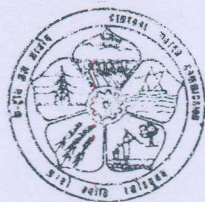


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केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION

सिंचाई परियोजनाओं के प्रबोधन हेतु
मार्गदर्शी सिद्धान्त
GUIDELINES FOR MONITORING
OF IRRIGATION PROJECTS

नई दिल्ली
NEW DELHI
1995

केन्द्रीय जल आयोग
1995

CENTRAL WATER COMMISSION
1995

सिंचाई परियोजनाओं के प्रगति एवं स्थिति रिपोर्ट
तैयार करने हेतु मार्गदर्शी सिद्धान्त

GUIDELINES FOR MONITORING OF IRRIGATION PROJECTS
AND PREPARATION OF STATUS REPORT

FOREWORD

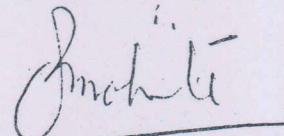
The development of irrigation has received priority in the overall planning in the country and a considerable public investments have been made in this sector through successive Five Year Plans. However, the continuous shortfall in achievement of the targetted irrigation potential from the projects had been a matter of concern to the Planning Commission, Ministry of Water Resources and Government of India. The problem of time & cost overrun also became endemic. In order to keep a close watch on project implementation and to complete them in a time bound manner, need for monitoring was realised.

The status of the Irrigation Projects was reviewed during the first and second State Irrigation Minister's Conference held in 1975 and 1976 and three tier monitoring of Major and Medium Irrigation Projects i.e. at Project, State and Central levels was recommended. At Central level, this work was entrusted to Central Water Commission.

To begin with, monitoring of 25 select projects was taken up in 1977 and gradually this number was increased. Later, the scope of monitoring was enlarged.

Monitoring Organisation of Central Water Commission had evolved the guidelines for monitoring of the Major and Medium Irrigation Projects during the year 1989. Subsequently, based upon the experience and positive impacts of monitoring, the need for modifying the guidelines to make the monitoring more effective was realised. Also it has been decided to extend the network of monitoring by Central Water Commission to bring all the Major Ongoing Projects in the country under its gambit.

The style & purpose of the monitoring efforts of the Central Water Commission is also undergoing a change. On one hand monitoring activity is to be shifted to the field offices, which requires that more clear & explicit guidelines are available, so that the practice become somewhat uniform even when numerous persons from different offices conduct the monitoring activities. On the other hand, by experience, CWC realised that apart from monitoring of physical and financial progress, monitoring of the management system including procedures used by the construction agencies are important in understanding the difficulties and suggesting improvements. These changing needs also required a revision of the guidelines. Accordingly, the revised guidelines have been prepared for use by the personnel engaged in monitoring of Irrigation Projects.



(A.D. MOHILE)
Member (WP&P)
C.W.C.

GUIDELINES FOR MONITORING OF IRRIGATION PROJECTS

The development of irrigation received high priority in the successive Plans and number of major and medium irrigation projects were taken up consuming bulk of the investment under Public Sector. However, inspite of that the benefits derived from these projects had been short of expectations. This matter was continuously causing concern to the planners and the Government of India. In order to improve the implementational frame work and to keep a close watch on the progress of the irrigation projects to complete them in a time bound manner to achieve the planned benefits, the need of monitoring was realised. Subsequently, during the first and second Irrigation Minister's conference held in 1975 and 1976, it was recommended to enforce three tier monitoring of the irrigation projects i.e. at Project, State and Central levels. At Central level this task was entrusted to the Central Water Commission.

The main objective of monitoring is to review the progress of the project, identify the reasons for shortfall, if any, and to suggest and assist in taking remedial measures. Monitoring is considered to be a management tool to ensure timely completion of the project. Thus, apart from bringing out project specific diffifulties etc it also needs to bring out any changes in organisational procedures etc necessary for smoother management of the project.

