

## Chapter II

### Water Resources Department

#### 2.1 Konkan Irrigation Development Corporation

##### Executive summary

*Konkan Irrigation Development Corporation (KIDC) was formed in 1998 under the KIDC Act, 1997 in order to expedite completion of the ongoing irrigation projects in Konkan Region. During the period 1998-2007, 90 projects were transferred to the KIDC, of which only 13 were 'nearly completed' as of March 2010. Total expenditure incurred by the KIDC on these projects up to 2009-10 was ₹2,573 crore. A review of working of the KIDC for the period 2005-10 revealed poor progress in execution of the projects and in achievement of the intended objectives. Audit observed lack of financial autonomy of the KIDC, absence of long-term plan and prioritisation of project execution, problems of land acquisition and rehabilitation of project affected persons resulting in delay and stoppage of works, huge cost overrun and defective execution of the projects, shortfall in creation and utilisation of irrigation potentials, deficiency in financial management and monitoring of the projects.*

*As the planning, administrative approval, tendering and allocation of funds for the projects were done by Government, expediting the execution of the projects by the KIDC, as envisaged in the Act, was difficult. Works were commenced without acquisition of required land; clearance of Forest Department and settlement of compensation claims of PAPs, resulting in abnormal delays in completion of the projects and consequent increase in cost.*

*Limited resources were thinly spread over too many projects by the KIDC, contrary to the recommendation of the High Powered Committee. There were short release of funds by the State Government for the AIBP projects and under special packages. However, the Department released funds in excess of the administrative approval of the projects.*

*There were instances of defective execution of works and unnecessary increase in height of the dams without accruing any additional benefit. Against the targeted irrigation potential (IP) of 2.57 lakh hectare, IP of only 63,145 hectare (25 per cent) was created; storage of water was 2230 Mcum (63 per cent). Utilisation of IP created was low; it was less than 1 per cent in two projects, because of leakages and unwillingness of the beneficiaries.*

*Monitoring of the projects by the Governing Council was inadequate. The Executive Committee met only once in three years. Water Users' Associations were either not formed or not registered. Agricultural extension activities to educate the farmers about the benefit of the prescribed crop pattern were not undertaken by the KIDC.*

### 2.1.1 Introduction

Konkan Region (the Region) in Maharashtra consists of the Districts of Greater Mumbai, Raigad, Ratnagiri, Sindhurg and Thane with a total area of 30,394 square kilometers and has 22 river basins. The total cultivable command area of the Region was 15.28 lakh hectares (ha) with an estimated irrigation potential of 3.67 lakh ha. Prior to formation of Konkan Irrigation Development Corporation (KIDC), Government of Maharashtra (GoM) had completed 90 irrigation projects and created an irrigation potential of 22,248 ha in the Region.

In December 1997, the GoM estimated that the cost of the 38 ongoing projects in the Region was about ₹ 1,034 crore and the cost of the administratively approved projects and the future projects<sup>1</sup> would be ₹ 1,533 crore. As Water Resources Department (WRD) could provide only ₹ 80 crore to ₹ 90 crore per year through budget, it would take 10 to 12 years to complete the ongoing projects. In order to expedite the completion of the projects, the GoM decided to establish a separate entity so that budgetary support could be substantially supplemented through open market borrowings and all the ongoing and new projects could be completed in a time bound manner. Accordingly, the GoM established the KIDC in 1997 under the KIDC Act 1997 (the Act) which started functioning from January 1998. The objective of setting up of the KIDC was to achieve the total irrigation potential of 3.67 lakh ha in the Region out of which irrigation potential of 2.57 lakh ha was to be created by the KIDC through 90 projects. For this purpose 90<sup>2</sup> projects viz., four major, 11 medium and 75 minor irrigation projects were transferred to the KIDC during January 1998 to April 2007. These included six<sup>3</sup> projects which were provided Central Assistance under the Accelerated Irrigation Benefit Programme (AIBP). Tillari Project (major) was brought under AIBP during 2005-06 and five other projects during 2009-10. The KIDC executes projects which after completion are required to be handed over to Maintenance Division, Water Resources Department under Government of Maharashtra.

The GoM had formulated (September 2002) a new body called *Maharashtra Paibandhare Vittiya Company Ltd.* (MPVCL) to raise funds from the open market and distribute the same to all irrigation development corporations in the State. Therefore, the GoM did not give guarantee to the KIDC to borrow funds from the open market since 2004-05. Hence, the projects of the KIDC were entirely financed through budgetary grants. Though the Act empowered the KIDC to levy and recover revenue from the sources, this power was never formally exercised by the KIDC. The revenue collected by the KIDC was deposited into Government account as Government Revenue.

### 2.1.2 Organisational set up

The Governing Council (GC) of the KIDC is headed by the Minister for Water Resources as ex-officio Chairman. The Chief Secretary to the GoM is the

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<sup>1</sup> Number not mentioned in the Act.

