

CHAPTER III

REVENUE AND FOREST DEPARTMENT

3.1 STATE COMPENSATORY AFFORESTATION FUND MANAGEMENT AND PLANNING AUTHORITY (CAMPA)

Introduction

Forest land is diverted for facilitating developmental activities for non-forestry purposes like construction of power projects, irrigation projects, roads, railways, schools, hospitals, rural electrification, telecommunication, drinking water facilities and mining.

Government of India (GoI), subsequent to the orders of Hon'ble Supreme Court (October 2002) created (April 2004) the Compensatory Afforestation Fund Management and Planning Authority (CAMPA). It was also directed to centrally pool the money recovered on behalf of the said Authority, lying with the States and Union Territories, into an adhoc CAMPA constituted for the purpose till the CAMPA became operational.

In accordance with the directives contained in the guidelines (July 2009) (Guidelines) by Ministry of Environment and Forests (MoEF), Government of India (GoI) on State CAMPA, the concerned State Forest Department (SFD) would work out the amount¹ required for Compensatory Afforestation (CA), the Net Present Value (NPV) and costs for fulfilling any special conditions laid down by the GoI and SFD at the time of approval of diversion of forest land. The amount is deposited by the Project Agency (User Agency) in the adhoc CAMPA account maintained at New Delhi. The guidelines required the setting up of State level CAMPA for receiving CAMPA funds from the above account and also prescribed procedures for utilization of the CAMPA funds. The GoM constituted (July 2009) the Steering Committee and the Executive Committee for setting up of Maharashtra State CAMPA (State CAMPA). The GoM further had accorded sanction (January 2010) to open an account in the name of Executive Committee of State-CAMPA. The funds which were received from the implementation of provisions of the Forest (Conservation) Act, 1980 (FC Act, 1980) which included other funds already received and had remained unspent, funds received/transferred from the Central Government or the State Government by special orders or guidelines would be deposited in the account of State CAMPA.

GoM Resolution (January 2010), for constituting the Governing Committee for setting up of the State CAMPA under the Chairmanship of Chief Minister

¹ The State Forest Department (SFD) had a rate chart from 2009-10 for the plantation models existing prior to the issue of November 2013 rates. The SFD in November 2013 issued ready reckoner rates for five plantation models for recovering the Compensatory Afforestation (CA) amount from the User Agencies. If the proposal of CA was of model 1 to 4, the amount shall be calculated based on the rates of model 1. The rates of model 5 shall be applied only in cases where the alternate land provided by the User Agency was completely barren with no irrigation facility and the User Agency was willing to pay the cost as per model 5

of State was issued with the Minister of Forests, Minister of Finance and Minister of Planning amongst others as members.

GoI enacted the Compensatory Afforestation Fund Act, 2016 which came into force from August 2016. The Act has, however, not been implemented in the State pending finalisation of CAMPA Rules by GoI (October 2018).

Organizational Setup

Principal Secretary (Forest) is responsible for the overall administrative control of the State Forest Department (SFD) and is assisted by Principal Chief Conservator of Forests (HoFF²), Nagpur. The proposals for diversion of forest lands for various projects right from processing till approval are done by a Nodal wing headed by an Additional Principal Chief Conservator of Forest cum Nodal Officer in the PCCF (HoFF). The State CAMPA is headed by an Additional Principal Chief Conservator of Forests (APCCF), CAMPA who is responsible for the preparation and implementation of Annual Plan of operation (APO) and other day to day activities. Chief Conservators of Forests (CCFs) are head of the circles and assisted by the Divisional Forest Officers (DFOs) or Divisional Conservators of Forests (DCFs). At the Range level, Range Forest Officers are responsible for executing the CA works. State CAMPA functions through a three-tier committee hierarchy:

- Governing Body headed by the Chief Minister of the State, mandated to lay down the broad policy framework for functioning of State level CAMPA and reviews its working from time to time.
- Steering Committee headed by the Chief Secretary of the State, mandated to lay down and approve rules and procedures for the functioning of the body and its Executive Committee. Its responsibilities included monitoring utilisation of State CAMPA fund, approving the APO, the annual reports and audited accounts of the State CAMPA.
- Executive Committee headed by the Principal Chief Conservator of Forests (HoFF) of the State mandated to prepare the APO of the State for various activities, submit it to the Steering Committee before end of December for each financial year and supervise the works being implemented out of funds released from the State CAMPA. It was also responsible for ensuring proper auditing of both receipt and expenditure of funds.

Process and Fund Flow

According to para 4.2 (i) of guidelines issued (February 2004) by MoEF under the FC Act, 1980 for diversion of forest land, forestry clearance is to be given in two stages;

➤ At first stage, the proposal is to be agreed to in principle (Stage I). Conditions relating to transfer, mutation and declaration of a Reserve Forest or Protected Forest under the Indian Forest Act, 1927 of equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation thereof, are stipulated at this stage.

² Head of Forest Force

➤ After receipt of report from the State Government regarding compliance with the stipulated conditions, formal approval by MoEF under the Act is issued, also called the second stage of clearance or final clearance.

Ad-hoc CAMPA was to release funds based on APO received from respective State or UTs. These plans were to be formulated by a State Level Executive Committee and approved by a State Level Steering Committee before being sent to Ad-hoc CAMPA. The funds released were then to be disbursed by the Nodal Officers amongst the divisions³ for implementation of APOs.

Besides the above, conditional works as described in paragraph 3.1.5 were also undertaken.

Audit Scope and Methodology

Audit test checked records of APCCF cum Nodal Officer, APCCF (CAMPA), three out of 11 territorial circles⁴, three divisions in each selected circle, two divisions⁵ each in Nagpur and Amravati Wild Life circles, CCF (Research, Education and Training) and Publicity Information Officer, Nagpur. The selection of circles and divisions was made on the basis of allocation of funds from State CAMPA. Out of total allocation of ₹ 657.47 crore to all the circles, audit covered three circles which were allocated funds amounting to ₹ 391.76 crore.

The audit was conducted between January 2018 and June 2018 and covered a period of five years from April 2013 to March 2018. Cases of diversion of forest lands approved prior to the audit period were scrutinized only where the CA works against these diversions were proposed and undertaken in the APO during the audit period.

Audit evidence was also gathered through photographs taken during field inspections undertaken jointly with officials of the SFD. The findings on the subject matter were issued (July 2018) to the Government; the replies of the Government were received (December 2018) and incorporated appropriately.

Audit objectives

The audit was conducted to assess whether

- Proposals for diversion of forest land for non-forest use were processed as per extant guidelines;
- Planning for compensatory afforestation through the mechanism of APOs was done effectively to ensure timely grounding of CA works;
- The state CAMPA funds were utilized economically, efficiently and effectively for purposes of compensatory afforestation;
- The monitoring of plantations through inspections by DCFs to ensure quality of execution of CA works was effective.

³ The CA works in the APO are proposed by the circles by collecting the information from the Divisions under them. The approved CA works in the APO are executed by the Divisions and their respective Ranges

⁴ Dhule : DCFs Dhule, Jalgaon and Yaval; Thane : DCFs Thane, Dahanu and Shahapur and Nagpur: DCFs Bhandara, Gondia and Wardha

⁵ Nagpur Wild Life: Pench Tiger Reserve and Bor Wild Life Sanctuary; Amravati Wild Life: DCF, Gugamal Wild Life Division and DCF, Akot Wild Life division

Audit Findings

The audit findings include deficiencies in the system of diversion of forest land, deficiencies in the preparation of Annual Plan of Operation, taking up of afforestation work in the alternate lands, taking up of conditional works and deficiencies in the system of accounting of CAMPA funds which are detailed in succeeding paragraphs.

3.1.1 Data on diversion of Forest Land and CA works

According to the provisions of Para 3.2 of the guidelines issued under Forest Conservation Act, 1980, CA was to be done over equivalent area of non-forest land (NFL). Further, the NFL should be identified contiguous to or in the proximity of Reserved Forest or Protected Forest. In the event that NFL was not available in the same district, it may be identified anywhere else in the State. Where NFL was not available or available in less extent, CA may be carried out over degraded forest⁶ twice in extent to the area being diverted or to the difference between forests land being diverted and available NFL, as the case may be.

The NFL which were transferred and mutated in favor of the SFD for the purpose of CA shall be notified by the State Government as Reserved Forest (RF) or Protected Forest (PF) under relevant section of the local Forest Act. The Nodal Officer shall report compliance within a period of six months and shall send a copy of the original notification declaring the NFL as RF or PF to MoEF for information and record.

In the State of Maharashtra 1,671 cases involving 65,363 hectares (ha) got stage II approval as of March 2018.

It was observed that;

- The information of NFL or degraded forest lands provided for CA against 1,671 cases was neither consolidated by APCCF cum Nodal Officer nor available with Chief Conservator of Forests.
- APCCF (CAMPA) was responsible for implementation of APO. The case wise information on CA works due, proposed in the APO and completed was not available with APCCF (CAMPA).
- There was no information sharing between APCCF cum Nodal officer, responsible for processing of forest land diversion cases and APCCF (CAMPA), responsible for taking up afforestation work in alternate lands identified at the time of approval of diversion cases using CAMPA funds, which could have been used in preparation of APO.
- The test-checked circles and divisions were also not maintaining project wise details to show the alternate lands provided for afforestation against the diverted forest lands and the phase wise expenditure incurred on pre-plantation operations (PPOs), first year operations and second year to 10th year operations on such alternate

⁶ Degraded forest is a secondary forest that has lost through human activities the structure, function, species composition or productivity normally associated with a natural forest type expected on that site

lands. The details of NFL or degraded forest land declared as RF or PF were also not available.

- A monthly progress return (MPR) containing the details of CAMPA funds collected from the User Agencies, the shortfall in collection of NPV *etc.* was being submitted by the circles to APCCF (CAMPA) and APCCF cum Nodal Officer. These monthly returns were found to be incomplete as the MPR did not mention the alternative land allotted, the status of CA works done, up to date expenditure incurred *etc.* Besides, the cases (After 2002) shown by Nodal Officer in respect of three test-checked circles was 1,011 whereas the MPR submitted by the circles showed 374 cases. Thus, all the cases of diversion were not found in the statement.

The absence of database regarding complete status of CA works against the total diverted forest land and lack of monitoring on undertaking of due CA works resulted in cost escalation as mentioned in **paragraph 3.1.2.2**.

The Government stated that a comprehensive database covering all aspects of Forest (Conservation) Act 1980 has been created. The process of filling up the data by circles and divisions in the database was in progress (December 2018).

Further, in the three selected Circles, audit test-checked 104 cases in which forest land admeasuring 2,818.684 hectares was diverted for non forestry purposes during the period 2013-18. Against the diverted forest land, CA work was proposed to be taken up in 3,243.22 hectares land. Of which, in 1,920.22 hectares (49 *per cent*) land, CA works (91 cases) were in progress and in the remaining 13 cases, 1,323 hectares (41 *per cent*) land, no CA works were taken up (March 2018).

3.1.2 Approval for diversion of forest land

3.1.2.1 Status of proposals for diverting forest land

In the State as of March 2018 out of 4,166 proposals received, 1,671 cases involving 65,363 hectares got stage II approval. The status of cases for diverting forest lands as of March 2018 in the three test checked territorial circles is given in **Table 3.1.1**.

Table 3.1.1: Status of diversion of forest land in test-checked circles
(Number of cases)

Circles	Position of forest land diversion cases as on March 2018					
	Total	Rejected or closed or withdrawn or revoked	Stage II Approved	Pending		
				Stage I approval granted	Stage I approval pending	Total
Nagpur	625	93	276	69	187	256
Thane	869	146	304	75	344	419
Dhule	591	87	189	43	272	315
Total	2085⁷	326	769	187	803	990

Source : Information collected from APCCF cum Nodal Officer

⁷ In 2,085 cases 95,280 ha forest land is involved and in 769 Stage-II approved cases 42,832 ha forest land is involved

Out of 2,085 cases, 769 had got stage II approval, 326 cases were revoked or rejected or withdrawn and balance 990 cases were found pending at various levels. Of 187 cases of stage-I approval, 93 are pending for a period ranging between five years and 25 years and remaining 94 cases for period less than five years. Thus, these 93 cases were liable to be summarily revoked in terms of Clause 4.2 of Forest Conservation Act, 1980 which stipulated that, in cases where compliance of conditions stipulated in the in-principle approval was awaited for more than five years from the State Governments, the in-principle approvals would summarily be revoked.

It was seen in these 93 cases, the test checked circles neither recorded anything about revocation nor took any further action to obtain a fresh proposal from user agencies (which should be considered denovo). Moreover, of the 93 cases, in 26 cases ₹ 4.40 crore had been deposited in adhoc CAMPA.

The Government stated that responsibility of revocation of more than five years old stage I approved cases rests with MoEF, GOI. However, the details of cases revoked by MoEF, GOI till date were not furnished.

Encroachment on forest land in an unrevoked case is discussed below.

In a proposal for diversion of 0.38 hectare of protected forest land for construction of petrol pump and service station in favour of Indian Oil Corporation Limited (User Agency) in Thane division, Audit observed that 1.15 hectares of forest land had been encroached since long. The MoEF had accorded (September 2009) stage I approval for diversion of only 0.38 hectare of forest land with the condition that the balance encroached area (0.77 hectare) should be surrendered by the User Agency to the SFD. However, the User Agency had not fulfilled the conditions of surrendering the encroached land and therefore stage II approval was not accorded (April 2018). Action taken on User Agency for encroachment or illegal utilization of the forest land was not available with SFD. Thus, the User agency was using the forest land without any legal rights.

Government stated that action was being taken to take over the possession of encroached land (0.77 hectare).

The fact remained that the case remained unrevoked and the user agency continued to utilize 0.38 hectare without obtaining stage II approval even after lapse of nine years from the date of stage I approval.

3.1.2.2 Delay in granting Stage II approval

The time period between stage I approval and stage II approval as prescribed in MoEF's notification (March 2014) was four and half months.

It was observed that time taken to grant stage II approval overshoot the prescribed period in many cases for reasons attributable to the User Agencies, SFD and MoEF. The User Agencies had to credit the cost of CA calculated by the SFD at the time of complying with the conditions of Stage I. There were no provisions in the FC Act or guidelines for recovery of updated cost of CA in respect of cases which were delayed for Stage II approval.

In test checked circles, out of 769 cases, 89 cases got stage II approval during 2013-18. Out of these 89 cases, in 46 cases the delay in according stage II

approval was between five months and 45 months. In such cases, the cost of CA collected after stage I approval was bound to increase.

Audit had conducted an analysis of 12 cases in eight test-checked divisions (except Gondia) and found that in six cases the differential cost due to delay in granting stage II approval worked out to ₹ 2.52 crore.

We also observed that in 24 cases where CA work was completed, the expenditure incurred was ₹ 18.45 crore which was ₹ 11.19 crore more than the cost of CA (₹ 7.26 crore) recovered from the User Agencies.

It is pertinent to mention that under Gondia division, differential cost wherever the stage II approval got delayed was recovered and in one such case the differential cost (₹ 8.06 crore) due to time lag of 14⁸ months in stage II approval was recovered from User Agency.

Government stated that in cases where the user agency failed to deposit the demand, fresh demand as per the new rates in tune with ready reckoner of new financial year were given to the user agency and they had to pay such difference which may arise due to delay. It was also stated that adequate mechanism was in place to plug the differential cost in cases of time lag in stage II approval.

The reply was not acceptable as in the test-checked six cases the differential costs were not recovered till the date of audit. The Government also did not mention the recovery of differential amount in these six cases. This indicated that the adequate mechanism which was in place as stated by the Government was not effective.

