

# Executive Summary

## Why did the Government of India (GoI) launch the Accelerated Irrigation Benefit Programme (AIBP)?

Responding to a sudden decline during the VIII Plan in the rate of creation of additional Irrigation Potential (IP) and reduced allocation of funds by the States to the irrigation sector, GoI launched the Accelerated Irrigation Benefits Programme (AIBP) in 1996-97 for accelerating the implementation of large major and multi-purpose irrigation projects which were beyond the resource capability of the States, and to complete ongoing major and medium irrigation projects which were in an advanced stage of completion. This was later extended to cover surface water Minor Irrigation (MI) projects in Special Category (SC) States<sup>1</sup>, and such projects satisfying specified criteria in other States.

From 1996-97 to 2007-08, 253 major, medium and ERM<sup>2</sup> projects and 6855 MI projects were approved under AIBP; the Ultimate Irrigation Potential (UIP) of these projects was 10.49 million ha, which represented about 8 per cent of the country's total UIP. During this period, GoI provided funding of Rs. 26,719 crore for such projects – Rs. 16,720 crore in the form of Central Loan Assistance (CLA) and Rs. 9,999 crore as grant.

## Why did we decide to conduct a performance audit of AIBP now?

Our earlier audit report on AIBP (No. 15 of 2004) revealed that the progress in completion of AIBP projects and creation of Irrigation Potential (IP) was very poor; many projects had not been taken up or were abandoned mid-way; and there were numerous instances of cost and time over-runs. Further, the programme had been repeatedly modified, resulting in dilution of the original focus; many projects had been injudiciously selected (despite elaborate guidelines), and there were several instances of diversion, parking and misuse of funds, as well as poor contract management.

We decided to conduct a follow-up audit to assess whether the performance of AIBP had improved, and also whether the key issues highlighted in our earlier report had been appropriately addressed. Our audit, which was for the period 2003-04 to 2007-08, covered 70 major and medium irrigation projects and 346 MI projects in 26 States, and involved field audit of the records of the Ministry of Water Resources, the Central Water Commission, the Water Resources/ Irrigation Departments and implementing agencies of the State Governments, and field inspections of the sampled projects.

<sup>1</sup> States in the North Eastern Region (including Sikkim), Jammu & Kashmir, Uttarakhand and Himachal Pradesh

<sup>2</sup> Extension, Renovation and Modernisation

## How is this performance audit report organized?

Chapters 1 and 2 of this report provide background information on AIBP, our audit approach, and the previous audit findings in brief. Chapter 3 to 8 provides overall audit findings on different areas of interest from a national perspective, while Chapter 10 provides detailed audit findings relevant to individual States, with a separate section for each State.

## What did our performance audit reveal?

### Repeated Modifications in AIBP Guidelines

The scope and coverage of AIBP, as well as funding pattern, were altered successively through six sets of modifications to the AIBP guidelines between October 1996 and December 2006. Reform measures introduced under AIBP, viz. the concept of reforming States (which agreed to revise water rates to cover operation and maintenance charges), and the “fast track” approach for speedy completion of projects, were not satisfactory, and were subsequently abandoned. This trend of repeated modifications was clearly indicative of continued lack of clarity in the focus and objectives of AIBP, which had been pointed out in the earlier Audit Report.

### AIBP's Role in Overall Creation and Utilisation of Irrigation Potential

Although AIBP was a significant factor in the reported creation of Irrigation Potential (IP) in the major, medium, and ERM sector (especially since 2003-04), project-wise data regarding actual utilization of potential reportedly created was not furnished either by the Ministry of Water Resources (MoWR) or the Central Water Commission (CWC). Consequently, the contribution of AIBP to IP which was actually utilized could not be ascertained in audit.

The role of AIBP in the Minor Irrigation (MI) sector is relatively small. However, the Ministry did not maintain project-wise details of IP created and utilized under AIBP MI projects and could only furnish lump sum figures of IP created and utilized on a year-wise and State-wise basis. In the absence of detailed data, the authenticity of creation and utilization of Irrigation Potential under individual AIBP MI projects could not be verified.

