

Chapter-IV

Monitoring and Maintenance of Projects and Coordination among Stakeholders

Monitoring of irrigation projects

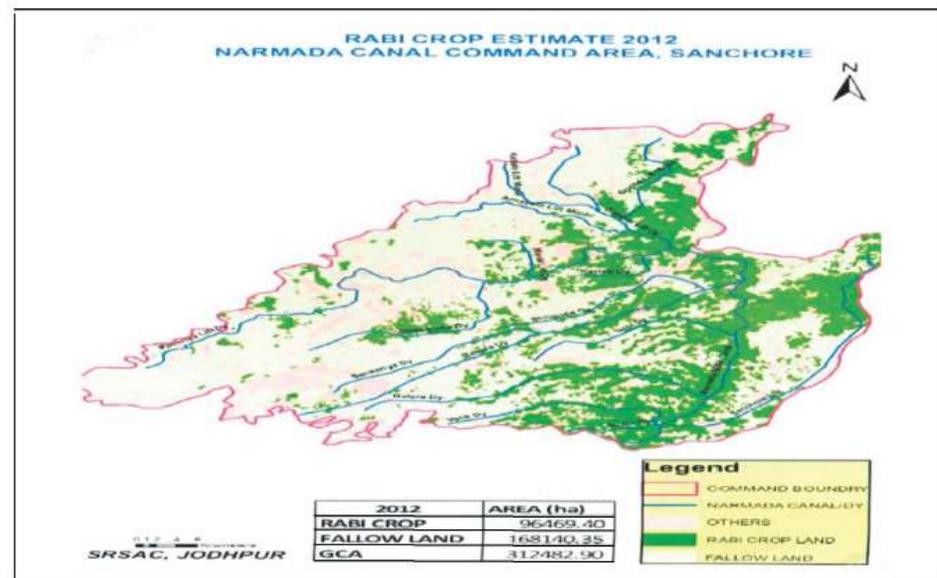
Monitoring is the systematic approach to track the project’s progress towards reaching its objectives. The project objectives could not be achieved without the coordination among line departments. However, instances of non-coordination among line departments and lack of monitoring were noticed as discussed below:

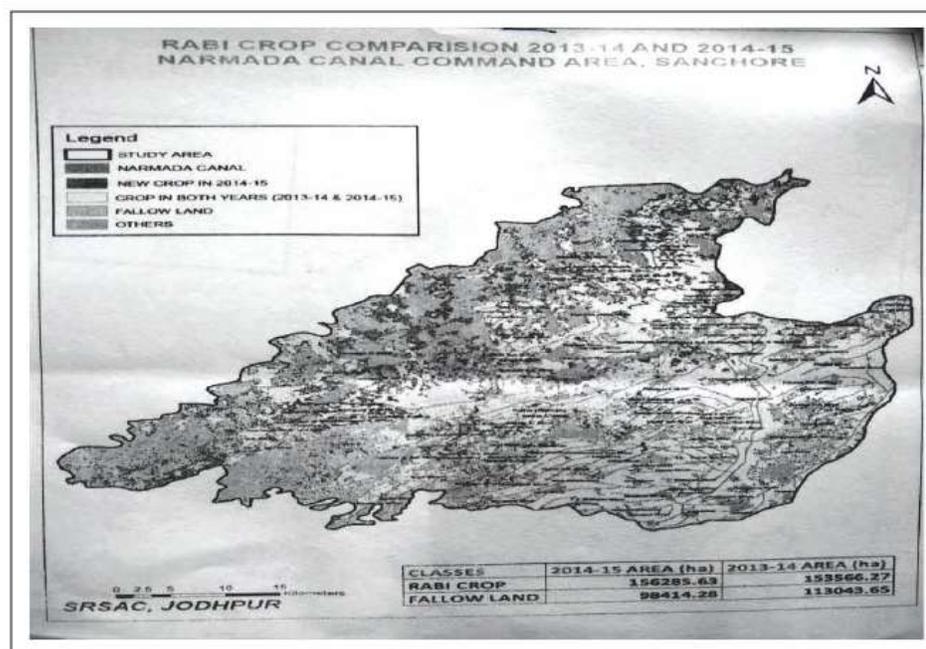
4.1 Lack of monitoring the release of water from canal

The WRD obtained imageries of command area of NCP during the years 2012 to 2015 from State Remote Sensing Application Center Jodhpur for analyzing the Rabi crop estimate. Review of these imageries validate that Rabi crops were increased from 39 *per cent* to 63 *per cent* of the command area, although the canal water was not released upto the quantity envisaged because the *diggies* were only partly electrified till then as mentioned in *paragraph 3.5.1 (i)*.