3.1.3 Preparation of Annual Plan of Operations

The State Forest Department adopted the bottom up approach for preparation of APO to ensure need based realistic planning. Proposals from the implementing agencies (Field Offices) were called to prepare the APO. The proposals for taking up of CA works with certification required by DFO (in prescribed proforma) obtained from the field were consolidated, shared with the subject matter specialists in the office of the PCCF (HoFF). The resultant draft APO was put up before the Executive Committee and onward for approval. In addition to CA works, the conditional works stipulated by MoEF for which the cost was separately paid by User Agencies to SFD, were also included in APO.

3.1.3.1 Defects in inclusion of CA works in APO

As per the Rule 12 (2) of State CAMPA guidelines (July 2009), after receipt of the money, State CAMPA shall accomplish the afforestation for which money was deposited in the Compensatory Afforestation Fund within a period of one year or two growing seasons after project completion, as may be appropriate. Thus, it was expected that CA works should be started within two years from the stage II approval of the project. In case, land provided for CA was found unsuitable at the time of taking up the Pre-Plantation Operation

⁸ Stage I approval : February 2009 and Stage II approval : April 2010

(PPO⁹) works, then, alternative sites proposed against such unsuitable land were required to get approval from MoEF or REC¹⁰.

In three test-checked circles, audit scrutiny of 104 cases (out of total 769 cases sanctioned during 2013-18) revealed the following-

- In all the 104 cases, PPO works were proposed in APO during 2013 - 18. The alternate lands provided for CA in 13¹¹ cases of forest land diversions were found unsuitable (1,323 hectares was found unsuitable out of 1,804 hectares) at the time of taking up the CA work. This was mainly due to inadequate survey and incorrect certification by the forest officials at the time of submitting the proposal for stage II approval. The proposals for new alternative lands were submitted to MoEF; the approval for which was awaited (October 2018). Out of these 13 cases, in five cases, the PPO works were proposed repeatedly in the APOs without ensuring the suitability of the lands resulting in non-execution of the PPO works and surrender of funds allocated for the works as shown in **Appendix 3.1.1**. Thus, the existing system of survey and verification of suitable land was evidently inefficient.

Though the concerned CCFs furnished the reasons for non-execution of PPO works, the comments from Government in this regard was awaited.

- Further 28 out of 104¹² PPO works in the APO were found included with a delay ranging from one to 27 years¹³ from two years after the date of stage II approval (**Appendix 3.1.2**). PPO works in respect of one such case of diversion of forest land (Kar River Project) which were approved in 1988 were proposed in the year 2017-18. This delay had resulted in cost escalation of ₹ 30.79 crore. As the CA cost had already been recovered from the User Agencies, this extra cost was required to be borne by the SFD.

Government stated that only in few cases there was delay in taking up PPO works due to unsuitability of lands. Fresh detailed instructions had been issued (September 2018) to avoid such delays.

- In four cases of Gondia, Shahapur and Dahanu divisions, the CA works were not proposed in APO because the land provided for CA

⁹ The Compensatory Afforestation works commences with the Pre Plantation Operations. The Plantation area is decided based on the availability of area, funds, soil condition, etc. Coupe area having below 0.4 crown density shall be selected for taking up plantation. Once the plantation site is decided, the area shall be demarcated on ground. Within the selected plantation area, grids of 100m x 100m shall be laid down. Trial pits up to depth of 60 cm shall be dug as per the available soil depth. One trial pit shall be dug in each grid. Zone I, II and III are decided as per the soil depth. Based on this information, treatment map is prepared

¹⁰ Regional Empowered Committee shall be constituted at each of the Regional offices and shall consist of three members namely (i) the Regional Principal Chief Conservator of Forests (Central), Chairperson, (ii) three non-official members who shall be experts one each in mining, civil engineering and development economics and (iii) the Conservator of Forests or the Deputy Member Conservator of Forests in Regional Office, Member Secretary to decide the proposals involving diversion of forest land upto 40 ha other than proposals involving mining and encroachments

¹¹ Nagpur - Six cases (963 ha) and Thane - Seven cases (402 ha)

¹² Dhule - 13; Nagpur - 57 and Thane - 34

¹³ One to Five years -20 cases; Five to 10 years - Five cases; and 10 years and above- Three cases

was outside the jurisdiction of the circle concerned. In two¹⁴ such cases of Shahapur division, against the diversion of forest lands, CA lands of 835.10 hectares were provided in four¹⁵ different divisions. The division which processed the diversion case and other divisions under whose jurisdiction the CA lands were provided were responsible for timely execution of CA works, the PPO works on these lands were not proposed in the APOs by either of the divisions. The DCF, Shahapur stated (April 2018) that his division had no role as the CA lands fell under other divisions.

In three out of four cases, the delay in taking up of CA works had led to cost escalation of ₹ 11.42 crore. In the fourth case in the Gondia Division, Stage-II approval was not granted by the MoEF till date.

Government did not furnish any reply.

3.1.3.2 Irregular sanction and expenditure from CAMPA Funds

National CAMPA Advisory Council directed (June 2010 and January 2012) that expenditures of administrative nature, expenditure on strengthening infrastructure at headquarters, petrol, oil and lubricant expenditure on vehicles, construction, repairs and renovation of office, residential building, forest rest house, ministerial staff quarters *etc.* above RFO level and purchase of vehicles-particularly for the use by officers *etc.*, were not permissible out of the CAMPA funds. National CAMPA Advisory Council (January 2015) allowed not more than 15 *per cent* NPV component to be used for items which were not allowed under CAMPA guidelines.

It was observed in the three selected circles that the 65¹⁶ works of construction of administrative buildings, repairs and maintenance of forest guest houses, DCF quarters were sanctioned in the APOs and an expenditure of ₹ 10.34 crore was incurred which was not admissible under CAMPA.

Further, in Dhule circle, as against sanction of ₹ two crore in the APO of 2016-17, an amount of ₹ seven crore was deposited (February/March 2017) with the Public Works Division, Dhule towards construction of circle office administrative building by CCF (T), Dhule. This amount of ₹ five crore was sanctioned (March 2017) by the APCCF (CAMPA) which was irregular.

Government stated that the expenditure was incurred from 15 *per cent* of Net Present Value component as allowed by Adhoc CAMPA and from the interest earned on CAMPA fund.

The reply was not acceptable as the act and guidelines do not provide for utilization of interest for other than specified purposes. Whenever a fund is created, interest necessarily has to be ploughed back unless specified otherwise. Further, the Government did not provide details of expenditure incurred from 15 *per cent* NPV component.

¹⁴ Construction of Mumri Dam and 765 Aurangabad – Padghe Transmission line

¹⁵ Aurangabad, Ahmednagar, Junnar and Sangamner

¹⁶ Thane – 35 works , Nagpur –Three works, Dhule – Seven works and Pune-20 works

3.1.3.3 Delay in submission of APOs

As per the guidelines contained in GoM, Revenue & Forest SFD Resolution (September 2009), the Executive Committee was to submit the APOs to Steering Committee before end of December for each financial year and obtain the Steering Committee's concurrence for release of funds. The approved APOs were to be submitted to MoEF, New Delhi for release of funds from Adhoc CAMPA.

It was observed that the APOs were approved by the Executive Committee with a delay ranging between one month and nine months from the scheduled month of December of each year for submission to Steering Committee as mentioned in **Appendix 3.1.3** which was attributing to the overall delay in taking up of CA works.

Government while accepting the fact stated that the APO usually gets delayed since it is a laborious task where information is sought from various implementing agencies in the field. However, the funds were usually received in time and, therefore, the delay did not actually affect the timely release of funds.

The fact remained that the timely submission of APOs as per guidelines was not adhered to.

3.1.3.4 Plantation taken up under State Schemes covered subsequently under CAMPA

According to paras 2 and 3 of CAMPA guidelines, the plantations are proposed only on the compensatory land sanctioned against the forest land diverted for non-forest purpose. Further, the afforestation activities are carried out by collecting the cost of afforestation from the User Agencies as per the ready reckoner rates.

We observed that CCF (T), Dhule had demanded additional funds of ₹ 2.49 crore for CA works during the year 2012-13. The plantations for which additional amounts were demanded pertained to the period of 2010-11. These plantations were under State Afforestation Scheme and were not part of any project of diversion of forest lands to user agencies. This was subsequently transferred (2012-13) under CAMPA. The Government sanction for transferring of these afforestation works from State Scheme to CAMPA were not available at the circle office. But, the works were found incorporated in the approved APO.

At the time of taking up the afforestation work under State scheme, the plantation model proposed was 400 plants per hectare which was prevailing at that time. However, after getting these plantations covered under CAMPA, the divisions with the directions (April 2011) of the CCF (T), Dhule converted the plantation model to 1,600/2,500 plants per hectare. Consequently, there was cost escalation which resulted in the demand for additional amount of ₹ 2.49 crore on CAMPA. Executive Committee directed (December 2012) that responsibility needed to be fixed at the field level for non-adherence to the prescribed model. However, no action was taken against any officers (October 2018).

Thus, decision of the CCF (T) to cover the balance work of plantations taken up from State schemes under CAMPA was irregular which resulted in extra burden of ₹ 2.49 crore on CAMPA Funds.

Government stated that these plantations were not taken up under State scheme but were raised through CAMPA funds only. While accepting the change in the model, Government stated that additional fund was demanded for meeting the expenditure due to change in model.

The reply was not acceptable as the plantations were initially taken up under State Scheme till March 2011 as reported by CCF (T), Dhule in November 2012, while demanding funds.

3.1.4 Irregular execution of CA works in protected forest area

In accordance with Forest Conservation Act, 1980, the SFD has to submit a certificate of suitability of the lands proposed for CA by the User Agencies at the time of compliance for Stage II approval. Similarly, where a land proposed by the User Agencies was found unsuitable for CA subsequently after the Stage II approval, CA on alternate lands in place of original identified land will have to be got approved from the SFD and MoEF before any CA works are undertaken. In the following cases, the CA works were found executed by the division without obtaining approval of the MoEF.

3.1.4.1 Diversion of 116.03 hectares of forest land for Bhimalkasa Minor Irrigation Project

For the Bhimalkasa Minor Irrigation Project in Bhandara division, 116.03 hectares of forest land was approved (July 2015) by MoEF for diversion against which alternate double degraded land of 232.06 hectares for CA was approved in Mouza Khamba. At the time of taking up the CA works, the division found that only 74.06 hectares was suitable for plantation. In order to compensate for the remaining 158 hectares of unsuitable land, the division proposed alternate lands in seven¹⁷ different villages. However, the division without submitting the proposal to APCCF for obtaining the approval from MoEF for taking up CA on alternate land, proposed the PPO works in the APO and executed the CA works on the alternate lands.

The DCF, Bhandara stated that the CA works on 232.06 hectares was taken up during the year 2014-15 and during survey it was observed that there was natural regeneration in the said site and hence alternate sites were proposed for PPO works in the APO. The reply was not convincing as the CA works on alternate sites were proposed and taken up without the approval of State Government or MoEF. Government accepted the facts.

3.1.4.2 During field visit to one (Mokhe plantation site of 50 hectares) of the plantation site, out of 158 hectares alternate sites, as stated above, it was observed that the said land was not a degraded forest land but was a protected forest on which afforestation was already done by Social Forestry, SFD. However, the division while submitting the monthly progress reports (March 2017) to the circle had shown plantations in entire 50 hectares at a cost of ₹ 66.56 lakh which was factually not correct. Out of the proposed

¹⁷ Mokhe-50 ha; Savargaon-18 ha; Jamnapur-10 ha; Khairlanji-Five ha; Ukara-25 ha; Sangadi-30 ha and Umri-20 ha

50 hectares of land, plantation was undertaken only in 38 hectares due to encroachment of some lands by the nearby village and the land was found unsuitable for plantation. Temporary fencing was found in the plantation site though huge quantity of chain links were procured and were found lying in the Range Office campus.

Government accepted the facts and stated that with regard to non-installation of chain links necessary action would be taken against the then DCF.

3.1.4.3 Diversion of 16.226 hectares of forest land for 765 KV Raipur Pooling Station, Wardha

The PPO work and first year operation for compensatory afforestation in 13.25 hectares in Rajegaon Beat in compartment Numbers 307 to 309 was proposed in the APO of 2015-16 and 2016-17 against the diversion of forest land for 765 KV Raipur Pooling Station, Wardha. However, in the APO of 2017-18, the second year operations were proposed in compartment numbers 317, 637 and 638 instead of the compartment numbers proposed.

During the site visit to compartment numbers 307 to 309, it was found that the plantation work had been carried out in the area under Outside Tribal Sub-Plan (OTSP) scheme and the division was forced to change the site and carry out the plantation work at compartment numbers 317, 637 and 638. However, the reasons for change of compartment numbers were not available on record (Plantation register, measurement book).

We also observed that in compartment numbers 317, 637 and 638, a dense forest existed because of previous plantations undertaken on the said site. The plantations under CAMPA were found done in a scattered area between the existing dense forests in these compartments (Photograph shown below) and therefore, could not be identified, though the plantation register and measurement books showed that 28,497 plants were planted as against 33,125 plants.

The photographs of the site taken on 18th January 2018 are placed below.



Plantation at Compartment Nos 317, 637 and 638

Government stated that detailed explanation was called for from CCF (T), Nagpur.

3.1.4.4 Diversion of 117.28 hectares forest land for construction of 220 KV/DC Borivali Boisar and Kharagar-Kalwa transmission line

MoEF had accorded approval (September 2012) for diversion of 117.28 hectares forest land for construction of 220 KV/DC Borivali Boisar and Kharagar-Kalwa transmission line in Mumbai, Thane and Palghar Districts. For CA purpose, 161.405 hectares double degraded forest land in

Dahanu division and 73.17 hectares degraded forest land in Thane division was provided.

The degraded land proposed in Thane division was not found suitable and therefore, CCF (T), Thane had proposed (January 2016) alternate land of 73.17 hectares in villages Talegaon, Alikiwali and Padgha. The proposal was forwarded (March 2016) to MoEF through SFD for approval in February 2016, the approval of the same was awaited.

During field visit to the plantation site at Alkiwali, Audit observed that the site was already having a dense forest cover and the density of forest was recorded in the plantation register as 0.4. According to the guidelines issued by SFD, the lands having forest density of less than 0.4 should be proposed for CA. The plantations done were also on available open patches of area which could not be easily identified. The growth of the plants (now in 2nd year) was also hampered due to surrounding thick trees. Audit also observed that there was free movement of cattle in the vicinity of the site.

Government accepted the facts and stated that plantation would be revived by taking necessary steps.

3.1.5 Execution of Conditional Works

MoEF while according approval to the forest land diversions puts certain conditions such as carrying out the work of teak irrigated plantations, safety zones plantations, canal side plantations, medicinal plants plantations, catchment area treatment, soil moisture conservation, survey demarcation, barbed wire fencing *etc.* either by User Agency or by SFD from the cost for such work credited by User Agency. The circle and APCCF (CAMP) should ensure inclusion of conditional works in the APO. The execution of conditional works rests with the division concerned.

Audit observed that the conditional works as described below were either not executed or executed in contravention of the directions specified in the approval.

3.1.5.1 Conditions relating to plantation of medicinal plants

The MoEF, GoI while according approval to three¹⁸ projects of diversion of forest land for transmission lines in Gondia and Dhule division, had inserted a condition that the user agencies shall prepare a scheme of plantation of medicinal plants on the Right of Way¹⁹ wherever possible after completion of the stringing work in consultation with the SFD.