In nut-shell, monitoring of a project is a systematic effort to:

- Set performance standards
- Ensure implementation of the construction programme
- Review the organisational and management capabilities of the project organisation and procedural difficulties being faced by them
- Compare actual physical and financial achievements with the set targets
- Identify deviations, shortfalls, lagging areas etc occurred and anticipated alongwith their effect on the overall implementation programme and inter-related activities and analyse their causes
- Suggest corrective measures for overcoming the bottlenecks/problems

- Review the project, suggest modifications in the implementation procedures, programme and targets
- Compile the information on the physical and financial status

The entire monitoring exercise comprises of the following stages:

1. Preliminary preparations
2. Field visit
3. Collection of information/data and review of the status of the project
4. Wrap up meeting with Project Authorities
5. Preparation of Status Report
6. Follow up of the action points

1. **PRELIMINARY PREPARATIONS**

A programme for monitoring visit may be drawn and communicated to the Project Authorities. They may also be requested to compile the information in the prescribed formats and make available the same to the monitoring team immediately after reaching the project site.

2. **FIELD VISIT**

During field visit, efforts should be made to physically inspect all the works in progress in the project. However, if it is not possible to inspect all the works due to certain limitations, atleast the major and critical works must be inspected. Discussions may also be held with the contractors at site as regards the progress of their works vis-a-vis the agreed programme.

3. **COLLECTION OF INFORMATION/DATA AND REVIEW OF THE STATUS OF PROJECT**

All the relevant information/data may be collected during discussions with Project Engineers in the field and from records available in the project offices. Based upon this, the status of the project may be reviewed and the critical issues may be identified for further clarification/discussion with Project Authorities.

4. **WRAP-UP MEETING WITH PROJECT AUTHORITIES**

The physical and financial progress of the project and the critical issues may be discussed in the Wrap-up Meeting with the Project Authorities and Action Points may be identified for follow up action by the concerned agencies.

5. **PREPARATION OF STATUS REPORT**

The critical issues requiring immediate attention of the State Government may be communicated separately through a letter from Chief Engineer (CWC) concerned to the Secretary to the State Government with a copy to all concerned. The detailed Status Report of the project may be prepared within a month and sent to all concerned for necessary action.

6. **FOLLOW UP OF THE ACTION POINTS**

The action points incorporated in the Status Report may be followed up. Project Authorities may be advised to indicate the status of the action points in their quarterly progress reports.

GUIDELINES FOR PREPARATION OF STATUS REPORT

PART-I EXECUTIVE SUMMARY

An executive summary preferably not more than 2-3 pages comprising of following information may form the first part of the Status Report.

Para-1 PROJECT IN BRIEF

Location, components, benefits, estimated cost, year of approval, inter-state aspects, if any, year of start, targetted date of completion, external source of funding, if any,

Para-2 ORGANISATIONAL & MANAGEMENT ASPECTS

Adequacy of organisational set-up vis-a-vis physical & financial programme.

Para-3 PHYSICAL PROGRESS

Percentage completion of various components of the project and achievement of potential.

Para-4 FINANCIAL PROGRESS

Latest expenditure details, outlays for the current plan/year.

Para-5 ISSUES IN FOCUS

Only critical issues needing immediate attention of the Government/Project Authorities.

PART-II STATUS REPORT

1. PROJECT COMPONENTS AS BEING EXECUTED

Describe here the project location, its scope, benefits and componets as being executed. Saliént features of the project may be given in **PART-III-Annexures**.

2. CHANGE IN SCOPE, IF ANY

Changes in the scope of the project, if any, as approved and as being executed may be indicated.

3. **ORGANISATIONAL SET UP FOR THE PROJECT**

- (a) State the organisational set up in the project vis-a-vis physical & financial programme and comment on its adequacy. Design back up, coordination between the various units of the projects, procedural difficulties etc. may also be given.
- (b) Comment upon the functioning of inter departmental committees for various purposes such as land acquisition, environmental management, posting of staff and review of progress etc. Whether such committees are convening meetings regularly?