### Poor Progress in Completion of Projects

The status of completion of projects taken up under AIBP continued to be poor. Of the 253 major, medium and ERM projects sanctioned under AIBP between October 1996 and March 2008, only 100 projects were reported as completed. However, of the 70 major and medium projects within our audit sample, while 21 projects were reported as completed, 12 of these “reportedly complete” projects were found to be actually incomplete or non-commissioned. Most of the major and medium projects also suffered from cost and time over-runs.

As regards minor irrigation projects, while about 37 per cent of the projects sanctioned under AIBP were reportedly complete, the authenticity of completion of individual MI projects, as reported by the Ministry, could not be verified in the absence of detailed project-wise data with the Ministry.

The major reasons for non-completion/ delayed completion of projects were non-fulfilment of pre-requisites (acquisition of land, receipt of forest/ environmental and other clearances), delayed construction of railway and highway crossings, and poor tendering and contract management.

### **Short creation of Irrigation Potential/ Non-utilisation of created Irrigation Potential**

Out of 41 major, 29 medium and 346 minor irrigation projects test-checked by Audit, the targeted irrigation potential was not created in 25 major, 19 medium and 189 minor irrigation projects; even the IP reported as created was not being utilized fully. In addition to delayed work execution, one of the main reasons for short creation/ non-utilisation of IP was due to splitting a single irrigation project into two or more projects for approval under AIBP, or dividing a project into AIBP and non-AIBP components; even if the concerned AIBP project was completed, irrigation potential was incapable of being actually utilized due to non-completion / non-functional state of the linked projects.

### **Deficiencies in Planning and Approval of AIBP Projects**

Preliminary reports, which form the first stage in the process for obtaining investment clearance for the irrigation project from the Planning Commission, were deficiently prepared in 11 out of 28 major/ medium projects approved during 2003-08; they were prepared without survey and investigation (and were based exclusively on desk study) or did not assess the anticipated benefits and expected outcomes.

Detailed Project Reports (DPRs) (which form the basis for techno-economic scrutiny and approval of projects) in 14 out of 70 test-checked major/ medium projects were found to be deficient in several aspects – incomplete meteorological and other data like soil surveys and water logging; hydrological aspects like catchment area, monsoon rainfall and annual yield; water availability and need in the command area, 100 years return flood period, ground water potential etc. As regards minor irrigation projects, DPRs for 112 out of 364 test-checked minor irrigation projects were not prepared/ made available and the projects were cleared on the basis of “concept papers” or simple project proposals.

The Benefit Cost Ratio (BCR), which is critical for assessing the economic viability of an irrigation project through detailed assessment of incremental annual benefits and annual costs, was either not assessed at all or overstated (through improper calculation of costs like interest, depreciation, on-farm development cost, maintenance costs, as well as benefits) in 28 major/ medium and 177 minor irrigation projects. Further, in 12 major/ medium and 119 minor irrigation projects, the proposed cropping pattern (which is critical to determination of incremental benefits and BCR) were not adapted in consultation with

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the State Agriculture Department and were not based on soil surveys of the command area, casting further doubts on the calculated BCR and the economic viability of projects approved under AIBP.

### Poor Project Execution

In addition to delays due to non-fulfilment of pre-requisites, one of the main deficiencies in project execution was incorrect phasing of project implementation. Contrary to the guidelines stipulating that the construction programme of various components of major projects was to be appropriately planned on a yearly basis so as to start yielding phase-wise benefits quickly, we found numerous instances of incorrect phasing of project components e.g. dam section incomplete, but main/ branch canals complete or nearly complete; main/ branch canals completed, but work of distributaries and water courses not taken up; main and branch canals constructed in patches, with gaps (particularly in the initial reaches). Consequently, despite incurring of substantial expenditure, the benefits of irrigation water were not fully available to the targeted beneficiaries.

We also found that maintenance of assets created under AIBP were not being accorded due priority, with 3 major, 3 medium and 37 minor irrigation projects having lost their capacity due to silting, weed growth and structural erosion. Further, arrangements for handing over completed projects to farmers/ water users had not been operationalised in 30 major/ medium and 194 minor irrigation projects.