The medicinal plantation, in Gondia Division was to be executed in right of way in 101 hectares. However, the plantation was done only in 20 hectares which was also not done in the Right of Way as seen during field visit. In the remaining two projects of Dhule division; no plantation was done even after lapse of four to six years.

Government stated that explanation was called for from CCF (T), Nagpur.

¹⁸ Gondia - 1) Raipur to Wardha 400 KV D/C Transmission line; Dhule - 2) Solar Photo Voltaic Power Project in Dhule (325 Ha); and 3) Dhule –Vadodara 765 KVDC Transmission Line

¹⁹ A right of way is a type of easement granted or reserved over the land for any purpose

3.1.5.2 Conditions relating to installation of bird deflectors and circuit breakers

In two projects²⁰ in Dhule and Wardha divisions, MoEF stipulated that the User Agency should provide at its cost, suitable bird deflectors which were to be fixed on upper conductor of transmission line at suitable interval to avoid bird hit and install circuit breakers at suitable places besides maintaining necessary ground clearance to prevent electrocution of wild animals. However, the records indicating that User Agency had installed the bird deflectors and circuit breakers were not available in the division.

A preliminary offense report was found registered (November 2017) in case of project in Wardha division stating that around 1.65 hectares of the plantation site was burnt to ashes due to bird hit on the same survey number. This indicated lack of compliance to the conditions specified by the MoEF.

In reply, the CCF (T), Dhule stated (March 2018) that the matter had been taken up with the User Agency. DCF, Wardha stated that RFO had been directed to take action. Government did not furnish any reply.

3.1.5.3 Conditions relating to creation of habitat or home for avifauna

In Shahapur and Thane divisions, while according approval to 765 hectares Aurangabad-Padghe Transmission Line project, MoEF had put a condition for creating and maintaining alternate habitat or home for the avifauna²¹, whose nesting trees were to be cleared in projects. The user agency had deposited ₹ 7.28 lakh in May 2016, however, no work was executed.

In reply, the DCF, Shahapur stated that estimate for the said works was submitted to the technical authority for approval which was awaited (October 2018). Government did not furnish any reply.

3.1.5.4 Conditional work to be undertaken by the Wild Life division

MoEF accorded (May 2015) approval to a project for widening into four lanes of the Mansar-Khawasa section of NH-7, with the condition that the National Highway Authority of India (NHAI) would assist the State Government in conservation and preservation of flora and fauna of the area in accordance with the wild life conservation plan prepared by the Chief Wildlife Warden (CWLW) of the State. The structure for the safe crossing and providing corridors for wildlife was being dealt separately. The CWLW prepared the plan which envisaged identifying forestry and wild life management activity necessary to endure the impact of the road activity and were thus necessary in general for the conservation of flora and fauna and for the specific habitats. The plan was to be implemented during a period of five years from 2015-16 to 2019-20 by CF & FD, Pench Tiger Reserve (PTR) and CCF (T), Nagpur in

²⁰ Dhule –Vadodara 765 KV DC Transmission Line and Wardha-Warora 400 KV Transmission line by MSEDCL

²¹ The birds of a particular region, habitat or geological period

their respective areas as per the activities²² identified. An amount of ₹ 4.97 crore was remitted (February 2015) by the NHAI into adhoc CAMPA.

The above works were not included in the APO of 2015-16. The activities for ₹100 lakh were approved in the APO of 2016-17 of which ₹ 55 lakh was released but not utilised. During 2017-18, ₹ 99.40 lakh was approved in the APO again for same activities and ₹ 59.50 lakh was released from which ₹ 42.49 lakh was spent. The balance amount of ₹ 17.01 lakh was surrendered. During the year 2018-19, balance items were sanctioned in the APO at a cost of ₹ 84 lakh except for corridor maintenance. No funds were released till May 2018.

The plan which was proposed to be implemented during the period of five years from 2015-16 to 2019-20 has not yet taken off. As against the funds of ₹ 4.97 crore obtained from NHAI, amount released during the period 2015-19 was only ₹ 59.50 lakh (11.97 *per cent*) and the expenditure incurred was only ₹ 42.49 lakh (nine *per cent*). Thus, non-implementation of the works proposed in the plan defeated the purpose of conservation of flora and fauna.

The CCF and FD, PTR stated (June 2018) that due to time constraint, the funds could not be utilised during 2016-17 and 2017-18. In future, action would be taken to utilize the funds in the same financial year. Government did not furnish any reply.

While according approval (November 2015) to the project²³ in PTR division, the MoEF had stipulated that the User Agency shall mitigate the side effects of the project on wildlife by providing drinking water facilities to the wild life at 20 different locations in buffer zone area; each zone should have (i) Borewell (₹ one lakh each); (ii) A saucer shaped water body of capacity 4,000 litres (₹ 0.50 lakh each) and (iii) a Submersible one HP solar Water Pumping System (₹ 2.50 lakh each).

These works were proposed in the APO of 2017-18 and ₹ 85 lakh was sanctioned and released to PTR division. The division had incurred an expenditure of only ₹ 35 lakh on provision of bore wells and saucer shaped water body and the work of providing a Submersible one HP solar Water Pumping System in 20 locations was not executed and the amount of ₹ 50 lakh released for the same were surrendered in March 2018. Further, the unexecuted work of providing a Submersible one HP solar Water Pumping System was not included in the APO of 2018-19. Thus, the water body was not created.

The CF and Field Director, PTR stated (June 2018) that due to delay in e-tendering process, the work could not be executed in the financial year 2017-18. Further, SFD had not demanded any separate funds in the APO of 2018-19 for execution of the above work. The fact remained that the work

²² Works to be carried out in Corridor - Check Naka and Maintenance; Habitat/Meadow improvement to increase food availability for herbivores; Corridor Maintenance; Maintenance of Water Holes; and Water Source creation

Works to be carried out in Buffer zone - Habitat/Meadow; Maintenance of Water Holes; Water Source Creation; Anti-poaching camp and check naka creation; and Protection Hut

²³ Khindsee feeder canal in Village Pali and Satrapur

included in the APO for providing of submersible HP was not done, though included in APO 2017-18. Government did not furnish any reply.

3.1.5.5 Compliance with other conditions

While according approval to the project of 765 hectares Aurangabad Padghe Transmission line in Shahapur division, the MoEF had inserted a condition that *“the boundary of the diverted forest land shall be demarcated on ground at the project cost by erecting four feet high reinforced cement concrete pillars each inscribed with its serial number forward and back bearing the distance from pillar to pillar”*. The User Agency had deposited an amount of ₹ 17.59 lakh for this conditional work in May 2016. However, no work was executed though a provision of ₹ 3.38 lakh was there in APO of 2017-18 and the same was made available in July 2017.

In reply, DCF, Shahapur stated (February 2018) that the estimate for the said works was submitted to the technical authority for approval which was awaited (October 2018). Government did not furnish any reply.

- Diversion of 5.264 hectares of forest land for Construction of Canal of New Mordad-Khordad Distributaries project in Dhule division was approved (April 2016) by the MoEF with the condition that the plantations on both sides of distributaries of Panzan Left Bank Canal will be undertaken by the User Agency at their cost within one year. However, the work was neither undertaken by the User Agency nor was enforced by SFD (July 2018).

DCF, Dhule stated (March 2018) that, the matter would be taken up with User Agency. Government did not furnish any reply.

3.1.6 Fund Management

During 2013-18, SFD received funds of ₹ 745 crore from adhoc CAMPA on the basis of APOs submitted to MoEF and expenditure of ₹ 773.24 crore was incurred (March 2018).

3.1.6.1 Non reconciliation of amounts remitted into Adhoc CAMPA.

Amounts towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation, NPV of forest land, Catchment Area Treatment Plan Funds *etc.*, are worked out by the SFD and are deposited by the concerned User Agencies directly into the adhoc CAMPA account through Challan/NEFT. A copy of the same is submitted to the division concerned alongwith the compliance conditions to stage-I approval.

The projects of diversion of forest lands are forwarded to MoEF through the APCCF. As such, the APCCF was aware of the amount credited by the User Agencies as part of compliance to the conditions put forth for the diversion of forest lands by MoEF. The APCCF cum Nodal Officer was, therefore, expected to ensure that the funds are credited correctly into accounts of State CAMPA and ensure periodical reconciliation of the same.

Audit observed that there was no database maintained by the Nodal Officer or at State CAMPA to verify the amount credited by user agencies and deposited into the Adhoc CAMPA account. The only record available was the Monthly Progress Report submitted by the circles which were compiled and maintained in excel sheet. In the absence of proper records, Nodal Officer could not

ensure the amount actually credited by the user agencies in Ad hoc CAMPA account, as the account was the combined account for all States. Therefore, reconciliation of the amounts deposited into the Ad hoc CAMPA accounts was not completed since inception.

APCCF cum Nodal Officer stated (December 2017) that as the amount recovered as compensatory levies are directly deposited in the account of Adhoc CAMPA, New Delhi, it was not fair to expect State Government to maintain the ledger for transaction that are not received by SFD. While furnishing the details of reconciliation it was stated that for the period 2006-13 the reconciliation was done in July 2014, however, ₹ 3.24 crore was pending reconciliation for which details had been sought from the bank at New Delhi. Reconciliation for the period 2013 to 2017 was pending and amount of ₹ 130.74 crore was still to be reconciled.

Government stated that the reconciliation of certain old proposals was still to be ascertained because at that point there was no system present for checking authenticity of each entry. Further, it was stated that as of November 2018, an amount of ₹ 195.06 crore was pending reconciliation.

3.1.6.2 Non reconciliation by circle offices

Analysis of statement of release of fund prepared by APCCF (CAMPAs), the Audit Report prepared by the Chartered Accountant and the actual receipt of fund shown in the records of circles during the period 2013-17 revealed differences as mentioned in **Table 3.1.2**.

Table 3.1.2: Reconciliation of funds disbursed

(₹ in crore)				
Name of the circle	Year	As per CA Report	Amount shown as disbursed by APCCF CAMPAs	Amount shown as received by the circle
Nagpur	2013-14	3.40	3.51	4.66
	2014-15	9.03	9.14	9.26
	2015-16	13.57	16.92	22.62
	2016-17	Not prepared	24.71	24.47
Thane	2013-14	Not furnished	12.37	12.37
	2014-15	18.12	16.83	18.58
	2015-16	14.57	14.68	14.68
	2016-17	18.62	15.68	Not prepared
Dhule	2013-14	6.67	6.74	6.68
	2014-15	7.78	7.96	7.96
	2015-16	7.81	8.01	7.88
	2016-17	14.83	16.86	16.82

Source : Information collected from circles

From the above it was clear that there was no reconciliation of figures between State CAMPAs and circles.

Government admitted the differences and stated that the same are being verified.

3.1.6.3 Outstanding recoveries of Net Present Value (NPV) pertaining to cases prior to 2002

The MoEF directed (October 2006) that the recovery of NPV was to be made in all cases of forest land diverted under FC Act, 1980 which included those

cases which were accorded in-principle approval before 30 October 2002 and for which final approval had either been granted on or after 30 October 2002 or shall be granted hereafter.

Audit observed that against the outstanding NPV of ₹ 32.66 crore worked out by SFD, ₹ 13.42 crore was recovered and balance amount of ₹ 19.24 crore was outstanding as of March 2018 i.e. even after lapse of 11 years.

Government stated that presently an amount of ₹ 16.98 crore was pending.

3.1.6.4 Irregular diversion of CAMPA funds

The Executive Committee had approved (August 2014 to December 2016) re-appropriation of funds of ₹ 11.26 crore from CAMPA on items²⁴ which were not included in the approved APO and inadmissible as per CAMPA guidelines. Out of ₹ 11.26 crore, an amount of ₹ 5.26 crore was yet to be recouped to CAMPA funds.

Though, the funds were diverted, the APCCF (CAMPA) was not maintaining any ledger or accounts to identify the amount transferred and recouped subsequently. The transactions were required to be traced from different files, bank statements *etc.*

Government accepted the fact and stated that only ₹ 25.60 lakh remained to be recouped.

The fact however remained that the diversion of funds was irregular.

3.1.7 Monitoring

3.1.7.1 Shortfall in the inspections of CAMPA plantations

As per norms prescribed (October 1995) by the PCCF (HoFF), Nagpur, the DCFs shall inspect and verify at least once all the plantations where pre-planting operations and planting are in progress. During First Year Operation (FYO), in addition to the inspection of planting and weeding, DCF shall inspect each plantation twice to review protection and also each plantation at least once during Second Year Operation (SYO) to Fifth Year Operation (5YO) to review the protection aspects. For Assistant Conservator of Forests (ACF), the inspections shall be carried out minimum of two times of each site during PPO to Tenth Year Operation (TYO).

In the eight test-checked (Gondia did not furnish information) divisions it was observed that during 2013-18, as against required 1,268 inspections of plantation for PPO to FYO the concerned DCFs conducted only 319 inspections. The concerned ACFs had conducted only 371 inspections as against required 1,536 inspections.

In the evaluation report published (December 2015), the SFD had observed that the intensity of inspections was found to be appalling, which was one of the reasons for poor quality of execution. Further, the details of inspections by supervisory officers were not available in many instances.

²⁴ Honorarium, Computerisation of accounts, Training to Ministerial staff, Extension to office building, Administrative expenses *etc.*

Government accepted the facts and stated that the norms for inspections have been revised (March 2018) and instructions issued (September 2018) to all implementing agencies to adhere to the norms.

3.1.8 Conclusion

The audit of State CAMPA revealed that a huge number of diversion proposals were pending at various stages for approval. The APCCF cum Nodal Officer did not maintain a database of non-forest land or degraded land received against the diversion of forest land. The details were also not maintained at APCCF (CAMPA) and at circles. The preparation of annual plan of operation was found deficient as there were cases of inclusion of compensatory afforestation works without adequate survey; non-inclusion of plantation works in plan within the stipulated period; inclusion of inadmissible items under CAMPA and inclusion of plantation works from State scheme. Besides, there were delays in submission of annual plans of operation to the Steering Committee. When compensatory afforestation works were executed on alternate lands, necessary approvals of MoEF were not taken always. MoEF's stipulations in respect of conditional works were also not followed. Thus, CAMPA funds could not be used economically and efficiently as delays in approvals had resulted in cost escalation which was not recovered from the user agencies and CAMPA funds had to be used. The scheme was ineffective in many instances as there were cases of diversion of fund for inadmissible purposes/unsuitable works and non-grounding of compensatory afforestation works under Annual Plan Operation as per rules. The reconciliation by APCCF cum Nodal Officer with Adhoc CAMPA for the amounts credited by the User Agencies was still pending. There were unreconciled differences between amounts released by State CAMPA and that shown as received by the circles. There were deficiencies in conducting inspections at field level resulting in weak monitoring with resultant poor quality in execution of works.

3.1.9 Recommendations

- Stage II approvals may be expedited. Cases pending for more than five years may be disposed off as per rules.
- A complete database of non-forest lands and degraded lands identified in lieu of diversions of forest lands should be maintained to ensure timely taking up of compensatory afforestation works.
- The mechanism to recover the differential cost from user agencies towards compensatory afforestation works must be strictly enforced.
- The annual plan of operation should be prepared with due diligence to avoid inclusion of irregular items and also ensure commencement of PPO within stipulated period as per extant guidelines.
- The APCCF cum Nodal Officer may ensure a system for early completion of pending reconciliation of the amounts credited by the User Agencies with Adhoc CAMPA.

