Effective enforcement of Cattle Trespass Act is called for to achieve

security of crops from cattle trespass damage. Possibly, if winter crop planning is initiated with cattle fodder and forage crops, a headway could be made in agricultural development during post-monsoon period.

A new scheme of lift irrigation from floating barges has recently been put into operation on some of the perennial streams. This could prove beneficial to the areas served, if the organisational set-up is judiciously formed, so that the scheme does not flounder on the frailties that generally encompass our human front.

Observations of the Team and its recommendations as incorporated in this report aim at maximising production from irrigated agriculture and will undoubtedly prove helpful in planning, progressing, executing and maintaining irrigation works—more particularly small schemes and wells.

I take this opportunity of expressing our thanks to the State Government and their officers for providing facilities for at-site studies of works and for extending to us their co-operation.

With best regards,

Yours sincerely,

M. THIRUMALA RAO

Shri G. L. Nanda,  
Home Minister, Govt. of India  
New Delhi.

## P R E F A C E

Study of Minor Irrigation Works in Orissa State was taken up by the Irrigation Team, Committee on Plan Projects, Planning Commission, in accordance with the Terms of Reference communicated vide Committee on Plan Projects Memorandum No. COPP/(4)/17/58, dated the 4th August, 1958 given on Pages 67-68 of this report.

The Team comprised:—

- (i) Shri Thirumala Rao, M.P.—*Leader*.
- (ii) Shri Baleshwar Nath, Chief Engineer—*Member*.
- (iii) Dr. Arjan Singh, Retd. Director of Agriculture, Punjab—*Member*.
- (iv) Shri Mahavir Prasad, Irrigation Adviser, Ministry of Food & Agriculture—*Member Ex-officio*.

After preliminary discussions on March 17, 1962 at Bhubneshwar, proceedings of which appear in *Appendix I*, field studies were initiated by the Leader. The Team subsequently toured in different parts of the State and conducted at-site studies on representative irrigation works, of both pre-Plan and post-Plan periods.

The studies conducted primarily aimed at getting techno-economic appraisal of the works, as also of their maintenance, irrigational performances and overall benefits accruing to the community.

The Team has had discussions with the State authorities at appropriate levels on different aspects of irrigated agriculture in the State. Another meeting was held at Bhubneshwar on August 6, 1963 between the Leader and Members of the Team and the State Deputy Chief Minister and other officers. Various issues as emerged out of field studies were then discussed. Its proceedings appear in *Appendix II*.

Comments of the State Government on the Draft Report as received *vide* Plan and Coordination Department Letters No. 2353(Coord), dated 6th April, 1965 and 4270/Coord/M.I.P.—Misc/88/64, dated 25th May, 1965 have been taken into consideration while finalising the Report. Observations of the Team and their recommendations thus reflect by and large, agreed views of the Team and the State Government.

## CONTENTS

CHAPTER	Page
I. General .. .. .	1
II. Small Diversion Schemes .. .. .	6
III. Tanks and Reservoirs .. .. .	23
IV. State Tubewells .. .. .	38
V. Lift Irrigation .. .. .	48
VI. Planning and Prospecting of Minor Irrigation Works ..	60
Recommendations .. .. .	64
Terms of Reference .. .. .	67
Appendices .. .. .	70