### Poor Financial Management

Between 75 to 85 per cent of the AIBP grants released during 2005-06 to 2007-08 were released to just six States (Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Orissa). These states were thus, cornering major portion of AIBP grants without corresponding performance in terms of project completion, thus providing an incentive for inclusion of fresh AIBP projects driven by construction work.

We found that the majority of Gol sanctions for release of funds were issued at the fag end of the financial year (last quarter/ March). Further, State Governments did not release the Gol funds in entirety or delayed such release to the implementing agencies well beyond the stipulated period of 15 days; short release of funds amounting to Rs 116 crore were detected. There was a substantial "rush of expenditure" on AIBP projects in the last quarter/ month (March) of the financial year, which was also indicative of poor financial management.

We also found that the Gol had failed to enforce the provisions of the AIBP guidelines for converting the grant component into loan in cases of failure to complete the projects in time in 7 major/ medium projects in Andhra Pradesh and Rajasthan, and 18 minor irrigation projects in Himachal Pradesh. In three States (Gujarat, Himachal Pradesh and Karnataka), the second installment for the State was irregularly released by the Gol before

submission of the Utilisation Certificates (UCs) for the first installment. Further, audited Statements of Expenditure in support of the UCs for each project were not being sent by 12 States<sup>3</sup>.

We found substantial diversion of funds and other financial irregularities in the AIBP components of the Sardar Sarovar Project (SSP), Gujarat. The State Government overstated expenditure incurred out of AIBP Central Loan Assistance during 2003-05 by Rs. 1158 crore. Even the utilization certificates provided by the Sardar Sarovar Narmada Nigam Limited (SSNNL) for utilization of funds of Rs. 675.20 crore provided by Gol for irrigation benefits to Drought Prone Areas (DPA) were irregular, as the branch canals covered under DPA were already constructed or were under construction when the DPA component was introduced. Our audit scrutiny also revealed other instances of diversion/ parking of funds of Rs. 280 crore in 14 States<sup>4</sup>.

### Poor Contractual Management

Our audit scrutiny revealed grant of undue benefits to contractors amounting to Rs. 186.89 crore in 14 States, as well as cases of unauthorised/ irregular expenditure of Rs. 403.83 crore in 17 States. In addition, other cases of irregular contractual management were also detected in 12 major/ medium and 28 minor irrigation projects.

### Monitoring and Evaluation

The Central Water Commission (CWC) was required to carry out monitoring visits to major/ medium projects at least twice a year. We found that the actual percentage of monitoring visits ranged from 66 to 73 per cent during 2002-08. As regards monitoring of minor irrigation projects, a “sample” of such project was to be checked by the CWC. However, we found that CWC had made monitoring visits to only 57 minor irrigation projects in 10 States, which constituted a negligible proportion of the 8699 minor irrigation projects sanctioned under AIBP. The monitoring of AIBP projects at the State and Project levels was also deficient.

An evaluation study, covering AIBP projects in 28 States with data upto September 2004, had been got conducted by the Ministry of Statistics and Programme Implementation (MOSPI); however, efforts for circulating the report of the study to the States/ implementing agencies for necessary remedial action had not been undertaken. Also, Remote Sensing Technology (RST) had not been used in most States to monitor the progress of AIBP Projects.

<sup>3</sup> Arunachal Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Mizoram, Nagaland, Rajasthan, Uttar Pradesh and West Bengal

<sup>4</sup> Assam, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Manipur, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tripura and Uttar Pradesh

## What do we recommend?

1. There has been significant dilution in the focus and objectives of AIBP due to repeated modifications (six sets of modifications since its inception in 1996-97) in the scope and funding pattern of the scheme. Consequently, GoI must have a long-term perspective of AIBP in the programme guidelines, and avoid repeated and piecemeal modifications in an ad hoc manner.
2. The Ministry must institute a system to collect authentic and validated data of not only creation, but also utilisation of IP for AIBP projects in the major/medium/ ERM and MI sector at least for a period of five years after the completion of the projects.