Water Resources Department

3.2 Implementation of Small Hydro Projects on PPP basis in Maharashtra

3.2.1 Introduction

Power is a critical infrastructure on which the socio-economic development of the country depends. The growth of the economy and its global competitiveness hinges on the availability of quality power at competitive rates.

Water Resources Department (Department), Government of Maharashtra (GoM) declared Hydro-Power Policy in November 2002 which was applicable only to captive power producers with installed capacity upto 25 MW. The Government declared (September 2005) a revised policy for development of small hydro projects (SHPs) upto 25 MW installed capacity through private sector participation with an intention to harmonise the provisions in the State policy with those in Electricity Act²⁵, 2003 (Act).

Department in furtherance of the policy identified and displayed (September 2005), 121 SHPs (details of which shown in paragraph 3.2.2) with installed capacity of 417.92 MW to be offered to captive power producers²⁶ (CPP)/independent power producers²⁷ (IPP) through bidding process. The criteria for selection of developers were as under:

- The developers are selected on the basis of technical and financial capabilities, past experience and highest upfront premium²⁸ offered. The selected developer was also required to pay the threshold premium at ₹ 50 lakh/MW where Department had already made investment on trash rack²⁹ and penstock³⁰ and in other cases it is Nil. On selection, Letter of Permission (LoP) was issued to developer. LoP was also issued to the developer who came forward with his own site for development provided the project was not already identified by Department. The selected developer was required to prepare and submit a techno-economic feasibility report (TEFR) to GoM within three months from the receipt of LoP.

²⁵ The Electricity Act, 2003 has come into force since 10 June 2003 by replacing the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and Electricity Regulation Commission Act, 1998 with a view to de-license the generation and permit direct commercial relationship between Generation Company and consumer/trader

²⁶ Captive generating plant is a power plant set up by any person to generate electricity primarily for own use

²⁷ Independent generating plant is a power plant set up to generate electricity for sale to any consumer located in the state or any other willing distribution licensee or power trading company

²⁸ Upfront premium is primary consideration for allotment of the project

²⁹ A trash rack is a wooden or metal structure, frequently supported by masonry that prevents water-borne debris (such as logs, boats, animals, masses of cut waterweed *etc.*) from entering the intake of a water mill, pumping station or water conveyance. This protects water wheels, penstocks, and sluice gates from destruction during floods

³⁰ Penstock is a sluice or gate that controls water flow or an enclosed pipe that delivers water to hydro turbines

- After approval of TEFR, a letter of allotment (LoA) was issued to the developer within one month from the date of submission of TEFR. On receipt of LoA, developer was required to deposit the performance security and sign a hydropower development agreement (HDP) with the Department within eight days.
- After signing the HDP, the developer was to arrange for clearance and financial closure within six months. After getting this, GoM was required to issue a letter of authorisation (LoA) to the developer to start the project work within eight days on payment of the upfront premium. The developer was required to complete the project within 24 months from the date of authorisation.
- The Small Hydro Projects (SHP) allotted under this policy was on build, operate and transfer (BOT) basis for a period of 30 years starting from the date of commissioning. Department could extend the BOT period at its discretion. If the period was extended, the Department reserved the right to review the charges specified in the policy.
- Generated electricity can be sold to any consumer located in the State or any willing distribution licensee or any power trading company. However, Maharashtra Electricity Distribution Company should have first right of refusal. Sale of power should be as per dispensation emerging from the tariff and procurement process determination exercise initiated by Maharashtra Electricity Regulatory Commission.

3.2.2 Status of Projects

GoM had identified 121 sites for construction of SHPs based on availability of water, land, dam work completed/near completion, topo-sheet study and preliminary investigation conducted at field level. The status of 121 SHPs as on December 2018 is shown in **Table 3.2.1**.

Table 3.2.1: Status of Small Hydro Projects

Status	Government identified		Self-identified		Total	
	Nos.	Installed capacity (MW)	Nos.	Installed capacity (MW)	Nos.	Installed capacity (MW)
Bidding completed	19	31.30	11*	39.40	30	70.70
Bidding in progress	3	1.70	--	--	3	1.70
Feasibility study in progress	61	266.87	--	--	61	266.87
Project dropped	26	78.15	1	0.50	27	78.65
Total	109	378.02	12	39.90	121	417.92

Source: Information furnished by Department
*Note: *Included 10 Government-identified projects allotted as self-identified*

3.2.3 Organisational Set-up

The Principal Secretary, Water Resources Department is the administrative head of the Department. He is assisted by the Secretary, Command Area Development (CAD) at Mantralaya level, and (i) Chief Engineer (CE) (Electrical), Hydro Projects, Mumbai; (ii) CE (Civil) of the concerned regions; (iii) Superintending Engineer (SE); Koyna Design Circle (KDC), Pune; (iv) SEs (Civil) & (Electrical) of the concerned circles; and (v) the Executive Engineers (EE) of the divisions concerned at the field level for implementing

the policy for development of SHPs through privatisation. Activities of field offices for implementation of the policy are shown in **Table 3.2.2**.

Table 3.2.2: Activities of field offices for implementation of the policy

Activity	Competent Authority
Issue of LoP for Government identified SHP	CE (Electrical)
Issue of LoP for self-identified SHP	Secretary (CAD)
Authority for submission of TEFR	SE, KDC, Pune under intimation to Department
Authority for approval to TEFR	Secretary (CAD)
Signing of HPDA	CE (Civil) of the concerned region
Approving extension of time limit for clearances and financial closure/decision regarding forfeiture of performance security and cancellation of HPDA	Secretary (CAD) on recommendation of CE (Civil) of the concerned region
Imposing penalty for surrender of allotment	Secretary (CAD)
Monitoring progress of SHP	EE (Civil)
According extension of time limit for the development activity/imposing penalty for delay	CE (Civil) as per provision of HPDA with approval of Secretary (CAD)
Pre and post monsoon inspection of SHP	Joint inspection by the SE (Civil) & (Electrical) of the concerned region.
<i>Source: State Hydel Policy, 2005</i>	

3.2.4 Scope of Audit

The implementation of the Policy in the State was reviewed by the Audit during February to August 2018 by scrutinising the records in Department at *Mantralaya*, offices of the CE (Electrical), Hydro-project, Mumbai, three³¹ CEs of WRD, SE, KDC, Pune and EEs of eight³² divisions. Audit selected nine (installed capacity: 39.25 MW) out of 30 (installed capacity: 70.70 MW) projects for which bidding was completed, on random basis as shown in **Appendix 3.2.1**. The reply of State Government furnished in January 2019 has been incorporated suitably at appropriate places.

The audit findings, which emerged from the examination of records, are discussed below:

Audit findings

The audit findings include deficiencies in planning, tendering, implementation of project, shortfall in generation and monitoring which are detailed in succeeding paragraphs.

3.2.5 Planning

3.2.5.1 Feasibility study still in progress

As stated in **paragraph 3.2.2**, Department had identified 121 sites (installed capacity: 417.92 MW) for development of SHPs under revised Policy.

³¹ (1) CE (SP), WRD, Pune; (2) CE, NMR, Nashik; and (3) CE, Goshikhurd Project, Nagpur

³² (1) Kukadi Irrigation Division No. 1, Narayangaon, Pune; (2) Minor Irrigation Division, Kolhapur; (3) Medium Project Division, Kolhapur; (4) Nashik Irrigation Division, Nashik; (5) Nandur-Madhmeshwar Project Division, Nashik; (6) Upper Pravara Dam Division, Sangamner, Ahmednagar; (7) Mula Irrigation Division, Pune; and (8) Goshikhurd Dam Division, Pauni, Bhandara

Audit noticed that out of 121 sites identified by Department, 61 sites (installed capacity: 266.87 MW) were identified without carrying out feasibility study. Audit further noticed that of these sites, feasibility study of one site (installed capacity: five MW) is in progress and feasibility study of 60 sites (installed capacity: 261.87 MW) have not started till date (January 2019). Besides, 27 projects with installed capacity of 78.65 MW were also dropped being financially infeasible.

This indicated that no proper planning was done while finalising the sites for development of SHPs and the projected installed capacity had not been achieved even after lapse of more than 17 years from the enforcement of revised policy in September 2005.

State Government stated that most of the sites included in the list were identified 25-30 years back. For bidding purposes, the installed capacity was estimated on the basis of preliminary information furnished by civil wing of Department. Once these projects awarded to developer, he would carry out detail survey and investigation.

Reply corroborated the fact that Government had identified the sites for construction of SHPs without carrying out feasibility study. Thus, the objective of harnessing the green power with the help of private sector was largely defeated due to deficient planning.

3.2.5.2 Allotment of projects without tendering

As per Policy, if the developer comes forward with his own site for development of the project, Department should issue LoP directly provided the proposed project is not already investigated by Department. Decision of Secretary (CAD) of Department in this regard should be final.

Audit noticed that out of 11³³ self-identified projects, 10 projects³⁴, though included in the Government identified sites, were awarded to developers on the ground that detailed project reports of these sites were not done by the Department.

Thus, due to delay in completion of detailed project reports the sites, which were identified by the Department, were allotted to the developers without tendering, which resulted in loss of upfront premium, which could not be quantified and also lack of competitiveness and transparency.

³³ (1) Bhambhurda Taluka Mulshi, District Pune (5.00 MW); (2) Dhamani Dam foot, District Kolhapur (2.80 MW); (3) Ghatprabha, District Kolhapur (8 MW); (4) Ghod District Pune (0.50 MW); (5) Khodshi, District Satara (4.90 MW); (6) Mula Right Bank Canal (RBC) and Left Bank Canal (LBC), District Ahmednagar (4.9 MW); (7) Morana, District Sangali (0.40 MW); (8) Nilwande, District Ahmednagar (7 MW); (9) Nilwande High Level, District Ahmednagar (4.60 MW); (10) Suki, District Jalgalon, (0.50 MW); and (11) Yedgaon, District Pune (3 MW)

³⁴ (1) Bhambhurda Taluka Mulshi, District Pune (5.00 MW); (2) Dhamani Dam foot, District Kolhapur (2.80 MW); (3) Ghatprabha, District Kolhapur (8 MW); (4) Ghod District Pune (0.50 MW); (5) Khodshi, District Satara (4.90 MW); (6) Mula Right Bank Canal (RBC) and Left Bank Canal (LBC), District Ahmednagar (4.9 MW); (7) Morana, District Sangali (0.40 MW); (8) Nilwande, District Ahmednagar (7 MW); (9) Nilwande High Level, District Ahmednagar (4.60 MW); and (10) Yedgaon, District Pune (3 MW)

3.2.6 Tendering

▪ Short-recovery of threshold premium

As per Policy read with clause 2.1.3 of HPDA, the developer was required to pay threshold premium and upfront premium within one month from the date of receipt of letter from Department.

Audit noticed that two out of nine selected projects; there were short/non-recovery of threshold premium as discussed below:

- In respect of Nilwande HEP, District Ahmednagar, the Developer, paid (January 2011) only ₹ 3.5 crore, against ₹ four crore due (eight MW @ ₹ 50 lakh/MW) towards threshold premium, which resulted in short recovery of ₹ 50 lakh. Though the Department continuously instructed for payment of balance threshold premium, developer had not paid the same until date (October 2018).
- In respect of Ghatprabha SHP, District Kolhapur, the Department did not recover threshold premium of ₹ four crore.

Government stated that the Regional Chief Engineer was instructed to verify the issue of threshold premium in view of actual installed capacity and action would be taken accordingly. In respect of Ghatprabha SHP, it is stated that instruction was issued to field office to recover the threshold premium.

3.2.7 Implementation

As per Policy, the developer was required to commission the Project within 24 months from the date of authorisation. As against 30 SHPs tendered, 11 SHPs (36.85 MW) were commissioned while 19 SHPs (33.85 MW) were incomplete as of March 2018.

3.2.7.1 Completed Projects

Out of 11 commissioned projects, two projects (Ghatprabha SHP and Pimpalwadi dubi SHP) were commissioned within the time limit and nine projects were commissioned after delays ranging from one month to 63 months.

In respect of six selected commissioned projects, one project (Ghatprabha SHP) was commissioned within scheduled time and five projects were commissioned after delays ranging from 17 months to 63 months as detailed in **Appendix 3.2.2**.

Of the five projects, for two projects *i.e.* Yedgaon, district Pune and Mukane, district Nashik, the delay was due to delay in handing over of land to developers while in respect of Nilwande, district Ahmednagar the delay was due to delay in land acquisition for upper level powerhouse. Further, in respect of Radhanagari SHP, district Kolhapur the delay was due to delay in repairs to leakages in sluice gate and spillway of dam whereas in respect of Darana SHP, district Nashik the reasons for delay could not be ascertained from records. The other audit findings are discussed below:

- **Ghataprabha SHP, District Kolhapur (Self-identified)**

The LoA was issued (January 2009) to the developer with installed capacity of eight (2×4) Megawatt (MW) and projected annual generation was 12.67 million units (mus) to be commissioned by November 2013. The project was commissioned in July 2011.

Scrutiny revealed that the Ghataprabha SH Project was shortlisted by the Department, however, the LoP was issued (June 2008) to Developer as self-identified project. The SE, KDC, Pune did not specify the actual installed capacity and approved the project at 2×2.5 MW or more in TEF. The developer has, however, set up two turbines of four MW each *i.e.*, eight MW which were unworkable as the capacity utilisation factor³⁵ of the project was only 18 *per cent* indicating unviable. Further, the internal rate of return was 7.78 *per cent* only as against prescribed 11 *per cent* by the Department. As per the approved water table, the annual generation was worked out on the basis of installed capacity of eight MW, however, the design of penstock, turbine and generator was prepared based on installed capacity of five MW, which was also not justifiable. However, SE, KDC, Pune declared the project financially viable.

Audit noticed that as against the 70.35 mus projected annual generation from July 2011 to January 2017, the actual generation during the said period was 68 mus. Thus, there was short generation of 2.35 mus. It was further noticed that the power generation had been stopped since February 2017 due to failure in SCADA³⁶ system and control & relay panels.

Government stated that shortfall in generation was due to release of water to fill up the K.T. weirs downstream of dam. Further, developer was responsible for loss of power generation and field office instructed the developer from time to time for repairing of SCADA system.

3.2.7.2 Incomplete projects

As per Policy, developer was required to commission the project within 24 months from the date of authorisation. Audit noticed that 19 projects, with installed capacity of 33.85 MW, remained incomplete due to incomplete gorge filling work in dam, preparation/revision/modification of HPDA under progress, dam work stopped due to opposition of PAPs, incomplete rehabilitation works, letter of authorisation not issued *etc.*

In respect of two out of three selected ongoing projects with installed capacity of 6.05 MW, the delays in completion of SHPs ranged from 39 to 53 months as detailed in **Appendix 3.2.3**. Of the three projects, one project *i.e.* Goshikhurd (RBC) SHP, Pauni, district Bhandara, the time limit for completion of project was not expired whereas in respect of Waki SHP district Nashik the delay was due to non-completion of dam. In respect of Mula (Right

³⁵ Capacity utilisation factor is the ratio of actual gross energy generated by the project to the equivalent energy output as its rated capacity over the year

³⁶ Supervisory control and data acquisition (SCADA) is a computer system for gathering and analysing real time data. It is used to monitor and control a plant or equipment in industries such as telecommunications, water and waste control, energy, oil and gas refining and transportation

Bank Canal and Left Bank Canal) SHP the delay was due to the title of land was not in the name of Water Resources Department.

Government stated that instruction was issue to CE, NMR, Nashik for review of progress of Waki SHP and subsequent action against the developer. In respect of Mula SHP, it was stated that the land was now in the name of WRD and financial closure by developer was in progress. The extension of time limit upto April 2020 was given for completion of project.