Describe if detailed construction drawings are available at site in advance of construction. Describe if these are being prepared by an independent design office. Indicate if the design office is adequately manned by persons in position. Indicate how many times during the last one year, designers at appropriate level visited the project?

4. **CONTRACTUAL ARRANGEMENTS**

A brief account of major contracts in the project may be given with action points. In particular, deal with the following:

- (a) What are the current delegation of powers as regard to award of work for civil contracts through competitive bidding? Is this adequate? Suggest changes, if considered necessary.
- (b) Is there any special procedure for dealing with claims from contractors for extra item etc expeditiously? Is this working satisfactory?
- (c) What is the arbitration procedure?
- (d) Are large number of arbitration cases coming up? Analyse reasons and suggest measures.
- (e) Whether number of cases are going to the court inspite of the arbitration?

5. **QUALITY ASSESSMENT**

Describe briefly Quality Control Organisation of the project. Also state whether this organisation is independent of construction wing.

- (b) The places where field laboratories are stationed alongwith the facilities therein.
- (c) Quality control manual followed by the Project Authorities.
- (d) Whether proper records regarding quality tests are maintained? What actions are being taken on the quality test results?
- (e) Comment on quality of works completed and of those under execution.

6. **LAND ACQUISITION, REHABILITATION & RESETTLEMENT**

Describe in details the progress on land acquisition for the project works and rehabilitation of the oustees. Also comment on the adequacy of land acquisition process in the project & suggest measures to expedite the same and comment on the following:-

- Is a land acquisition officer available specifically for the Project Organisation?
- Is the project following a procedure of consent awards?
- Are there a large number of court cases hampering land acquisition?
- Status of land acquisition cases may be given in annexure
- Describe in brief the approved R&R policy of the State/Project and the status of its implementation in the project.

(Details may be given in Annexure)

7. **ENVIRONMENTAL CLEARANCE**

Briefly describe the following:

- i) Whether the project has been cleared from the environmental angle, if not, what action has been taken to get it cleared?
- ii) If cleared subject to conditions, briefly give the conditions laid down by the Deptt. of Environment and forest & action taken to fulfill these.

- iii) Whether environmental action plan formulated by State? If so, details thereof with index plan and it's estimated cost?
- iv) If Project/State level multidisciplinary Environmental Management Committees have been constituted for the project?
- v) How many times these committees have met during the last one year? Are the minutes of the State level Environmental Management Committee sent to the Environmental Management Organisation of CWC.

(Details may be given in Annexures)

8. ESTIMATED COST

Following information may be given under this:-

- (a) Originally estimated cost and revisions, if any approved by the Planning Commission.
- (b) Latest estimated cost.
- (c) Reasons for increase in the cost, if any. Break up of increase due to each reason.
- (d) Cost of balance works.

9. TECHNO-ECONOMIC APPRAISAL

- (a) Date(s) of approval and cost(s).
- (b) Further revision, if any, and status of revised estimate/report.
- (c) Present position of examination.

10. EXTERNAL ASSISTANCE

- (a) Value of agreement, effective dates of beginning & closing of assistance.
- (b) Components of the project covered under the assistance.

(c) Actual expenditure and reimbursement. Reasons of shortfall, if any.

(d) Points needing attention at the Govt. level. Reimbursement and expenditure schedule, observations of lending agency and their status may be given in Annexure.

11. **PHYSICAL PROGRAMME & PROGRESS OF DIFFERENT COMPONENTS OF THE PROJECT**

The detailed progress of various components may be given in the table given below:

Sl. Item No.	Unit	Total estt. qty.	Progr-ess upto last year	Progra-mme for the current year	Achie-vement during the year to the end of.....	Likely date of comple-tion
1	2	3	4	5	6	7
8						

A. HEAD WORKS

Dam/Barrage

- Earth Work

i) Excavation Tcum
ii) Embankment Tcum

Masonry Tcum
Concrete Tcum
Gates Nos.