The role of AIBP in funding a large number of individual MI projects with miniscule IP needs to be re-examined, particularly in view of the lack of monitoring and data collection by both the Ministry and CWC.

3. MoWR must investigate all cases of incomplete/ non-commissioned projects reported as complete to ensure that there is no diversion or misuse of funds released for these projects. Appropriate action must also be taken against the authorities issuing such false completion certificates.
4. Since AIBP is an Additional Central Assistance (ACA) programme, GoI may ensure equitable distribution of AIBP funds to states based on predefined criteria e.g. population dependent on agriculture, UIP yet to be fulfilled; and also past performance in completion/commissioning of projects and utilisation of targeted IP under AIBP.
5. In order to encourage the defaulting State Governments to ensure timely completion of projects, GoI must apply the provision for conversion of grant to loan in all cases of serious slippages in completion schedule, as provided for in the MoU.
6. GoI may recover the amounts diverted by the State Governments, if necessary, by making deductions from the next instalment of Plan Assistance to the defaulting State Governments.
7. The major reasons for non-completion of major/ medium/ ERM projects include (a) non-acquisition of land; (b) delays in construction of railway/ highway crossings; (c) improper synchronisation of project components (dealt with elsewhere in this Report), and (d) delayed tendering and contract management. While we note that acquisition of land is a complex and sensitive process, GoI funds should be released only after the State Government certifies that the major portion of the land required for the project (not just for the dam/ headworks but also for the canals) has already been acquired. Further, future releases should be linked to progress in land acquisition.

Better co-ordination with railways and NHAI is required for quick completion of crossings.

8. In case of irrigation projects which have been split into two or more AIBP projects or which have been separated into AIBP and non-AIBP components, MoWR should ensure

that linked components of AIBP projects are completed, so as to ensure the creation of targeted IP under AIBP, and commissioning/utilisation thereof.

9. Survey and investigation may be ensured in respect of all preliminary reports for investment clearance; these cannot be based only on desk study.

Formal DPRs may be insisted upon for all minor irrigation projects; concept papers or equivalent should not be treated as sufficient.

AIBP guidelines and the Planning Commission's investments clearance lay great stress on Benefit Cost Ratio (BCR) so as to provide assurance regarding the economic viability of the project. In this context, the MoWR must ensure that BCRs for all projects are properly calculated, based on validated and verifiable data and assumptions relating to costs, revenues, cropping patterns etc.

10. To tackle the problem of incorrect phasing of project implementation e.g. dam section incomplete, but main and branch canals completed or nearly complete; main/ branch canals completed, but work of distributaries/ water courses not taken up or at a very preliminary stage; main/ branch canals constructed in patches, with gaps (particularly in the initial stages), creation of irrigation potential should be recognized by MoWR/CWC only where (a) there are no gaps in the main/ branch canals, and water is capable of flowing right through the sections recognized for creation of IP; and (b) not just the main/ branch canals, but also all associated minors and distributaries have been completed.
11. In order to ensure that funds provided under AIBP do not go waste due to poor maintenance of assets created under AIBP, MoWR may ensure that before approving a project for AIBP funding, the State Government provides a formal undertaking to ensure adequate resources for its maintenance for the next ten years. Further, MoWR/ CWC may consider instituting a system to assess the actual quality of maintenance of Major/ Medium AIBP projects post-completion.
12. In order to maintain the sanctity of the budgeting process, MoF/MoWR must ensure release of AIBP funds well in time, and not in the last quarter or in March.
13. GoI may take up the matter with the concerned State Governments to avoid short release and delayed release of AIBP funds to the implementing agencies. Further, a system should be put in place for monitoring releases on a project-wise basis.
14. The Ministry/ CWC should ensure that the stipulated monitoring visits twice a year to all major and medium projects are carried out without fail. As regards minor irrigation projects, a reasonable sample of projects should be inspected by the Ministry/ CWC; if CWC is unable to carry out such inspections, the Ministry may consider hiring its own consultants for such inspections.