3.2.8 Shortfall in generation of power

The TEFR was to be prepared considering the release of the water strictly as per irrigation/domestic/industrial demands and the generation was to be synchronised with these releases. Department reserved the right to decide the release schedule and modify it from time to time as per the requirements. No claims of compensation on these grounds (*less release of water*) should be entertained.

Scrutiny of six selected SHPs commissioned revealed that as against the projected annual generation of 462.35 mus based on TEFR, the actual generation upto March 2018 was 333.91 mus (*72 per cent*) as detailed in **Appendix 3.2.4**. The reasons for non-achieving of projected annual generation were non-acquisition of land in submerged area, delay in handing over and less release of water *etc.*

Further scrutiny revealed that in respect of Nilwande low level SHP the targeted generation was achieved whereas in respect of Mukane SHP, generation was not commenced due to change in location of sub-station for grid connectivity by MSEDCL. In remaining four SHPs, there was shortfall in the annual generation of power ranging from three *per cent* (Ghatprabha SHP) to 89 *per cent* (Yedgaon SHP) of the targeted annual generation mainly due to less release/availability of water. Thus, the condition regarding the release of water in the Policy, HPDA and TEFR was not in consistent with the objective of creating suitable environment for attracting private sector investment.

3.2.9 Monitoring

Audit noticed that though review meetings were conducted during July 2013 to October 2016 wherein difficulties in implementation of projects were discussed, the project specific issues were not discussed in the said meetings. No review meetings were conveyed thereafter either by CE (Electrical), Hydro Projects or at Government level.

Government stated that periodical meetings were taken up at Government level and instruction was issued to CE (Electric) to conduct monthly meetings with CE (Civil) of concerned region to address various issues concern with development of SHPs.

The reply substantiates audit findings that there was lack of co-ordination between the CE (Civil) and CE (Electrical) which adversely affected implementation of the projects, as brought out in earlier paras.

3.2.9.1 Non-revision of hydro policy

As per the State Hydel Policy 2005, the policy should periodically be reviewed in view of the dynamic economics of the sector. In normal circumstances, next review should be after three years.

Audit noticed that though CE (Electric) had carried out review and submitted (September 2008 and December 2013) a draft policy suggesting various amendments/revisions to overcome the constraints at various stages of implementation, no action has been taken at Government level.

State Government stated that CE (Electric) was directed to evaluate the outcome of Hydel Policy, 2005 in view of benefits and various aspects/lessons learnt during implementation. Further, draft of revised Hydel Policy, 2008 was being circulated to Regional CE (Civil) and other line department for their comments.

3.2.10 Conclusion

Audit on implementation of Small Hydro Projects on PPP basis covering the period 2013-18 revealed that out of 121 sites identified by the Department, the feasibility study of 61 sites (installed capacity: 266.87 MW) had not been completed at the time of identification of sites and 27 sites (installed capacity: 78.65 MW) were dropped being financially infeasible. Further, as against estimated installed capacity of 417.85 MW, only 36.85 MW installed capacity was achieved.

In respect of six selected commissioned projects, one project was commissioned within scheduled time and five projects were commissioned after delays ranging from 17 months to 63 months. There was time overrun ranging from 39 to 53 months in respect of two ongoing projects due to non-completion of dam and land handed over to developer was not in the name of the Department. The projected annual power generation was not achieved, among other things, due to release of lesser volume of water.

Thus, due to improper planning and inadequate monitoring the objective of harnessing the green power with the help of private sector was largely defeated. Had the planning and monitoring been better, the outcome could have been different.

3.2.11 Recommendations

- Government may complete the feasibility study in respect of listed projects in a time-bound manner.
- Government may address the issue of less release of water so as to have fair terms for PPP Projects.
- There was a need to focus on the issues on hand and work out a solution to take the project forward or short close the same if a feasible solution was possible.

3.3 Implementation of Accelerated Irrigation Benefits Programme

3.3.1 Introduction

The Government of India (GoI) launched an Accelerated Irrigation Benefits Programme (AIBP) during 1996-97 to provide Central Loan Assistance (CLA) to major³⁷/medium³⁸ irrigation projects in the country with the objective to accelerate the implementation of those projects, which were beyond resource capability of the States, or were in advanced stage of completion. From 2005-06 onwards, Central assistance was given in the form of grants instead of CLA. Since inception, 68 major/medium projects were included under AIBP in the State of Maharashtra, of which 39 projects were completed as on 31 March 2013. Out of remaining 29 projects, five were completed during 2013-18 leaving 24 projects, which were ongoing as on March 2018.

Implementation of AIBP in the State is done by the State Government in Water Resources Department (WRD) through five³⁹ Irrigation Development Corporations (IDCs) which are responsible for construction and management of Irrigation Projects in the State. A State Level Technical Advisory Committee⁴⁰ (SLTAC) scrutinises and gives clearance to proposals of administrative approval/revised administrative approvals costing above ₹ 25 crore.

The Audit was conducted between May 2017 and September 2017 and information obtained in November 2018 covering the period 2013-18 through a test-check of records in WRD at *Mantralaya* and all the five IDCs, with a view to review implementation of the AIBP in the State. For detailed audit, 18 projects out of 29 were selected on random sampling basis as given in **Appendix 3.3.1**. Joint inspection of project sites was also done by audit along with the officials of IDCs. The replies of the WRD received (February/December 2018) have been included wherever necessary.

The audit findings, which emerged from the examination of records in these offices, are discussed below:

Audit findings

The audit findings on financial management, project implementation, contract management, creation of irrigation potential and its utilization and monitoring are discussed in succeeding paragraphs.

³⁷ Projects having culturable command area (CCA) of above 10,000 hectares (ha)

³⁸ Projects having CCA above 2,000 ha and upto 10,000 ha

³⁹ (i) Maharashtra Krishna Valley Development Corporation (MKVDC) for Western Maharashtra (ii) Konkan Irrigation Development Corporation (KIDC) for Konkan region (iii) Godavari Marathwada Irrigation Development Corporation (GMIDC) for Marathwada region (iv) Vidarbha Irrigation Development Corporation (VIDC) and (v) Tapi Irrigation Development Corporation (TIDC) for Vidarbha/Marathwada regions

⁴⁰ GoM constituted (November 2010) State Level Technical Advisory Committee to scrutinise proposals pertaining to AA and RAA of water resources projects costing above ₹ 25 crore. The Committee chaired by Director General, Design, Training, Hydrology, Research & Safety, Nashik with Chief Engineer, Design, Training, Research & Safety, Nashik and Chief Engineer, Planning & Hydrology, Nashik as members and Superintending Engineer, Data Collection, Planning & Hydrology, Nashik as Member-Secretary

3.3.2 Financial Management

The balance cost of the project at the time of inclusion in AIBP was considered for assistance under AIBP. The share of GoI under AIBP since 2006 was 90 per cent for drought prone, tribal and flood prone areas (which was reduced to 75 per cent and 60 per cent from 2013 and 2015 onwards) and 25 per cent from 2013 onwards for other areas. Funds under AIBP were released by GoI to the State Government as per the progress of work based on the sharing criteria. The State Government was required to release the Central share and the State's matching share to the IDCs, which in turn were expected to release the funds to the executing divisions based on their demand limited to overall administrative approval for the project. The budget provision, release of Central and State share funds and expenditure incurred during 2013-18 are given in **Table 3.3.1**.

Table 3.3.1: Budget provisions, release of fund vis-à-vis expenditure during 2013-18
(₹ in crore)

Year	Budget provision		Receipt of Central Share*	Release of State Share	Total funds received	Expenditure
	Central share	State share				
2013-14	1135.59	509.77	279.52	1280.57	1560.09	2036.39
2014-15	956.45	757.88	32.00	1121.49	1153.49	1239.97
2015-16	562.36	600.10	307.80	2406.13	2713.93	1872.98
2016-17	1270.96	1417.62	379.87	3254.83	3634.70	2756.43
2017-18	596.96	2132.52	346.86	2132.51	2479.37	2960.04
Total	4522.32	5417.89	1346.05	10195.53	11541.58	10865.81

Source: Information furnished by WRD, GoM
Note: Budget provision, fund release and expenditure incurred is related to all - ongoing projects under AIBP in that year
 * GoI has released less central fund due to less allocation of fund to the Ministry

During 2013-18, the total fund released under AIBP was ₹ 11,541.58 crore (Central share ₹ 1,346.05 crore and State share ₹ 10,195.53 crore), against which expenditure incurred was ₹ 10,865.81 crore.

3.3.2.1 Projects deprived of funds due to delays in according revised administrative approval

Para 134 of Maharashtra Public Works (MPW) Manual provided that revised administrative approval (RAA) should be obtained when there was a likelihood of expenditure exceeding the amount of administrative approval (AA) by 10 per cent.

In test check projects, there was a delay in according RAA in two projects viz., Warna Medium Irrigation Project and Sangola Branch Canal Project, as detailed below:

- **Warna Medium Irrigation Project**

The project was administratively approved (January 1967) for ₹ 31.64 crore, which was revised from time to time until latest revision in July 1986 for ₹ 288.47 crore. The upto date expenditure upto March 2005 was ₹ 288.32 crore. The project was included under AIBP in 2005-06 and upto date expenditure incurred upto March 2012 was ₹ 519.81 crore. Meanwhile, MKVDC submitted (January 2011) proposal to GoM for according third RAA

for ₹ 2,149.95 crore which was approved in October 2016 for ₹ 1,174.98 crore. As a result, no fund was provided to the project between April 2012 and March 2016. Thus, due to non-availability of funds, the work was not completed and hence project was delayed. The work of canal was deferred and the command area of the project was irrigated through lifts from the river.

- **Sangola Branch Canal Project**

The project was administratively approved (September 1977) for ₹ 0.46 crore, which was revised from time to time upto December 2003 for ₹ 288.01 crore. The upto date expenditure upto March 2007 was ₹ 76.41 crore. The project was included under AIBP in 2007-08 and upto date expenditure incurred upto March 2014 was ₹ 276.73 crore. The MKVDC submitted (December 2014) proposal to GoM for according third RAA for ₹ 937.92 crore which was approved in October 2016 for ₹ 937.92 crore.

Thus, due to delay in grant of RAAs, no fund was provided to the project from 2014-16. The project was planned to be completed in December 2019.

WRD stated (February 2018) that the delay in granting RAA to projects was due to necessity of obtaining approval of SLTAC as per the revised guidelines.

The fact remained that these projects especially Sangola Branch Canal project which was taken up to cater to the need of drought prone areas lagged behind for want of funds.

3.3.2.2 Non-recovery of outstanding dues

(i) KIDC is implementing the Tillari Project as an inter-state project between Government of Maharashtra (GoM) and Government of Goa (GoG) with a view to create irrigation potential of 6,676 hectares (ha) in Maharashtra State (Tillari river basin in Sindhudurg district) and 14,521 ha in Goa State.

As per inter-state agreement between GoM and GoG (April 1999), the cost of construction and operation was to be shared by GoM and GoG in the ratio of 26.70 and 73.30 *per cent* respectively. Further, as per clause 3(v) *ibid*, the cost of some portions of main canal, branches and distributaries serving exclusively the territories of one State only should be borne by that State alone.

The cost as per the latest (fourth) RAA (June 2017) was ₹ 2,496.78 crore (GoM share ₹ 1,667.21 crore and GoG share ₹ 829.57 crore). The upto date share to be recovered from GoG on headwork and canal work was ₹ 568.19 crore as on March 2018. Of which, GoG released fund of ₹ 478.11 crore leaving balance of ₹ 90.08 crore.

Audit observed that GoG did not release its contribution to GoM since 2013-14. Though KIDC was pursuing the matter with GoG for payment of the dues, GoM belatedly requested GoG to pay the pending dues, in November 2015, November 2016 and August 2018 stating that non-receipt of the dues was hampering the progress of the project. GoG agreed (August 2018) to release ₹ 15 crore initially, however, only ₹ five crore was paid so far (November 2018).

(ii) The height of Waghur Dam under TIDC was increased (December 1997) by two meters for providing drinking water to Jalgaon Municipal Corporation

(JMC) for which Water Supply and Sanitation Department (WSSD), GoM was required to pay ₹ 47.55 crore to the WRD. However, WSSD had not paid the said amount. After closing of WSSD, the liability for payment of dues lies with the JMC. Subsequently, WRD updated (July 2018) the cost of work at ₹ 757.85 crore as per the yardstick of minor irrigation tank.

WRD stated (December 2018) that the recovery was being pursued with GoG and JMC.

3.3.3 Project Implementation

3.3.3.1 Delays in completion of the Projects - Time and cost overruns

As per the AIBP guidelines, the projects were to be completed within four financial years from the inclusion under AIBP. Out of 29 projects, five were completed during 2013-18, leaving 24 projects ongoing as on March 2018. The status of completion of 18 test-checked projects as on March 2018 is given in **Table 3.3.2**.

Table 3.3.2: Status of completed and ongoing projects taken up under AIBP

Name of the IDC	Number of Test checked Projects	Completed Projects			On-going Projects		
		Number of Projects completed	Delay from the stipulated date of completion under AIBP	Cost overrun with reference to the approved cost under AIBP (₹ in crore)	Number of Ongoing Projects	Delay from the stipulated date of completion under AIBP	Cost overrun with reference to the approved cost under AIBP (₹ in crore)
GMIDC	2	0	-	0	2	5 to 9 years	1778.03
KIDC	3	0	-	0	3	6 to 8 years	1019.00
MKVDC	6	1	7 years	0	5	4 to 7 years	557.00
TIDC	3	1	7 years	9.21	2	6 to 18 years	1031.13
VIDC	4	0	-	0	4	7 to 10 years	3092.13
Total	18	2		9.21	16		7477.29
<i>Source: Information furnished by WRD, GoM</i>							

Audit noticed that though the balance cost of 18 tested checked projects at the time of inclusion under AIBP was ₹ 4,089.07 crore, the upto date expenditure (not just five years) incurred under AIBP as on March 2018 was ₹ 11,575.57 crore. Thus, there was cost overrun of ₹ 7,486.50 crore due to delay in completion of projects. The major reasons for the delay were stated to be slow progress of land acquisition (10 projects), opposition of PAPs demanding compensation as per new Land Acquisition Act (one project), PAPs demanding cash compensation (one project), opposition of PAPs for construction of dam (one project), PAPs demand for irrigation water for themselves (one project), shortage of funds (five projects), delays in receipt of RAA from GoM (two projects), change in scope of work (three projects) etc. The Project wise reasons are shown in **Appendix 3.3.2**.

The WRD stated (December 2018) that delays in completion of projects were beyond the control of WRD and due to rising inflation indices and various valid reasons the balance cost of projects increased. However, by declaring special packages to PAPs, utilisation of artificial sands instead of natural sands wherever possible and administrative as well as policy reforms the projects would be completed in next one to three years.

The fact remained that the projects were delayed, which resulted in cost and time over run.

3.3.3.2 Incomplete Rehabilitation and Resettlement

As per the Maharashtra Project Affected Persons Rehabilitation Act, 1999, the State Government should provide civic amenities at the prescribed scale and manner in the new resettled village or in the extended part of any existing village established for the purpose of rehabilitation of PAPs. Such amenities should include 18 amenities mentioned under clause 10 (3) of the Act *ibid* such as schools, roads, cemetery, pastureland *etc.*

In test checked projects, it was noticed that rehabilitation and resettlement was completed in respect of three projects *i.e.*, Warna, Tillari and Sangolo Branch Canal and in respect of two projects *i.e.*, Tarali and Arjuna it was almost completed. In respect of Krishna Koyna Lift Irrigation Scheme the rehabilitation and resettlement was not required while in respect of Aruna the dam work is yet to start. The rehabilitation and resettlement of Dhom Balakwadi and Wang Medium Irrigation project was in progress. The observations noticed in these two projects are discussed in **Table 3.3.3**.