B. MAIN CANALS

(Details of all main canals are to be given one by one in the following headings)

Earth Work Tcum
Km.

Lining Tsqm
Km.

Structures Nos.

C. BRANCH CANALS

(Details of all main branch canals are to be given one by one in the following headings)

Earth Work Tcum
 Km.

Lining Tsqm
 Km.

Structures Nos.

D. DISTRIBUTORIES & MINORS

Distributories Km.
& Minors

E. WATER COURSES

Water Courses Km.

L-Section of the dam and Bar & Dot Charts of various canal systems indicating their progress and future programme may be enclosed as shown in Plate-I & II.

Also give comment on the following:

- (a) Expected deviation in completion schedule of any major components of the project or the project as a whole.
- (b) The measures taken to check the delay and their probable effect on construction schedule.

12. PROJECT POTENTIAL

- (a) Ultimate potential of the project, potential created upto last year, programme for current year and achievement.
- (b) Reasons for lag in potential, if any.
- (c) Status of utilisation vis-a-vis creation.
- (d) Statement of distributory-wise ultimate potential and potential created so far, may be enclosed as Annexure.

13. **FINANCIAL PROGRAMME AND PROGRESS**

Particulars	Amount (Rs. in Crore)
- Year of start	
- Original date of completion	
- Revised date of completion	
- Cumulative expenditure upto end of last plan	
- Cost of balance works	
- Approved outlay for current plan	
- Year-wise expenditure during current plan upto last financial year	
- Approved outlay for current financial year	
- Actual budget provided during the current financial year with break-up of funds into	
i) Works ii) Establishment	
Expenditure incurred during current year upto.....	

14. **FINANCIAL MANAGEMENT**

- i) Are the plan funds as provided in the annual plans being matched by budget grants?
- ii) Are budget grants as approved being received in the project well in time?
- iii) Does a system of issuing letters of credit exist? If so at what periodicity? Is the distribution of annual budget within the year adjusted to the work plan? Are LOCs being received timely?
- iv) After considering the level of financing, the balance cost and the likely escalation of cost, what approximate period in your opinion will be required to complete the project?

15. **MONITORING OF PROJECT AT STATE/PROJECT LEVEL**

Whether there is any Monitoring Organisation at State/Project level to monitor the progress. If so, the details of the organisational set up.

16. **POINT NEEDING ATTENTION**

(a) Discuss in detail the constraints affecting progress of work regarding:

- i) Technical inputs.
- ii) Land acquisition.
- iii) Floating of tenders.
- iv) Procurement of scarce materials.
- v) Sufficiency of infrastructures including establishment, labour/machinery etc.
- vi) Finance

(b) Comment as to whether proposed financial & physical programme can be achieved.

(c) Anticipated slippages in financial and physical targets.

(d) Suggestions for achieving the set targets.

PART-III ANNEXURES

1. PROJECT DETAILS
2. A. EXTERNAL ASSISTANCE
- B. LATEST OBSERVATIONS OF LENDING AGENCY ON PROJECT
 STATUS
3. STATEMENT OF DIST./MINOR-WISE ULTIMATE POTENTIAL
4. PROGRESS & PROGRAMME OF R&R
5. ACTION TAKEN ON OBSERVATIONS OF PREVIOUS STATUS REPORT
 OF C.W.C.

PART-IV PLATES

1. INDEX MAP
2. L-SECTION OF DAM
3. BAR & DOT CHARTS INDICATING PROGRAMME OF VARIOUS
 CANALS ALONGWITH THEIR BRANCHES AND DISTRIBUTION
 SYSTEM
4. MILESTONE PROGRESS CHART FOR VARIOUS PROJECT
 COMPONENTS

PROJECT DETAILS

1. HISTORY OF THE PROJECT.
2. PROJECT PROPOSALS.
3. GROSS BENEFITS (INDICATING GCA, CCA, AREA
IRRIGATED AND CROPPED AREA CANAL-WISE)
4. INTER-STATE ASPECTS, IF ANY.

