

# Project Execution and Maintenance

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### 5.1 Commencement without pre-requisites

Approvals of AIBP Projects were subject to fulfillment of various prerequisites such as acquisition of land for the project (which also involved payment of compensation to the affected families), clearance from the forest and environment departments and approval/clearances from other departments involved viz. Railways, National Highways etc. Commencement of the projects without fulfilling such prerequisites is beset with the adverse consequences of funds being blocked in incomplete projects.

Audit scrutiny revealed that 11 Major, 10 Medium and 22 MI Projects were taken up for execution without ensuring the fulfillment of the prerequisites such as land acquisition, forest clearances etc. in Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, Kerala, Maharashtra, Manipur, Orissa, Uttar Pradesh and West Bengal (12 States).

Details of such instances of commencement of projects without fulfilling the required prerequisites are given below:

**Table 11 - Instances of Commencement of Projects without fulfilling pre-requisites**

State	Projects	Findings
Andhra Pradesh		Four out of seven test-checked major/ medium projects and two MIs were delayed, since the Government awarded project works without prior acquisition of land.
Assam	Champamati Project	302 ha out of the total land requirement of 478 ha was yet to be acquired.

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State	Projects	Findings
Bihar	Durgawati Reservoir Project	Work was stopped since 2006-07 due to lack of forest clearance.
	Western Kosi Canal Project	Execution was badly affected due to non-acquisition of land.
	Sone Canal Modernisation Project	Non-clearance from the Road Construction Department delayed the completion of the Western Parallel Link Canal.
Chhattisgarh		Work in 1 Major, 1 Medium and 5 MI projects was badly affected due to delay in finalization of land acquisition cases.
Jammu & Kashmir		Work of 4 MI lift irrigation schemes was taken up without ensuring acquisition of land and availability of sufficient water.
Jharkhand	Sonua and Tapkara Reservoir Projects	Forest clearance from MoEF <sup>13</sup> was not obtained, though construction of the reservoir dam was almost complete, and forest land was put under submergence.
	Panchkhero Reservoir	Although the project was scheduled for completion by March 2009, survey for assessing land requirement for distributaries and water courses was not yet done.
Kerala	Muvattupuzha Irrigation Project	Three works were awarded before ensuring availability of land, and could not be completed due to non-availability of land. For another work 'Manjor Distributary – construction of railway crossing from chainage 782-891 m', work started only in January 2008 due to delay in tendering procedures, and the validity period of Railway approval for the work (issued in April 2004) had expired.
Maharashtra	1 Major and 6 MI Projects	Work was badly affected due to delay in finalization of land acquisition cases.
Manipur	Thoubal Project	Clearance had not been received for the rehabilitation and resettlement action plan.
Orissa	Upper Indravati, Telengiri and Right Bank Canal of Rengali	Works were delayed due to non-acquisition of land
	Kurubela, Laxmipur, Dhawandhar, Doraguda and Jagunguda MI Projects	Works were not completed, as they were pending clearances from MoEF, Revenue Department (for issue of notifications), and Water Resources Department (for sanction of estimates)
Uttar Pradesh	Bansagar Canal Project	Forest clearance for the Adwa Meja Link Canal was given, subject to completion of 75 per cent of rehabilitation and relocation work after obtaining consent of the villagers in full awareness of the benefits. However, no rehabilitation was carried out; physical visits and discussions indicated that the villagers were unwilling to be relocated. Consequently, the construction of the canal was stopped mid-way.
West Bengal	Teesta Barrage Project	Disputes over 123 cases of land acquisition remained unsettled. Further, the conditions to which MoEF clearance was subject to had not been fulfilled.
	Patloi Irrigation Scheme	Disputes over 13 cases of land acquisition remained unsettled.

## 5.2 Incorrect Phasing of Project Implementation

AIBP guidelines from 1998-99 envisaged assistance on large projects for their phased completion, so that benefits could start flowing early with comparatively smaller investments. The construction programme of major projects was to be phased out in such a way that the length of main canal and distributaries taken up (including the distribution system) in a year could be completed so as to start yielding phase-wise benefit.

Audit scrutiny, however, revealed that such phased implementation was not ensured during the construction of 17 Major, 7 Medium and 4 Minor Irrigation Projects in Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Punjab, Rajasthan, Tripura and West Bengal (15 States). Resultantly, projects remained non functional despite huge investments.

Details of instances where phase-wise benefits could not be availed due to construction of the projects in an uncoordinated manner are given below:

**Table 12 - Instances of Incorrect Phasing of Project Implementation**

State	Projects	Incorrect Phasing of Implementation
Andhra Pradesh	Yerrakalva Irrigation Project	Out of 50 distributaries, 32 were completed, and 8 sub-works were in progress. Field channels had not been taken up.
Bihar	Western Kosi Canal Project	Though the dam was 100 per cent complete, and the main/ branch canals were 99 per cent complete, progress in construction of distributaries and water courses was only 70 per cent and 32 per cent respectively.
	Sone Canal Modernisation Project	Though the dam was 100 per cent complete, and the main/ branch canals were 97 per cent complete, progress in construction of distributaries was only 88 per cent and no water courses had been constructed.
Chhattisgarh	Jharan Tank, Malanger Diversion and Pithama Tank MI Schemes	Though the headworks were completed, canal work/ distributaries were not executed.
Gujarat	Sardar Sarovar Project	Though the main canal and the branch canals were 100 per cent and 60 per cent complete respectively, the progress of works of the distributaries and minors were merely 27 per cent and 23 per cent respectively.
Jharkhand	Panchkhero Reservoir	The dam and main/ branch canals were 56 and 28 per cent complete; no work on distributaries and water courses was done.
	Sonua Reservoir	The dam and main/ branch canals were 98 and 83 per cent complete; no work on distributaries and water courses was done.
	Tapkara Reservoir	The dam and main/ branch canals were 100 and 75 per cent complete; no work on distributaries and water courses was done.
	Upper Shankh Reservoir	The dam and main/ branch canals were 99 and 58 per cent complete; 25 per cent work on distributaries was done, but no work was done on water courses.
Karnataka	Upper Krishna Project (Stage-II)	Although potential of 3231 ha was created on the Almatti Left Bank Canal, water could not be let out into the canal as the approach canal works were not completed.

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State	Projects	Incorrect Phasing of Implementation
<b>Kerala</b>	Kallada Irrigation Project	The works of Poovathoor Distributary and Bhoothakulam Minor Distributary were held up due to non completion of work at the railway crossing and two bridges on the road crossing portions respectively. Work on two other Minor Distributaries v.i.z Kottapuram Minor Distributary and Mynagappally Minor Distributary was only 22 and 60 percent complete respectively.
	Muvattupuzha Valley Irrigation Project	The works of the Manjoor distributary and Ettumanur Branch Canal were held up due to non completion of work at Railway crossing portions. Further, the work of Mulakulam brach canal in the portion from ch.5650m to 6770 m could not be completed due to heavy seepage and sliding of earth.
<b>Madhya Pradesh</b>	Bawanthadi Project	While construction of almost all major items of the project was completed, the primary dam section of the project was incomplete.
	Bargi Diversion (Phase-II) Project	Although 80 per cent of the work of the Majholi branch canal was complete, the work of the canal crossing of a main railway line at the starting reaches was not completed.
	Indira Sagar Project (Canal)	The district road bridge at RD 42.31 km of the main canal was still incomplete, after a lapse of 12 years.
<b>Maharashtra</b>	Vishnupuri Project	Though the project was declared completed, the part-I works of the command area were not completed.
	Dhamangaon Storage Tank MI Project	Though the project was declared completed, the utilization of created irrigation potential could not be done for want of non existence of facilities for lifting the water.
<b>Manipur</b>	Thoubal Multipurpose Project	While progress in construction of canals and distributaries was 89 and 68 per cent respectively, construction of the dam and spillway was lagging behind at 60 and 70 per cent respectively.
<b>Orissa</b>	Right Bank Canal of Rengali Irrigation Project	While the dam and main canal were 100 and 99 per cent complete respectively, progress in construction of distributary systems was only 23 per cent.
	Upper Indravati Irrigation Project	Although the majority of the main canal works had been completed, the minors and sub-minors from RD 11 to 22.40 km were still in the planning/ land acquisition stage.
<b>Punjab</b>	Extension of Kandi Canal Stage-II Project	Though the main canal was constructed upto 112.00 km, work on distributaries, lift irrigation schemes, and water courses was not taken up.
<b>Rajasthan</b>	Indira Gandhi Nahar Project Stage II, Narmada Canal	Instead of executing work in the flow system first and lift system later, both systems were taken up together and both were incomplete. Further, in IGNP Stage-II, the work of water courses was not completed in various systems due to lack of co-ordination.
	Mahi Bajajsagar Project	Even though the project was declared complete, the works of Nithauwa distributary were not completed in the reach 2.50 – 6.48 km, as forest clearance was awaited.
<b>Tripura</b>	Khowai Medium Irrigation Project	Though the barrage portion of the project was completed before inclusion of the project under AIBP, the construction of branch canals implemented under AIBP was only 5 percent.
<b>West Bengal</b>	Teesta Barrage Project	Out of five main canals, only two canals (TMLC and MMC) were completed, one canal (DNMC) was partially completed, one canal (TJMC) was in progress, and construction of one canal (NTMC) was yet to be taken up. Out of 35 distributaries of the completed canals, 21 were still incomplete, mainly due to land disputes.

**✓ Recommendation - 7**

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.

**5.3 Maintenance of the projects**

- Irrigation being a State subject, funds for maintenance of the Irrigation projects created under AIBP/ any other scheme was not permissible in the AIBP Guidelines. However, the need for maintenance of the assets created by investing huge funds cannot be overemphasised. During field visits of the test-checked projects it was observed that the irrigation tanks/ canals of 3 Major, 3 Medium and 37 Minor Irrigation Projects in Arunachal Pradesh, Bihar, Jharkhand, Manipur, Sikkim, Uttarakhand and West Bengal (7 States) had lost their capacity due to silting, weed growth, structural erosion etc.
- To ensure interest and encourage participation by farmers/ water user associations in the execution and maintenance of the projects, they were to be involved in the project from commencement to commissioning stage. After completion, projects were to be handed over to the beneficiaries, and a three level arrangement i.e. Water Users Associations, Distributary Level Societies and Minor Irrigation Project Level Councils were envisaged. However, such arrangements were either absent or practically non-functional in 18 Major, 12 Medium and 194 Minor Irrigation Projects test checked in Audit in Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Uttar Pradesh, Uttarakhand and West Bengal (21 States).

**✓ Recommendation - 8**

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.