Table 3.3.3: Status of rehabilitation of PAPs vis-à-vis amenities provided to rehabilitated villages

Name of the Project	Date of AA/cost of Project as per latest RAA	Affected villages PAPs/ Families	Status of rehabilitation of PAPs	Amenities not provided in the villages
Wang Medium Irrigation, District: Satara	31-10-1995/ ₹ 235.91 crore	9 villages 1,922 families	832 families were resettled and 1,090 families were still to be resettled.	Eight amenities ⁴¹ were not provided in the 15 new villages where PAPs were relocated despite a lapse of five years since project was to be completed in 2011 after inclusion under AIBP in 2008-09. It was further observed that out of 1,922 families, land has been distributed fully to 832 families, partly to 208 families and land to 882 families was yet to be distributed as PAPs are unwilling to move to new location. The WRD stated (December 2018) that important civic amenities like water supply, electrification, samaj-mandir, internal metal roads were provided. All construction works and allotment of plots would be completed by January 2019.
Dhom-Balkawadi, District: Satara	11-06-1996/ ₹ 1402.51 crore	4 villages 757 PAPs	757 PAPs rehabilitated	Two additional amenities ⁴² were to be provided in one village, where PAPs were relocated, however, the same was not provided till date. The WRD stated (December 2018) that the work of additional civic amenities would be completed by December 2018.

Source: Documents as collected by audit from Department/IDCs

⁴¹ (i) Open built up gutters, (ii) Cremation ground, (iii) Village Panchayat office, (iv) Land for bus stand, (v) Land for market, (vi) Water cistern for cattle, (vii) Pasture land and (viii) Access to farm land

⁴² (i) Village panchayat bhavan and (ii) Bus stop

3.3.4 Contract Management

Scrutiny of records related to execution of work in the test-checked projects revealed the following:

3.3.4.1 Award of work without inviting tenders

As per Para 200 of MPW Manual, tenders should invariably be invited publicly for all works to be given out on contract except extra items which were required to be executed while the work originally undertaken was in progress and which were really inseparable from the original contract and could not conveniently be done by a different agency.

Krishna Koyna Lift Irrigation Scheme (KKLIS) implemented by MKVDC was included in AIBP in 2009-10. WRD accorded (December 2006 and July 2007) approval for allotment of 29 works costing ₹ 43.34 crore pertaining to earthwork and construction of structures in various minors⁴³ of Takari Main Canal to two sugar co-operative factories⁴⁴ without inviting tenders on the ground of urgency and inability of MKVDC to complete these works immediately due to paucity of funds. Audit noticed that these works actually allotted to the sugar co-operative societies during 2009-10 to 2011-12, thus, there was no urgency in carrying out the works and therefore tendering process should have been resorted to in awarding the work. Further, these 29 works were in progress and only 80 per cent work amounting to ₹ 38.81 crore was completed till December 2018.

The WRD stated (December 2018) that there was urgency to execute works, however, due to paucity of funds and these agencies were ready to carry out the works without any condition of timely payment and escalation the works were awarded without tendering. This helped in creating irrigation potential of 10,200 ha in drought prone area and saving in cost and time.

The reply was not acceptable as these works were still incomplete even after a lapse of seven to eight years and thus, very purpose of awarding work without inviting tenders was defeated. Further, awarding the work without inviting tenders resulted in non-verification of experience and eligibility of contractors, which is evident in instant case that the works were still incomplete.

3.3.4.2 Excess payments to contractor

Arjuna Irrigation Project, Taluka Rajapur, District Ratnagiri was included in AIBP from 2007-08. The work was in progress and expenditure incurred upto December 2018 was ₹ 559.29 crore.

Scrutiny of records revealed that contractor had carried out the work of 'construction of embankment for hearting⁴⁵ zone' and 'construction of embankment for casing⁴⁶ zone'. The payment of ₹ 44.37 crore was made to contractor in September 2011. It was, however, noticed that Department had sanctioned (between April 2011 and May 2011) Extra Item Rate List (EIRL)

⁴³ A branch of distributary of canal

⁴⁴ (i) Sonhira Sahakari Sakhar Karkhana (SSK) Ltd (₹ 30.75 crore) and (ii) Dongrai Sagareshwar Shetkari Sahakari Karkhana Ltd.

⁴⁵ Hearting zone is zone of impervious earth within a zoned earthen or rock fill dam

⁴⁶ Casing zone is the outer side of hearting zone placed with pervious soils so as to protect the hearting zone

towards spreading the hearting and casing material by Dozer. Accordingly, ₹ 17.60 crore was paid (September 2011) to contractor towards EIRL. Since construction of embankment for hearting and casing zone was already included in the tender for which payment was made to the contractor as per tender rate, additional payment to the contractor on the ground of extra efforts was irregular and thus, resulted in excess payment of ₹ 17.60 crore.

WRD stated (December 2018) that there was no provision in the tender item for carrying out this work by mechanical means (dozer) but for achieving the progress of work contractor actually executed the work by using dozer.

The reply was not in consonance with the item No. 6, 7 and 8 of schedule B of tender document, which specified that the construction of embankment for hearting and casing zone with selected material and with all lead and lifts and its consolidation was to be done by contractor. Therefore, the cost of executing the work by any means including mechanical means was to be borne by the contractor.

3.3.5 Irrigation Potential created and utilised

The Irrigation Potential (IP) created and IP utilisation of two completed projects revealed that in respect of Warna Project, District Sangli, IP created (12,247 ha) was fully utilised. However, in respect of Gul Project, District Jalgaon, as against IP created of 3,025 ha the actual utilisation was only 350 ha due to non-execution of On-Farm Development Works (Command Area Development and Water Management) and diversion of water (64 per cent) for non-irrigation purpose for Chopda Municipal Council.

3.3.6 Monitoring

Monitoring of the project included under the AIBP is essential to ascertain the reasons for any shortfall/bottlenecks and suggest remedial measures to ensure completion of the project in a time-bound manner.

Government stated (February 2018) that the review of progress of projects as well as co-ordination among various departments such as forest, revenue *etc.*, is done regularly and effectively. For monitoring a special cell is also established to monitor physical and financial progress of all AIBP projects.

Reply is not convincing as in spite of creating of special cell and monitor at Department level, the issues relating to land acquisitions, delay in RAA *etc.*, which in effect delay in completion of project.

3.3.7 Conclusion

Under Accelerated Irrigation Benefit Programme (AIBP), 68 major/minor projects were included in the State since inception, of which 39 projects were completed prior to March 2013. Out of the remaining 29 projects, five were completed during 2013-18 leaving 24 projects ongoing as on March 2018.

The total fund received under AIBP were ₹ 11,541.58 crore (GoI share: ₹ 1,346.05 crore; GoM share: ₹ 10,195.53 crore) during 2013-18 against which expenditure incurred was ₹ 10,865.81 crore. The GoM delayed request for recovery of ₹ 90.08 crore towards construction and operation cost of Tillari Major Irrigation Project from Government of Goa since 2013-14. The Jalgaon Municipal Corporation (JMC) owed ₹ 757.85 crore to the Tapi Irrigation

Development Corporation towards cost involved in increasing height of Waghur dam for providing drinking water to JMC.

Out of 18 test checked projects in audit, 16 (89 per cent) were not completed within the timeline thereby defeating the very objective of accelerating the completion of irrigation projects under the AIBP. The time overrun in 18 projects ranged between five years to 10 years while the cost overrun was ₹ 7,486.50 crore.

In Wang project out of 1,922 families to be resettled only 832 were resettled while eight amenities in the 15 villages of Wang project and two amenities in one village in Dhom-Balkawadi project were not provided.

Agriculture, Animal Husbandry, Dairy Development and Fisheries Department

3.4 Recurring Loss and Nugatory expenditure

Indecision to close down Mother Dairy, Kurla and Central Dairy, Aarey, Goregaon and to accommodate the identified surplus staff and machineries in Government Milk Scheme, Worli by Dairy Development Department and Government resulted in recurring loss of ₹ 39.11 crore per annum as well as nugatory expenditure of ₹ 17.51 crore.

The Government Milk Scheme (GMS) is a departmentally managed Scheme under the administrative control of the Agriculture, Animal Husbandry, Dairy Development Department (Department), Government of Maharashtra (GoM). There are 32 GMS and 67 Chilling Centers in the state of Maharashtra. In Mumbai, there are three dairies *i.e.*, Central Dairy, Aarey, Goregaon, Mother Dairy, Kurla and Greater Mumbai Milk Scheme (GMMS), Worli with installed capacity of 2.20 lakh litres per day (llpd), 4.00 llpd and 4.50 llpd respectively.

GoM decided (2002) to hand over GMS in stages to Cooperative sector. The Department declared 5,029 posts in January 2003/May 2006 as “Surplus” in these three dairies. The General Manager (GMMS), Worli submitted (May 2007 and September 2012) a proposal to the Dairy Development Commissioner, Maharashtra State, Mumbai (Commissioner) to close down the Mother Dairy, Kurla and Central Dairy, Aarey, Goregaon and accommodate staff and machinery of the dairy in GMMS, Worli. However, no action was taken on the proposal submitted by the General Manager, GMMS, Worli.

Commissioner belatedly submitted (September 2012 and July 2013) proposal to the Department to close down Mother Dairy, Kurla and Central Dairy, Aarey, Goregaon and accommodate staff, labour and machineries as well as continue milk distribution from GMS, Worli. However, no decision has been taken at Department/Government level (October 2018).

In the meantime, out of the total original sanctioned posts of 8,542, Department sanctioned (August 2014) revised staff pattern of 4,097 posts for the Dairy Development Department which included 1,160⁴⁷ posts pertaining to

⁴⁷ Mother Dairy, Kurla: 322 posts; Central Dairy, Aarey: 270 posts and GMMS, Worli: 568 posts

these three dairies and surrendered 4,445 posts (including 645⁴⁸ surplus post of these three dairies), on the basis of the recommendations (July 2014) of a High Powered Committee⁴⁹ constituted to assess the manpower requirements of Dairy Development Department.

The dairies continued to function without any/meager milk production (market share of about 2-3 *per cent* in Mumbai). The dairy-wise summarised position of net loss, salary and non-salary expenditure as well as salary and wages on surplus staff is shown in the **Table 3.4.1**.

Table 3.4.1: Dairy-wise summarised position of net loss, salary and non-salary expenditure for the period 2014-16. (₹ in crore)

Name of Dairy and handling capacity	Actual Production of milk in litres per day (utilisation percentage)	No. of Regular Staff (excluding surplus staff)	Total Expenditure and percentage of expenditure on salary and wages	Net Loss	No. of identified Surplus Staff	Expenditure on salary and wages of surplus staff	Expenditure on electricity, water and furnace oil
Mother Dairy, Kurla (four lakh litres per day)	Nil (0 <i>per cent</i>)	239	37.83 (85)	42.91	126	7.47	1.34
Central Dairy, Aarey, Goregaon (2.20 lakh litres per day)	9777 to 11067 (5 <i>per cent</i> ⁵⁰)	216	42.64 (88)	35.32	322	10.04	2.90
GMMS, Worli (4.5 lakh litres per day)	27987 to 38901 (9 <i>per cent</i> ⁵¹)	741	81.70 (70)	70.69	197	5.91	7.79

Source: Annual Proforma Accounts for the year 2014-15 and 2015-16 of respective Dairies
Note: Annual Proforma Accounts for the year 2016-17 of three Dairies are not prepared till date

Thus, indecision on the part of the Commissioner, Dairy Development Department and Government, to close down Mother Dairy, Kurla and Central Dairy, Aarey, Goregaon and shift the machineries, as well as to accommodate the identified surplus staff of these two dairies in Greater Mumbai Milk Scheme, Worli resulted in net loss of ₹ 39.11 crore⁵² per annum as well as nugatory expenditure of ₹ 17.51 crore⁵³ on salary and wages of surplus staff and expenditure of ₹ 4.24 crore on electricity, water and furnace oil.

Government stated (July 2018) that to reduce the losses and run government dairy units from a business point of view, Government decided (November 2017) to renovate the GMS through public private participation (PPP). On receipt of report from technical consultant, the proposal will be submitted to Government.

⁴⁸ Mother Dairy, Kurla: 126 posts; Central Dairy, Aarey: 322 posts and GMMS, Worli: 197 posts

⁴⁹ The High Power Committee was headed by the Chief Secretary to the GoM

⁵⁰ $11,067/2,20,000\% = 5.03$

⁵¹ $38,901/4,50,000\% = 8.64$

⁵² Mother Dairy, Kurla, Mumbai ₹ 42.91 crore + Central Dairy, Aarey, Goregaon, Mumbai ₹ 35.32 crore = ₹ 78.23 crore ÷ 2 = ₹ 39.11 crore

⁵³ Mother Dairy, Kurla, Mumbai ₹ 7.47 crore + Central Dairy, Aarey, Goregaon, Mumbai ₹ 10.04 crore = ₹ 17.51 crore

Government should consider further rationalisation of staff in the dairies proposed to be closed down in the light of meager supply of milk by these dairies.

WATER RESOURCES DEPARTMENT

3.5 Fraudulent Payment

Fraudulent payment of ₹ 12.21 crore against purported supply of material, which had actually never been supplied or brought to the work-site.

Uma barrage project (UBP) envisaged construction of barrage across Uma river in Akola district with a view to irrigate 5,510 hectares of land.

Appendix 24 of the Maharashtra Public Works Manual (Manual) stipulated that the payments to contractors or suppliers were to be made on ascertaining the quantity of work done (including supplies made) and the quality of the works done i.e. whether the work had been done according to the specifications laid down or not. These details should be recorded in measurement book. Further, the person recording the measurements must satisfy himself by personal verification on the spot that each dimension that he was writing down in the measurement book did actually measure to the extent noted. Measurement book was thus, the basis of account of all quantities of work executed or material supplied. Measurement book should be maintained carefully being a very important account record as it may have to be produced as evidence in a Court of Law.

According to Rule 11 of Schedule of Power, referred in the Manual, the Sub-Divisional Engineer should exercise 100 *per cent* check on such measurements recorded by the Junior Engineer and the Executive Engineer must exercise at least five *per cent* check of the final measurements.

The work of 'Providing and fixing vertical lift type service gates and allied works' of the UBP was awarded (October 2009) by the Executive Engineer (EE), Minor Irrigation Division No. 2, Akola (Division) to a contractor at a tender cost of ₹ 16.20 crore (4.95 per cent above the estimated cost of the work). The work was stipulated to be completed in 24 months (October 2011). It was, however, extended up to June 2016. The contractor was paid ₹ 15.28 crore for the work executed till March 2012 (4th running account bill). Thereafter, the work stopped from July 2012 due to failure of the contractor to execute the work as per schedule. The compensation⁵⁴ from 01.07.2014 under Clause 2 of the contract was also levied on the contractor. But, it could not be recovered from the contractor.