ANNEXURE-II (A)

EXTERNAL ASSISTANCE

Date of agreement :

Credit No. :

Total amount of Credit :

Sl. No.	Bank F.Y. & semester/quarter	Schedule of disbursement	Reimbursement claimed	Reimbursement received	Reasons for short-fall if, any	Steps being taken to utilise the credit in full
1	2	3	4	5	6	7

ANNEXURE-II (B)

LATEST OBSERVATION OF LENDING
AGENCY ON PROJECT STATUS

COMPLIANCE BY PROJECT
AUTHORITIES

ANNEXURE-III

STATEMENT OF DISTRIBUTORY/MINOR-WISE UTILATE POTENTIAL

Name of Branch	Distri- butory/ Minor	Offtak- ing loca- tion	Ulti- mate Poten- tial	Created to end of last year		Additi- onal target during current year		Achieve- ment during current year upto date of visit	
				P	U	P	U	P	U

ANNEXURE-IV(I)

PROGRESS & PROGRAMME OF REHABILITATION & RESETTLEMENT

Sl. No.	Description	Total estt. qty.	Completed up to last year	Programme for current year	Progress during current year upto date of visit	Cumulative progress	Remarks
1	2	3	4	5	6	7	8

A. Submergence Area
(including seat of dam, colonies etc.) upto F.R.L.

- i) Forest land
- ii) Govt. land
- iii) Other land

Total:

B. Population Affected

- i) Total families affected
- ii) Total persons affected
- iii) Scheduled Caste families affected
- iv) Scheduled Caste persons affected
- v) Scheduled Tribe families affected
- vi) Scheduled Tribe persons affected

C. Villages Submerged

- i) Fully
- ii) Partly

D. Land Required for Canal

- i) Forest land
- ii) Govt. land

Total:

1	2	3	4	5	6	7	8
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E. Property Under Submergence

- i) Kucha houses
- ii) Pucca houses
- iii) Govt. buildings
- iv) Any Archaeological/
Historical places
- v) Religious places
- vi) Wells
- vii) No. of trees etc.

F. Reservoir Submergence Plan
alongwith year-wise programme

G. Rehabilitation/Resettlement

- i) Details of Act/guide-
lines followed for R&R Plan
- ii) Whether any R&R Plan has been
prepared and finalised?
- iii) Land required for rehabi-
litation including land
for land compensation
- iv) Source/location of land
required for R&R Plan
- v) Details on land capa-
bility aspect of the
areas identified for
resettlement
- vi) No. of resettlement
colonies proposed for
rehabilitation
- vii) Facilities proposed to be
provided in these colonies
 - (a) Houses (Facilities
provided by Govt. for
construction of
houses by oustees)
 - (b) Schools
 - (c) Religious places
 - (d) Community Centre/
Panchayat Ghar
 - (e) Health Centre
 - (f) Roads
 - (g) Marketing facility

- (h) Electricity
- (i) Water Supply
- (j) Others

viii) Irrigation Facilities
for agricultural land
allotted to project
oustees under land
for land programme

ix) Total estimated
cost of rehabili-
tation and resettlement and land acquisition components
alongwith expenditure incurred upto
the end of March of
the previous year,
budget for current
year and money spent
during the current
year upto the date
of visit

x) Reasons for shortfall
and bottlenecks,
if any

I. Details of Rehabilitation
Committee (if any)

J. Details of Resettlement

- i) No. of families/
persons to whom
land for land has been
allotted
- ii) No. of persons to whom
land has been allotted
for house sites
- iii) No. of families/
persons to whom
employment have been
given in Govt. service
- iv) No. of persons to whom
grant in aid given for
self employment