This indicates that farmers irrigated the fields by taking water directly from canal by arranging their own motor pumps although water was to be supplied from the *diggies* to each *chack* from distribution system. Images from 2017 to 2020 were not available with the department to assess the achievements.

State Government while accepting the facts stated (March 2021) that department made efforts for stopping the water theft.





4.2 Participatory Irrigation Management activities

Rajasthan Farmers' Participation in Management of Irrigation System Act, 2000 (RFPMIS Act) was introduced (July 2000) to govern the distribution of water among the farmers. RFPMIS Act stipulates that elected bodies of farmers namely Water Users Association (WUA) at primary level; Distributary Committee at secondary level; and the Project Committee at project level had to be formed. These committees were to exercise the powers and perform the functions to regulate the use of water among the various WUAs. The Government of Rajasthan (GoR) also framed Rules, 2002 under the Act.

4.2.1 Formation of WUA, Distributary Committee and Projects Committee

Section 4 of the RFPMIS Act, 2000 stipulates that there shall be one WUA for every water user area, consisting of all the water users, who are landowners in such area as members.

Scrutiny of records revealed that in Piplad, Akoli, Gulendi, Mamtori and Rohini WUAs were not formed. In Do Nadi WUA was formed; however, no activity was being performed by WUA. Further, Distributary and Project Committees were not formed in any of the water user areas except NCP.

State Government stated (March 2021) that in respect to Piplad and Gulendi formation of WUAs was under process. In Do Nadi, WUA was formed but not fully functional and Rohini and Mamtori projects were transferred to Panchayati Raj Department. State Government stated that formation of these committees at various level was under progress.

4.2.2 Warabandi

Warabandi is a rotational system of equitable water distribution, which is adopted according to a predetermined schedule clearly specifying the “Day, Time and Duration” of supply of water to each farmer. Section 17(a) of the RFPMIS Act stipulates that WUAs shall prepare and implement a *warabandi* schedule for each irrigation season.

Scrutiny of records revealed that even where the WUAs were formed the irrigation water was being provided without *warabandi* schedule.

State Government stated (March 2021) that in NCP a detailed timetable (*warabandi*) for operating each *diggi* has already been prepared and water was being released in all canals of the project for irrigation as per work plan. Reply is not tenable as no evidence was made available to audit in support of existence of *warabandi*. It was further stated that in Lhasi, Pilad and Gulendi *warabandi* would be started after constitution of WUA.

4.2.3 Demand and collection of irrigation service fees and water tax

The collection of Irrigation Service Fee (ISF) is important to ensure the maintenance and improvement of irrigation system, while reducing excess use of water in practicing flood irrigation. Effective operation and maintenance of the projects is possible only if WUAs are allotted a significant proportion of ISF. Section 17(e) of RFPMIS Act stipulates that the WUAs should prepare demand and collect ISF.

According to section 24 of the Act, the funds of the farmers’ organization would comprise grants received from the Government as a share of water tax collected in the area of operation. Further, Rule 54 (k) of RFPMIS Rules stipulates that ISF will be recovered by user associations and deposited into Government fund. Fifty *per cent* of deposited amount will however, be returned to respective WUA on submission of claim. All these WUAs have not received any grant or any other fund from Government or any other financial agency. Hence, WUAs were not involved in operation and maintenance activities effectively in the selected projects

Scrutiny of records revealed that ISF was estimated in B C Ratio. However, ISF was not recovered in Piplad, Akoli, Rohini, Mamtori, Ghat Pick Up Weir and Bhaisa Singh. In NCP, Do Nadi and Gulendi ISF was short recovered by 4.5 *per cent* to 34.71 *per cent*¹ of the targets. In Kishanpura Lift MIP, during

(₹ in lakh)

Name of project	NCP	Gulendi MIP	Do Nadi
Target	188.81	3.11	0.58
Achievement	65.54 (34.71%)	0.14 (4.5%)	0.05 (8.6%)

2012-13 to 2018-19, total ISF of ₹ 199.67 lakh was recovered by WUA. However, the same was not deposited in Government Fund. The collected amount was directly utilized in operation and maintenance of scheme by WUA in contravention of the rule mentioned *ibid*.