Scrutiny (September 2017) of records of the Division revealed that during joint measurement (December 2015) of the work conducted by the officials of the division as well as by the contractor's representatives, it came to light that the contractor had executed the work of ₹ 3.07 crore only against the actual

⁵⁴ Compensation at the rate of ₹ 10,000 per day from 01.07.2014 and later, it was raised to ₹ 20,000 per day from 07.11.2014, was levied under Clause 2 of the contract because of the continued non performance by the contractor. The amount of compensation due from the contractor was worked out to be ₹ 1.22 crore as of August 2017

payment of ₹ 15.28 crore made to him. The payment of ₹ 15.28 crore was made on the basis of measurements recorded in the measurement book by Assistant Engineer, authenticated by the Sub-Divisional Engineer and the abstract was signed by EE. Out of ₹ 15.28 crore paid to the contractor, ₹ 12.21 crore was paid against the purported supply of material, which had actually never been supplied or brought to the work-site. When this was communicated (March 2016) to the contractor after joint measurement (December 2015), the contractor accepted the deficiency and agreed (July 2017) to supply the material. This indicated that the recordings made in the measurement book by the Sub-Divisional Engineer were baseless and thus doubtful. As of December 2017, neither the material found short was supplied by the contractor nor the cost of material recovered from the contractor by the Division.

Thus, incorrect measurement and wrong authentication of measurement books by the Assistant Engineer and non-conduct of mandatory inspection by the Sub-Divisional Engineer resulted in fraudulent payment of ₹ 12.21 crore. This also indicated the lack of monitoring by the EE.

In reply, the Government agreed with the Audit and stated (November 2018) that the contract was terminated and contractor's security deposit of ₹ 94.46 lakh had been forfeited. Initiating disciplinary action against responsible officials was under consideration and instructions had been issued for filing FIR against contractor and erring officials.

Thus, despite knowing the fact, no punitive action against the erring officials as well as contractor had been taken (November 2018).

3.6 Delay in acquisition of land

Paragraph 251 of Maharashtra Public Works manual provides that no work should be commenced on land which has not been duly made over by the responsible civil officer. When tenders for works are accepted but the land required for the purpose is still to be acquired, the time that should be allowed for the acquisition of the land should be ascertained from the Collectors concerned before orders to commence the works are issued.

3.6.1 Injudicious payment – Commencement of work without acquisition of required land resulted in blocking of ₹ 2.18 crore on account of secured advance. Besides, ₹ 14.66 crore incurred on works proved to be unproductive.

Administrative approval for Lower Pedhi Major Irrigation Project⁵⁵ in Amravati district was accorded (August 2004) by Government of Maharashtra for ₹ 161.17 crore. This sanction was subsequently revised (August 2009) to ₹ 594.75 crore.

The work of construction of left bank main canal (one of the components of the project) comprising of earthwork, lining and structures from km one to 15 of the Lower Pedhi Project was awarded (August 2009) to a contractor for ₹ 81.23 crore (13.45 *per cent* above the estimated cost) with the stipulated period of completion of 36 months (August 2012) from the date of issue of

⁵⁵ Construction of dam, canals and distributaries

work order. However, extension was granted upto June 2019 for completion of work. The contractor was paid ₹ 19.24 crore⁵⁶ till October 2017 (13th running account bill).

Scrutiny (August 2017) of the records of Amravati Project Construction Division No.1, Amravati (APCD) revealed that the division paid (January-February 2010) secured advance of ₹ 3.19 crore to the contractor for 1210 MT of steel brought to the site of the work. Out of that, steel of 827.05 MT costing ₹ 2.18 crore was still lying unutilized and idle on the site of the work even after lapse of eight years of its procurement (August 2018). Slow progress of work was mainly due to delay in acquisition of land. Out of 89.58 hectares of land to be acquired, 62.95 hectares was acquired during 2009-10 to 2011-12 and 23 hectares was further acquired upto 2017-18. Four hectares of land was yet to be acquired.

Meanwhile, in consonance with the Government Resolution (February 2017) encouraging use of pipeline instead of conventional open canal system due to prevalent land acquisition problems across the State, the Chief Engineer, Special Project, Water Resources Region, Amravati sent (September 2017) a proposal to the Vidarbha Irrigation Development Corporation, Nagpur (VIDC) for adopting 'pressurized pipeline distribution irrigation system' instead of conventional canal irrigation system. The proposal had been accepted by the Governing Council of VIDC and further sent (October 2017) to Government for approval, which was approved (March 2018).

Thus, awarding of work without acquisition of required land of 89.58 hectares and payment of secured advance of ₹ 3.19 crore for such a huge quantity of steel in the initial stage of the work without assessing the progress of the work was not a prudent decision on the part of the division. This has resulted in idling of steel of ₹ 2.18 crore for past eight years. Moreover, expenditure of ₹ 14.66 crore incurred on the work till date proved to be unproductive as it could not be put to use due to slow progress of the work.

In reply, the Government accepted (December 2018) the audit findings and stated that there was inaction on part of the Division in respect of land acquisition for the canal even after issue of work order. The process of land acquisition was not initiated at the time of granting secured advance and as such steps were being taken to initiate departmental enquiry against the concerned officials. However, Government did not reply on unutilized steel.

3.6.2 Unfruitful expenditure of ₹ 3.54 crore on excavation and dewatering works owing to non-acquisition of required land for Lower Penganga Project.

Government of Maharashtra accorded (1997) administrative approval for ₹ 1,402.43 crore to Lower Penganga Project (LPP), a major inter-state irrigation project benefiting Yavatmal and Chandrapur districts of Maharashtra and Adilabad district of Telangana. The revised administrative approval was granted (2009) by Vidarbha Irrigation Development Corporation, Nagpur (VIDC) for ₹ 10,429 crore.

⁵⁶ Cost of work executed: ₹ 14.66 crore + Unadjusted Secured Advance: ₹ 2.18 crore = ₹ 16.84 crore + Mobilisation Advance : ₹ 2.40 crore = ₹ 19.24 crore

Work of construction of dam⁵⁷ under LPP was awarded (August 2009) to a contractor at 10.75 *per cent* above the estimated cost of ₹ 319.96 crore with the stipulated period of completion of 72 months (August 2015). However, the work actually started in October 2011 i.e. after more than two years from issue of work order due to problems with land acquisition, public resentment and paucity of funds. It was eventually stopped by the contractor in May 2012. The contractor was paid (June 2013) ₹ 4.04 crore for the work executed.

Scrutiny of records (March 2017 and February 2018) of the LPP Division, Yavatmal revealed that out of total land of 19,130 ha required for the project, only 327 ha (less than two *per cent*) of land was acquired upto 2009-10 (year of issue of work order); 758 ha (four *per cent*) of land was acquired upto 2012-13 (year in which work was stopped) and 1,768 ha (nine *per cent*) of land was acquired till March 2018. Thus, the land acquisition which was initiated in 2008-09, could not be achieved at the required pace. As a result, work could not start on time and delayed by two years. Further, it was stopped in May 2012 and the contractor sought (April 2016) withdrawal from the contractual obligation under clause 15(2)⁵⁸ of the general conditions of the contract, which was approved (December 2016) by the Executive Director, VIDC. Out of ₹ 4.04 crore paid to the contractor, ₹ 0.50 crore was incurred on approach road and downstream bridge whereas the remaining amount of ₹ 3.54 crore was incurred on excavation and dewatering works. Thus, despite knowing the status of land acquisition before hand, the work was taken up and subsequently terminated abruptly which rendered the expenditure of ₹ 3.54 crore incurred on excavation and dewatering works unfruitful.

It is pertinent to mention here that even before the commencement of the dam work by the contractor in October 2011, the Chief Engineer (CE), WRD, Amaravati had communicated (August 2010) to the VIDC that the possibility to get ample funds for this project was very remote since there was no physical and financial backlog⁵⁹ of irrigation potential in Yavatmal district; and two major projects such as Bembla and Arunavati were already under execution in the district. He had also suggested (August 2010) to cancel the work order.

In reply, the Government stated (November 2018) that ₹ 4.04 crore incurred on dam work was not wasteful being capital investment and was supposed to be utilized in the project in the future.

The reply of the Government was not tenable as in the backdrop of the land acquisition status, which was less than two *per cent* of required land upto the year of issue of work order i.e. 2009-10, the work of the dam should not have been taken up. Moreover, CE's suggestion (August 2010) in the matter was

⁵⁷ Construction of central gated spillway, stilling basin, non overflow sections, earthwork of right and left flanks of earthen dam and irrigation outlet of Lower Penganga Project

⁵⁸ Clause 15 (2) of the general conditions of the contract stipulated that where the total suspension of work ordered continued for continuous period exceeding 90 days for any reason whatsoever other than the default on the part of the contractor, the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer

⁵⁹ Backlog zone is created to ensure equitable allocation of funds for development of all the regions of Maharashtra by working out the physical and financial backlog based on Irrigation Potential created vis-a-vis net sown area in the State

also overlooked. Further, expenditure of ₹ 3.54 crore incurred on excavation and dewatering works was going to be unfruitful as the earthwork done was prone to be washed away with passage of time.

3.6.3 Unfruitful expenditure-The objectives of Lower Tapi Project could not be fulfilled owing to slow progress of land acquisition and tardy implementation of construction of dam and gate works thereby rendering the expenditure of ₹ 235.02 crore incurred on the project unfruitful.

Water Resources Department, Government of Maharashtra accorded (March 1997) administrative approval to the Lower Tapi Project consisting of construction of an earthen dam with central masonry spillway across Tapi river in Jalgaon district for storage of water for irrigation through lift irrigation schemes on either banks of Tapi river for ₹ 142.65 crore. However, the project underwent multiple revisions, the latest revised administrative approval (third time) was accorded (September 2009) for ₹ 1,127.74 crore.

The Lower Tapi Project Division (LTP), Chopda (division) awarded (April 1999) the work of dam⁶⁰ to a contractor at 12.96 per cent above the estimated cost i.e. for ₹ 64.29 crore with the stipulated period of completion of 84 calendar months (April 2006). However, due to non-finalization of design of piers⁶¹, the work could not be completed on time and was extended from time to time; the latest extension has been given upto March 2020. The contractor was paid ₹ 148.39 crore for the work executed up to March 2017 (67th running account bill).



Incomplete civil work of dam

Incomplete civil work of dam

Scrutiny of records (December 2016) of division revealed that against the total land requirement of 7,261⁶² hectares the division could acquire only 629 hectares (8.66 per cent) of land during 19 years i.e. 1999 to 2018 since the work was allotted. Further, out of required land of 6,913 hectares for the submergence area, only 404 hectares (5.84 per cent) of land had been acquired by the department as of November 2018, thus, even after completion of the civil work of the dam it was not possible to store water.

Meanwhile, a separate tender for the work of gates⁶³ was awarded (March 2009) to another contractor at 4.98 per cent above the estimated cost of ₹ 195.01 crore to be completed in 84 months (February 2016). The

⁶⁰ Construction of earthen dam, spillway, guide wall, energy dissipation arrangement of Lower Tapi Project

⁶¹ A pier is an upright support for a structure or superstructure such as an arch or bridge

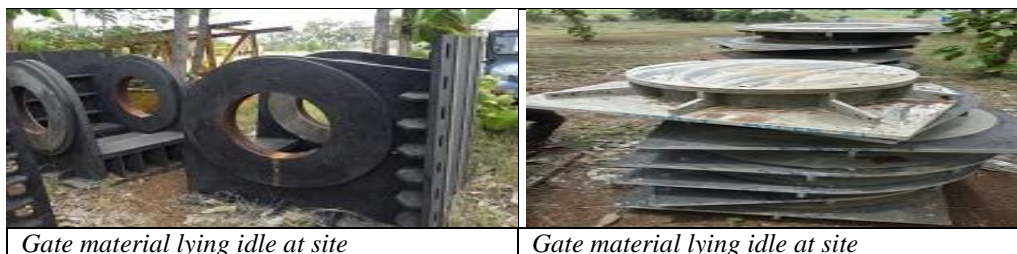
⁶² Government land: 2,663 ha, Private land: 4,595 ha and Forest land: 3.12 ha

⁶³ Work of Design, Fabrication, supply, Erection, Testing and commissioning of 23 nos. of radial gates and stop log gates and goliath crane including sand blasting and painting etc. for Lower Tapi Project

contractor was paid ₹ 86.63 crore for the work till March 2018 (12th running account bill).

It was further observed that owing to revised flood study, the design and drawings of the radial gates and stop log gates were required to be revised and approved by the Central Design Organisation (CDO), Nashik. Therefore, the Division intimated (October 2014) the contractor to stop the work. By that time, nearly 44 *per cent* of the gate work had been completed. The revised design and drawings of the radial gates and stop log gates were sent to CDO, Nashik for approval in August 2016, after a delay of almost two years, which were approved (November 2017). However, time extension upto March 2020 for completing the remaining work as per the revised design and drawings was granted in March 2018. In the absence of approved revised design and drawings, the work was stalled from October 2014. Thus, quantum of gate work executed for this project was lying unutilized since last four years thereby resulting in blocking of ₹ 86.63 crore.

It is pertinent to mention here that the grounds on which revised flood study undertaken were not found on record. Moreover, there was no information available to ascertain the possibility of the quantum of completed gate work that could be utilised in the revised design and drawings of gates.



It was also observed that as against an amount of ₹ 1,127.74 crore of revised administrative approval for the entire project, as of March 2018, an amount of ₹ 412.50 crore (36.58 *per cent*) only was received since inception (1998-99) of the project. Thus, expenditure of ₹ 148.39 crore incurred on civil work of dam and ₹ 86.63 crore incurred on mechanical work of gates remained unfruitful due to failure of the department to acquire the required land and non-finalization of revised design of gate work and construction work.

The division stated (December 2016) that the construction work was stopped from time to time due to lack of funds. It was further stated that design of various radial gate components was submitted (August 2016) to CDO, Nashik for vetting which would be finalized shortly. After finalization of design of gate components, pier design, construction work would be finalized.

Reply of the division was silent on the critical issue of land acquisition which was only 8.66 *per cent* of required land and moreover, there was no dearth of funds for the project as the quantum of yearly funds demanded was provided/ released. Thus, due to tardy implementation of the project, the entire expenditure of ₹ 235.02 crore (₹ 148.39 crore + ₹ 86.63 crore) incurred on civil work of dam as well as on gate work proved unfruitful.

Matter was referred (May 2018) to the Government; their reply was awaited (January 2019).

3.7 Excess payment

Excess payment of ₹ 2.54 crore was made to contractor due to payment at higher rates than tendered rates in Sapan Project.

Work of Construction of earthen dam from RD 110 M to 165 M and from RD 240 M to 1,110 M including gated spillway along with approach and tail channel and Head Regulator for Sapan River Project in Taluka Achalpur of Amravati District was awarded (October 2000) to a contractor at a contract cost of ₹ 36.75 crore which was 21 *per cent* below the estimated cost of ₹ 46.52 crore. The work was stipulated to be completed in 72 months (September 2006). The latest payment made to the contractor was ₹ 281.45 crore (May 2017) for the work executed up to the 126th running account bill (RAB).

Clause 14 of the contract stipulated that any additional work on account of any alteration in specifications and designs suggested by the Executive Engineer shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work and at the same rate as specified in the tender for the main work; and if the additional and altered work included any class of work of which no rate was specified in the contract, such class of work should be carried out at the rates entered in the schedule of rates of the division or at the rates mutually agreed upon between the Engineer-in-charge and the contractor, whichever was lower.

During the execution of work, as per the instructions (May 2005) of the Government the design/height of the spillway of the main work was changed due to which the quantum of one of the item number 29⁶⁴ of tendered work increased substantially from 4,064 quintals to 8,881 quintals. The payment for execution of increased quantity of this item was to be made at tendered rate⁶⁵ by applying clause 14 for the quantity upto 125 *per cent* of tendered and beyond 125 *per cent* at current rate by applying clause 38⁶⁶ of the contract.

