

CHAPTER VIII

CONCLUSION AND RECOMMENDATIONS

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8.1 Summary of Conclusion

Performance Audit of Outcomes in Surface Irrigation in respect of the works executed under TN-IAMWARM project in the Amaravathy reservoir, Radhapuram channel and Kalavarapalli reservoir revealed the following:

- Absence of periodical capacity surveys by the Department led to non-ensuring adequate silt storage and retardation of sedimentation in the Reservoirs. Delay in sanction of desiltation works for removal of sedimentation resulted in non-harnessing of the realised surface water to an extent of 65.793 TMC in three reservoirs which affected the irrigation needs of the crop area of the sub-basins.
- The intended outcome of envisaged for Amaravathi Reservoir *viz.*, increasing the conveyance efficiency of 20 *per cent* was only partially achieved even after incurring an expenditure of ₹ 74.99 crore on channel rehabilitation works. The conversion of gap area into fully irrigated area (22,095.17 ha) remained unachieved; and the actual irrigated area reduced during the period from 2015-16 to 2019-20 which was in the range of 12 to 57 *per cent* of the pre-project irrigated area. PWD failed to release water for irrigation from Amaravathi Reservoir either as per Regulations for release of water or on the basis of water requirement for the crops despite availability of sufficient water in years with good rainfall.
- The outcomes envisaged for Radhapuram Channel *viz.*, increased conveyance efficiency remained partially achieved during 2020 and for the balance years 2015-16 to 2018-19 it was not susceptible for verification due to absence of adequate documentation; and the outcome of conversion gap area of 2,183 ha into fully irrigated area remained unachieved. Inadequate assessment of availability of water in the source dams and delayed release of water from Radhapuram Channel due to non-receipt of Government orders also hindered the achievement of envisaged outcomes.
- The intended outcome of Kelavarapalli Reservoir *viz.*, conversion of gap area into fully irrigated area remained unachieved besides there was substantial reduction in the fully irrigated area after the implementation of the project. Failure of the department in framing the Rules of water regulations for the Kelavarapalli Reservoir even after 25 years of its completion resulted in release of water without assessing the irrigation requirements. Supply channel of Kelavarapalli Reservoir excavated to harness surface water to benefit 222 acres of agriculture land was not utilised for four years and the expenditure of ₹ 2.50 crore incurred remained unfruitful.
- There were gaps in maintenance of the rehabilitated water courses as the joint inspection conducted by the Audit along with Departmental official revealed encroachments, dumping of waste, weed formation on

the water course, damages to the channel structures and illegal tapping of water using motors.

- Department failed to monitor the quality of irrigation water and there were instances of discharge of untreated sewage water into the water courses. There were gaps in undertaking Participatory Irrigation Management activities *viz.*, formation of Water Users Association, preparation of water budget and raising of crop for second season based on the water availability which hindered the achievement of envisaged outcomes of the project.

8.2 Summary of Recommendations

The Government may:

- Conduct periodical capacity surveys to assess the extent of sedimentation in the reservoirs to ensure adequate silt storage.
- Prioritise sanction of desiltation works for removal of sedimentation to retain the original capacity of the reservoir and to utilise the available water without wastage.
- Formulate and update the Rules for regulation of water for irrigation systems to ensure release of water based on the availability and crop area cultivation.
- Development of integrated Water Resources Management System may be completed promptly to ensure effective utilisation of available water for irrigation needs.
- Take efforts to bridge the gap between the irrigation potential created and actually utilised by focusing on conversion of gap areas and partially irrigated areas into fully irrigated areas
- Maintain adequate documentation for recording the actual conveyance efficiency of Radhapuram Channel to ensure supply of adequate water to all the farmers.
- Take efforts to assess the requirement of water based on the availability in the source dams and avoid delayed issue of Government orders for release of water for irrigation from Radhapuram channel.
- Frame Rules for regulation of water for irrigation systems in Kelavarapalli Reservoir to ensure release of water based on irrigation requirements.
- Take efforts to utilise the supply channel to benefit the agriculture lands by harnessing surface water.
- Ensure timely repairs and maintenance of irrigation channels as envisaged in the Rules for regulation of water in Reservoirs.
- Protect the assets created for enhancing the conveyance efficiency of the irrigation systems from encroachments and illegal drawal of water to fulfil equitable distribution of water.

- Strengthen monitoring mechanism to retain the quality of irrigation water by arresting the discharge of untreated water into the irrigation channels.
- Ensure effective functioning of Water Users Association and preparation of water budget to strengthen the Participatory Irrigation Management activities

Chennai
The 05 JUL 2022



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