State Government accepted (March 2021) the facts.

4.2.4 Non-maintenance of records by WUAs

Various records/ registers which were required to be maintained by WUAs under RFPMIS Act/Rules were not being maintained (*Appendix-IV*). Further, rule 48 (6) stipulates that at the end of each season the respective farmers' organization shall prepare a report of water received and utilized along with quantity of water supplied and area under different crops. The report is to be submitted to the Project Authority. No such report was either prepared/ submitted or demanded.

4.3 Joint physical verification

During joint physical verification and beneficiary survey of WUAs/farmers conducted along with the representative of the department, audit observed the following:

(i) In Piplad, Mamtori and Ghat Pick Up Weir, canals were in damaged position at some places. In Mamtori, the broken portion was being used as a path.



LMC Piplad Project near Amlı Kurd village

State Government stated (March 2021) that canal has not been running due to non-availability of water in tank since long time.

(ii) In NCP some *diggies* e.g. Sukdi Minor (11 *diggies*) were not operational. Similarly, in Akoda Minor (11 *diggies*) and Dhingpura Minor (14 *diggies*) neither the electric pumps were installed nor electric connections were taken. Moreover, the farmers were taking water directly from canal by using their own pumps in unauthorized way as farmers have also taken unauthorized electric connections. There was heavy silt deposited and

vegetation and algae grown in canal causing blockage/decreased flow velocity of water through canal and hence the water could not reach to the tail end.



State Government stated (March 2021) that the work of removal of silt, etc. is carried out by WUAs from time to time, particularly before start of Rabi season. Reply is not tenable as heavy silt deposition, vegetation and algae were found during joint physical inspection.

(iii) In Do Nadi, it was seen during physical verification that there were seepages in dam and accumulation of silt and vegetation in some reaches of canal, causing loss of water flow.



Vegetation/silting in the Do Nadi canal

State Government stated (March 2021) that seepages in dam sluice well have been repaired. Jungle and silt clearance had been done before Rabi crop. Reply is not tenable as department had not made available any evidence in this regard.

(iv) During joint physical inspection, it was found that the Head sluice of the Ghat Pick Up Weir was not in working position as gate of sluice was jammed due to heavy deposition of silt (almost one feet).



Head sluice at Ghat Pick Up Weir

4.3.1 Assessment of deliverables of project and WUA/ farmers survey NCP

According to the Niti Aayog's- Water Index Report, June 2018, the Government of Rajasthan has implemented a comprehensive package of solutions in Sanchore along the Narmada river. There has been a huge push towards actualization of Participatory Irrigation Management (PIM) by formation of WUAs and state having the highest score on this indicator. However, during joint physical inspection with departmental representative of 227 WUAs out of total 2231, following were observed:

- (i)** Warabandi schedule was not being implemented in any of the WUAs and farmers had no knowledge of Warabandi.

State Government stated (March 2021) that most of the WUAs were following *Warabandi* schedule and training was being imparted about adopting *Warabandi* schedule regularly. Reply is not tenable as neither *Warabandi* schedules were found adhered during joint physical verification nor the Government made available any evidence in support of existence of *Warabandi*.

- (ii)** 65 WUAs were not collecting Irrigation service fee from farmers. 162 WUAs collected ISF, however the collected amount was not transferred to the Government account.

State Government stated (March 2021) that water charges are being collected from the cultivators regularly. The reply is not tenable as no documents regarding commented WUAs was made available to Audit.

- (iii)** 217 WUAs were not preparing plan for the maintenance of irrigation systems including distributary and minor system at the end of each crop.

- (iv) Basic infrastructure like office for WUAs etc. were not made available in any of the *diggies*.

State Government accepted (March 2021) the facts in respect of point (iii) and (iv) above.

- (v) 175 WUAs stated during survey that water level had risen after introduction of the project which led to increase in water logging and adversely impacted the agriculture.

State Government did not agree (March 2021) about the rise in water level because of conjunctive use of water by canal and wells. Reply is not tenable as conjunctive use of water is not being done in NCP.