Audit scrutiny revealed (July 2017) that Superintending Engineer, Upper Wardha Project Circle, Amravati sanctioned (November 2015) the payment for entire executed quantity of 8,880.66 quintals of item no. 29 at current rate⁶⁷ by treating it as new item instead of application of tendered rates in terms of

⁶⁴ 'Providing and laying HYSD (High Yield Strength Deformed Bars) reinforcement including cutting, bending, hooking, binding with ennaled wire fixing in position including cost of binding wire as per design *etc.* complete with all leads and lifts as directed and as per specification with contractor's own materials'

⁶⁵ ₹ 2,167 per quintal

⁶⁶ As per clause 38 of the contract, the contractor shall, if ordered in writing by the Engineer-in-charge to do so, carry out any items of work beyond 125 *per cent* of the tender quantity in accordance with the specifications in the tender. The contractor will be paid at the tender rate for the quantity up to 125 *per cent* and for the quantity beyond 125 *per cent* of the tendered quantity, he will be paid at the rates (i) derived from the rates entered in current schedule of rates and in the absence of such rates (ii) at the rates prevailing in the market. It was, however, mentioned in the clause that the (above or below) percentage, as agreed upon in the contract agreement, would also be applied on the current schedule of rates/market rates

⁶⁷ Current rates derived by department as follows:

Year	2005-06	2006-07	2007-08	2008-09
Revised rate (In ₹/quintal)	4383	4383	4834	5259

Clause 14 and 38 of contract. It was also observed that the payment was made to the contractor at ₹ 6,909.37/quintal for the work executed during 2008-09 against the sanctioned revised current rate of ₹ 5,259.20/quintal on the pretext that the increased required quantity of steel was not available at Amravati and the same had been procured from Raipur (Chhattisgarh) about 440 km from Amravati.

Thus, payment at current rates instead of at tendered rates for the quantity upto 125 *per cent* of tendered quantity and at higher rate (₹ 6,909.37/quintal) instead of at current rate (₹ 5,259.20/quintal) for the quantity executed during 2008-09 resulted in excess payment of ₹ 2.54 crore to the contractor as mentioned in **Table 3.7.1**.

Table 3.7.1: Details of payment made

(Figures in ₹)

	Quantity (Quintals)	Payment made at revised rate	Payment admissible at tendered/current rate on application of clause 38	Excess payment made
Item no. 29-Providing and laying HYSD reinforcement	8880.66	54043918 ⁶⁸	28685035 ⁶⁹	25358883

Executive Engineer, AMPD, Amravati (division) stated (July 2017) that the design of the spillway and scope of work changed completely and it was approved by the Government in May 2005 and hence it was necessary to invoke Clause 14 for the betterment of the project and to complete the early creation of irrigation potential in backlog area.

The reply of the division was not acceptable as the item sanctioned was already existed in Schedule-B of the tender agreement and hence the payment to the contractor should have been made at tendered rates (₹ 2,167/quintal) for the quantity upto 125 *per cent* of tendered quantity in accordance with Clause 14 of the Contract and remaining quantity at current rates in terms of Clause 38 of contract. Moreover, payment was made to the contractor at ₹ 6,909.37/quintal for the work executed during 2008-09 as against the current rate of ₹ 5,259.20/quintal.

Matter was referred (April 2018) to the Government, their reply was awaited (January 2019).

3.8 Excess payment

Incorrect revision of rate analysis resulted in excess payment of ₹ 16.13 crore to the contractor.

Work of Construction of Chichdoh Barrage⁷⁰ was administratively approved (June 2009) for ₹ 282.73 crore by the Vidarbha Irrigation Development Corporation (VIDC), Nagpur. Later, first Revised Administrative Approval was accorded by the VIDC, Nagpur in July 2016 for ₹ 597.44 crore.

⁶⁸ 1,607.34 quintals paid @ ₹4,383.05 per quintal in 2005-06 and 2006-07; 1,568.98 quintals paid @ ₹4,834.65 per quintal in 2007-08 and 5,704.34 quintals @ ₹6,909.37 per quintal (higher than current rate ₹5,259) in 2008-09

⁶⁹ 5,080 quintals [125% of tendered quantity (4,064 quintals)] @ ₹2,167 per quintal= ₹1,10,08,360 – 21% (tender *per cent*) = ₹86,96,604–(A) plus 3,800.66 quintals (quantity beyond 125% i.e. 8,880.66 – 5,080) @ ₹5,259.20 per quintal = ₹1,99,88,431– (B) = ₹2,86,85,035 – (A + B)

⁷⁰ Along with approaches, spillway and gate works across Wainganga river at Chamorshi Taluka in Gadchiroli district

Executive Engineer (EE), Minor Irrigation Division (MID), Chandrapur (Division) issued (March 2011) work order for construction of Chichdoh barrage to a contractor at 7.95 *per cent* above the estimated cost of ₹ 245.27 crore with the stipulated period of completion of 60 months (March 2016). Extension to the work was accorded (February 2016) up to June 2018. The contractor was paid (March 2018) ₹ 460.30 crore for the work executed up to 53rd running account bill.

Scrutiny of records (May 2017) of the Division revealed that the Chief Engineer (CE), Water Resources Department (WRD), Nagpur requested (August 2009) the CE (Mechanical), WRD, Nashik, for deriving the rate analysis for manufacturing and erection of vertical lift (VL) gates for the Chichdoh barrage. Accordingly, the CE (Mechanical), WRD, Nashik approved (August 2009) the same, considering that the gates would be fabricated in a workshop. But it was subject to the condition that charges such as transportation, inspection, insurance and VAT may be revised appropriately according to the condition of the project site at CE, WRD, Nagpur level. However, while finalizing the rates of the VL gates, the Division revised (August 2009) the approved rate analysis by incorporating the modified rates for taxes, overhead and inspection charges and indicating some new items, on the basis that the fabrication of gates was to be done at work site instead of workshop. Based on this, technical sanction was accorded (August 2009) by the CE, WRD, Nagpur.

Audit observed that:

- As the gates were to be manufactured at work site, yard and workshop charges ranging from ₹ 4,096 per MT to ₹ 7,450 per MT and generator charges at ₹ 6,040 per MT were included in the rate analysis of gates by the Division. However, the workshop charges ranging from ₹ 3,086 per MT to ₹ 14,621 per MT which had been included in the earlier rate analysis considering the fabrication at a workshop, were not deducted. This resulted in double payment amounting to ₹ 6.15 crore to the contractor (**Appendix 3.8.1**).
- Crane charges for erection of gates ranging from ₹ 3,096 per MT to ₹ 6,192 per MT were included as an additional charge in the rate analysis by the Division. Since, erection charges include all the allied components related to erection of the gates and were already being worked out ranging from ₹ 18,020 per MT to ₹ 26,047 per MT, loading of additional charges for crane in the rate analysis was unwarranted and thereby resulted in excess payment of ₹ 5.56 crore to the contractor (**Appendix 3.8.2**).
- In the approved rate analysis overhead charges (ranging from ₹ 6,021 per MT to ₹ 12,525 per MT) was applied on fabrication cost of the gates. However, in modified rate analysis the Division applied the overhead charges (ranging from ₹ 10,330 per MT to ₹ 18,229 per MT) on total cost i.e. fabrication cost including taxes, transportation, insurance and inspection. This resulted in additional payment of ₹ 4.42 crore to the contractor due to loading of overhead charges on total cost of gate (**Appendix 3.8.3**).

In reply, Government stated (November 2018) that the tender was awarded through competitive bidding hence stand alone scrutiny of single item and its rate analysis may not withstand as the contractor would have quoted his rates considering all items and rates put to tender.

The reply of the Government was not tenable as the division should have considered new charges after deduction of old charges in the revised rate analysis considering the site condition. Thus, incorrect revision of rate analysis by non-deduction of workshop charges, undue loading of crane charges; and loading of overhead charges on total cost instead of fabrication cost resulted in excess payment of ₹ 16.13⁷¹ crore to the contractor.

Public Works Department

3.9 Unfruitful expenditure

Tardy implementation of the work resulted in unfruitful expenditure of ₹ 7.76 crore due to non-completion of bridge even after lapse of nine years. Moreover, the very objective of providing all weather road connectivity between Chikalthana and Bhatkheda villages was defeated.

Public Works Department, Government of Maharashtra (GoM) accorded (June 2008) administrative approval to the work of Construction of a High Level Bridge across Manjara River at Chikalthana-Bhatkheda Road (work) in Latur district for ₹ 6.86 crore with a view to provide an all weather road connectivity between Chikalthana and Bhatkheda villages in Latur district.

Chikalthana village is situated on the left bank of Manjara river, while its cultivated lands are on the right bank of the river. As the site fell under the submergence of Khulgapur barrage (across Manjara River), there was standing water for a period of six to eight months in a year and hence, it was considered essential to construct a high level bridge to satisfy the need of the two villages Chikalthana and Bhatkheda for all weather connectivity.

Scrutiny of records of the Executive Engineer, Public Works Division, Latur (Division) revealed (December 2017) that the work was awarded (February 2009) to a contractor at 4.35 *per cent* above the estimated cost of ₹ 7.45 crore put to tender with the stipulated period of completion of 12 months (February 2010), which was later extended up to July 2013. However, the work remained incomplete and the contractor was paid ₹ 6.97 crore for the work executed up to June 2016 (21st running account bill).



Source:- Photo of the incomplete high level bridge taken in February 2018

⁷¹ ₹ 6.15 crore + ₹ 5.56 crore + ₹ 4.42 crore

Meanwhile, a proposal for revised administrative approval was sent (July 2015) to GoM for ₹ 11.59 crore to approve a Submersible Bridge of Full Tank Level of 583.50 M proposed against High level Bridge of observed high flood level of 587 M originally approved in AA. The proposal was approved (November 2018) and an amount of ₹ five crore was sanctioned for the balance work by the Government in the Supplementary Budget 2018-19. Besides, a proposal for extension up to July 2016 was also made (August 2015) on the ground that the site of the work was inundated with water of the Khulgapur barrage.

The reasons for change in scope of the bridge in the proposal of revised AA from high level to submersible were not available with the Division.

It was further observed that 25 per cent of bridge work and 100 per cent of approach road work was yet to be executed (November 2018) despite the fact that an expenditure of ₹ 7.76⁷² crore on civil work and land acquisition had been incurred. Thus, the very purpose of providing all-weather connectivity between Chikalhana and Bhatkheda villages stands defeated.

The Government stated (November 2018) that as the site of the bridge was under submergence, the progress of the work was affected due to standing water for a period of six to eight months every year. However, the construction work of seven piers out of nine piers was completed and that of abutment was in progress. Further, it was stated that new tender for balance work would be invited and the balance work would be completed by May 2019.

The reply of the Government was not in consonance with the facts that the condition of the site was known at the initial stage and with adequate planning and design, it could have been overcome. However, the work of the bridge could not be completed even after a lapse of nine years due to tardy implementation besides an expenditure of ₹ 7.76 crore incurred on bridge proved to be unfruitful.

3.10 Blocking of fund

Failure to get the work of submersible bridge across Godavari river executed from the contractor and non-completion of remaining portion of the work for last five years resulted in blocking of ₹ 1.83 crore.

Government of Maharashtra accorded (October 2008) administrative approval to the work of 'construction of submersible bridge across Godavari river on Nagamthan-Bhagur-Lasur road (SH-180) for ₹ 6.00 crore. Technical sanction to the work was granted (May 2010) for ₹ 5.83 crore. The Executive Engineer (EE), Public Works Division (West), Aurangabad (division) awarded (February 2011) the work to a contractor at 9.9 per cent below the estimated cost put to tender i.e. for ₹ 5.25 crore. The work was stipulated to be completed in 24 months i.e. by February 2013. The contractor was paid (March 2013) ₹ 1.83 crore for the work executed up to fifth running account bill.

Clause 15 (2) of the general conditions of the contract stipulated that where the total suspension of work stretches for a continuous period exceeding

⁷² Cost on works: ₹ 6.97 crore and Cost on land acquisition: ₹ 0.79 crore

90 days for any reason, whatsoever, other than the default on the part of the contractor, the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer.

Further, additional condition number 61 of the contract, agreed upon by the contractor, provided that the payment of bills would be made as per the availability of funds. No claims would be entertained for delayed payments.

Scrutiny of records (February 2018) of the division revealed that although the work order was issued in February 2011, the contractor started the work only in March 2012. The contractor stopped the work in July 2012 after completing almost 30 *per cent* of the work. However, the division requested (August 2012) the contractor to start the work immediately and also suo-moto gave (May 2013) extension to the work up to March 2014.

Meanwhile, the contractor requested (February and June 2013) the division to withdraw the work under Clause 15 (2) citing the reason of delayed payment of previous bills. Accordingly, the EE/SE submitted (October 2013) the proposal for cancellation of agreement of the work to the Chief Engineer, Public Works Region, Aurangabad (CE) for approval, wherein it was also stated that the remaining portion of the work would be completed after inviting a new tender. The CE approved (January 2014) the proposal and instructed the division that since the fund was available for the work during the year 2013-14, the same should immediately be utilized for completing the remaining portion of the work after inviting new tender. However, the process of re-tendering for the remaining portion of the work was completed as late as in July 2015 and as the lowest bidder quoted a rate at 43 *per cent* above the estimated cost, it was sent (July 2015) to Government for approval. Government did not approve the same and instructed to prepare revised estimates. As of April 2018, the estimates had been prepared for the balance work and approval of CE was awaited.

As apparent, the division did not take any action against the contractor for not starting the work or non-execution of work as per agreement. Division neither imposed penalty under Clause 2⁷³ of the contract for delaying the execution of work nor withdrawn the work on risk and cost of the contractor under Clause 3 C. On the contrary, acceptance of contractor's request for withdrawal of work under clause 15 (2) of contract was not justified as contractor himself delayed the execution of work.

Thus, failure of the division to get the work executed from the contractor and non-completion of remaining portion of the work for last five years resulted in blocking of fund to the tune of ₹ 1.83 crore, incurred on the construction of the bridge. In addition, due to passage of time not only the cost of balance work increased but also the condition of executed work got deteriorated, as seen from the photographs below.

⁷³ In the event of the contractor failing to carry out the work within the time frame as entered in the tender, he shall be liable to pay as compensation an amount equal to one *per cent* or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide for every day provided that total amount of compensation to be paid shall not exceed 10 *per cent* of the estimated cost of the work as shown in the tender



In reply, the Government stated (November 2018) that as the design of the bridge got approved in February 2012, the work could not be started earlier. Further, there was delay in payment of bills to the contractor due to paucity of fund. However, the contract for the balance work was awarded and the remaining work would be completed by May 2019 as the work executed by previous contractor was in good condition.

The reply of the Government was not tenable as the division could have insisted the contractor to start the initial work such as excavation and ancillary works in time so as to complete the work as per time schedule and moreover, the contractor raised all his bills in 2012-13 and the same were paid upto March 2013 leaving a meager balance of ₹ 1.03 lakh. Thus, withdrawal of work under clause 15 (2) of contract citing the reasons of delayed payment of contractor's bills was not justified as contractor himself delayed the execution of work and poor monitoring and lackluster attitude of the department resulted into non-completion of the bridge.

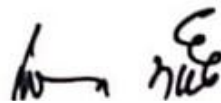
Nagpur
The 14th June, 2019



(HEMA MUNIVENKATAPPA)
Accountant General (Audit)- II,
Maharashtra, Nagpur

Countersigned

New Delhi
The 18th June, 2019



(RAJIV MEHRISHI)
Comptroller and Auditor General of India