K. Relocation of Communi-
cations (Reservoir Area)

- (a) Roads
- (b) Railways
- (c) Telegraph lines
- (d) Transmission
lines

ANNEXURE-V

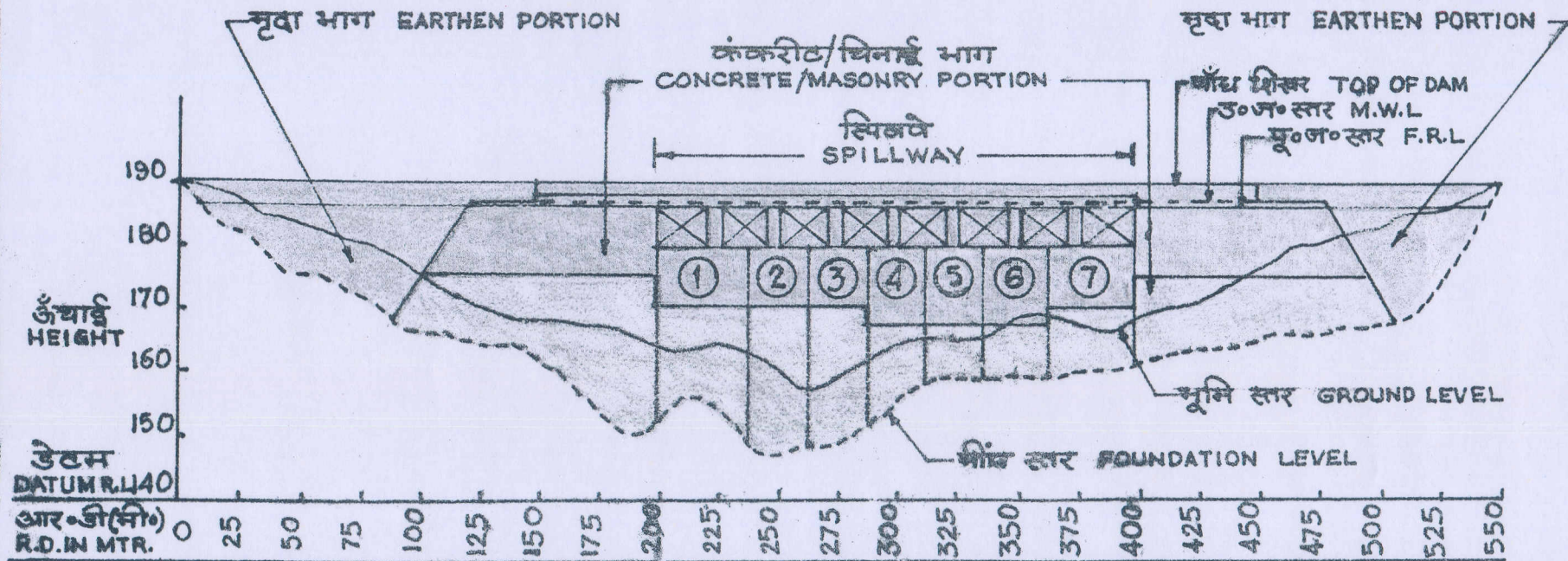
ACTION TAKEN ON OBSERVATIONS OF PREVIOUS STATUS REPORT OF CWC

Observations in previous status
report of Central Water Commission

Action taken by
Project Authorities

कार्यों की प्रगति दर्शाते हुए
बाँध का प्रतीकात्मक एल-सेक्सन
TYPICAL L-SECTION OF DAM
SHOWING PROGRESS OF WORKS

PLATE-I



संदर्भ

REFERENCE

पूर्ण हुए कार्य

WORKS COMPLETED

आगु वर्ष के लिए कार्यक्रम

PROGRAMME OF CURRENT YEAR

पूर्ण होने तक का कार्यक्रम

PROGRAMME TILL COMPLETION



TYPICAL BAR AND DOT PROGRESS CHART OF CANAL SYSTEM UP TO MINORS

सिंचाई प्रणाली स्वयं वितरण प्रणाली वर्धाता हुआ
नहर का धार स्वयं डाट चार्ट उपवितरिकाओं तक