4.4 Non-conducting of social audit

Rule 52 of RFPMIS Rules stipulates that at the end of each crop season the farmers' organization shall arrange social audit and competent authority shall render all assistance in conduct of social audit. However, no social audit was conducted in selected projects.

State Government stated (March 2021) that WUAs were instructed and were being motivated for conducting social audit in future.

4.5 Water Auditing

According to CWC water auditing is a systematic & scientific examination of water accounts of the project. Comprehensive Water Audit can give a detailed profile of distribution system & water users for facilitating easier and effective management of resources. Water auditing was not found conducted in any of the projects.

In respect of NCP, Piplad and Gulendi projects, State Government stated (March 2021) that water auditing work will be conducted in future.

4.6 Operation and maintenance

In order to properly maintain and operate an irrigation structure, it is necessary that a detailed O & M guideline for each irrigation structure may be prepared. Scrutiny of records revealed that O & M manual was not prepared/provided in any of the project.

State Government stated (March 2021) that the maintenance work of project was executed every year on priority basis. Reply was not tenable as no O&M manual for maintenance of project was prepared in any of the project.

4.7 Non-updation of WRD Manual

WRD Manual was published long back and last revised in 1982. A number of government orders have since been issued by the Department, but the WRD Manual has not been revised and updated since last 38 years. Due to this many of its provisions have become irrelevant and many important provisions are missing.

4.8 Non-rectification of defects

Rohini dam was completed in October 2013 and there was provision of three years defect liability period in the contract. There was leakage in the dam and due to this, discharge of water from dam became uncontrollable. Although this fact was in the notice of WRD, it handed over the dam to Panchayati Raj Department in April 2018 in damaged condition. Hence, irrigation was not being provided from the project.

State Government stated (March 2021) that rectification was done by the contractor at his cost and security deposit kept with department will be released only after removal of the defects. Reply was not tenable as no documentary evidences were submitted by the department. Further, it is pertinent to mention that the dam was handed over to Panchayat Raj Department in April 2018.

4.9 Coordination among Stakeholders

Effective co-ordination among the related line departments was necessary for effective planning and execution of the projects. Besides the nodal department WRD, the irrigation projects had other stakeholders i.e. PHED (for drinking water), Agriculture Department (for increasing crop yield) and Forest Department (for plantation along the canal).

4.9.1 Absence of formal mechanism for coordination

A committee of WRD, Agriculture Department and Revenue Department was to be formed with the main objective of preparing irrigation programme and cropping pattern in accordance with the availability of water in the irrigation project. However, committees were not formed in all selected projects and no meetings were held among the line departments.

State Government stated (March 2021) that the committees were being formed and regular consultations were held with the line departments. The reply was not tenable as no evidence of any higher level department coordination could be seen during audit. The reply also did not provide any proof of line department consultation.

4.9.2 Deficiencies in Role of line departments

The Agriculture Department was involved in formulation of DPRs in working out BCRs and cropping patterns. Hence, their continuous involvement was

necessary to ensure proper execution and monitoring of the projects. However, the Agriculture Department stated that neither they conduct any project specific awareness program for the beneficiaries nor they monitor it command area wise. Regular programs held by the Agriculture Department in each district cover these areas in normal course. In the absence of project specific data collection by the Agriculture Department, audit could not assess the increase in crop yield, change in cropping patterns etc. This resulted in inefficient monitoring of projects to ensure achievement of intended objectives.

State Government accepted (March 2021) the facts.

4.10 Summary of findings

Audit observed that there was absence of formal mechanism for coordination in line departments, WUAs were either not formed or were not working effectively, social and water audit was not conducted, O&M guidelines were not prepared, Manual was not updated, defects were not rectified timely, and heavy slits/vegetation deposited/grown in canal blocked the flow of free water in canal.

4.11 Recommendations

- *Department should enhance use of technology for monitoring the progress of irrigation projects for timely completion, regular maintenance and proper management.*
- *The WUAs may be strengthened with required infrastructure, financial means and training to play their defined roles.*
- *Department may ensure periodic maintenance of canals to facilitate free flow of water.*
- *Department may devise a joint monitoring mechanism for all line departments concerned (viz. WRD, Agriculture, PHED, Revenue and Forest) for all ongoing and future irrigation projects to ensure effective and regular coordination.*