<sup>2</sup> Projects transferred: Ongoing 73 projects (38 in 1998 and 35 in 2007) and 17 new projects out of 33 transferred (2000-2001)

<sup>3</sup> Arjuna, Aruna, Deoghar, Gadnadi, Nardave and Tillari

ex-officio Vice-Chairman. The Secretary, Water Resources Department (Secretary) of the GoM is the *ex-officio* Managing Director (MD) of the KIDC.

The Budget proposals are prepared by the Chief Accounts and Finance Officer (CAFO) of the KIDC, approved by the GC after reviewing the financial and physical progress of various projects and are submitted to the Department. The Department finalises project-wise fund allocation for the KIDC in consultation with the Planning Department.

The Executive Committee (EC) comprised of the MD as Chairman and Executive Director (ED), Chief Engineer (CE), CAFO and Executive Engineer (EE) as members. The EC is responsible for finalisation of tenders and settlement of claims of contractors *etc.* The Department finalises the demands for funds received from the KIDC in consultation with Planning Department, GoM.

Under the superintendence and control of the MD, the ED is responsible for the overall execution of projects and is assisted by the members of the EC. Under the CE, there are four circles each headed by a Superintending Engineer (SE) under whom there are 12 EEs at Divisional level.

### **2.1.3 Audit scope and methodology**

A performance audit on the KIDC was conducted during March to June 2010 covering a period from 2005-06 to 2009-10. For this purpose, records of the ED and the CE were test-checked. Thirty<sup>4</sup> out of 90 irrigation projects were selected (**Appendix 2.1**) on simple random sampling basis and the records were test-checked along with the records of the respective divisions and circles. Joint site visits of all the 30 selected projects were carried out along with the KIDC personnel.

Audit objectives and the audit criteria adopted for the performance audit were discussed with the Secretary in a meeting held on 23 March 2010. The audit findings were discussed with the Secretary in the exit conference held on 9 November 2010.

### **2.1.4 Audit objectives**

The audit objectives were to assess whether:

- sufficient autonomy was given to the KIDC for planning, funding, execution and timely completion of irrigation projects;
- adequate funds were available for timely completion of projects, maintenance of accounts and financial reporting system was adequate;
- five year and annual plans were made by the KIDC and the same were realistic for achievement of the targets set for execution of the irrigation projects;
- the targeted irrigation potential and water storage was created and utilised at optimum level to achieve the envisaged crop pattern;

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<sup>4</sup> two out of four major projects (both ongoing); four out of 11 medium projects (all ongoing); 24 out of 75 minor projects (two completed and 22 ongoing)

- adequate monitoring and periodical review of the progress of the projects were conducted; and
- the safety norms and flood control system were scrupulously followed during execution of the projects.

#### **2.1.5 Audit criteria**

The audit criteria adopted for the performance audit were:

- The KIDC Act, 1997;
- Government resolutions and orders issued from time to time;
- Guidelines for funding pattern, viz., Governor's Directives;
- Maharashtra Public Works (MPW) Manual and MPW Account Code;
- Land Acquisition Act, 1894.

### **Audit findings**

#### **2.1.6 Organisational infirmity**

##### **Lack of autonomy**

As per the Act, the KIDC was empowered to make special provisions for mobilisation of resources required for completion, promotion and operation of the ongoing irrigation projects in a time bound manner and execution of other allied activities including flood control. The Act also empowered the KIDC to construct hydro electric projects and to levy and recover water charges for supply of water for irrigation, industrial and domestic purposes to local bodies, government agencies, cultivators and water users' associations.

##### **2.1.6.1 Mobilisation of financial resources**

##### **Borrowings from open market**

Scrutiny (April-June 2010) of records of the ED revealed that the KIDC had raised on the basis of guarantee given by the GoM; ₹ 574 crore by issue of bonds at rates varying between 11 *per cent* and 14.50 *per cent* during the period 1998-99 to 2003-04 and thereafter funds were provided by the GoM through budgetary grants. As no revenue accrued to the KIDC, the principal amount of ₹ 434.61 crore and interest of ₹ 418.41 crore was repaid by the MPVCL as of March 2010. At the end of 2009-10, the borrowed amount outstanding for repayment was ₹ 139.29 crore along with interest accrued thereon. The MPVCL established to raise funds from the open market and disburse to all the irrigation development corporations across Maharashtra, could raise only ₹ 798.15 crore, out of which ₹ 20.91 crore was provided to the KIDC during 2003-04 to 2005-06.

Despite the provisions made under the Act, the powers to raise funds and mobilisation of resources *etc.*, were never formally entrusted to the KIDC. Subsequent to Government resolution (May 2007), the KIDC became dependent on the GoM for grants to execute the projects.



### Utilisation of income generated from the irrigation projects

According to the Act, the irrigation projects and hydro-electric power projects assigned and situated in the area of operation stood transferred to the KIDC along with the income generated from these projects for payment of interest and repayment of loan raised from the open market. In contravention of the provisions of the Act, revenue generated from the completed and ongoing irrigation projects (as of July 2010) in the Region was not handed over to the KIDC by the GoM so far. An amount of ₹ 853 crore only was repaid as loan amount and interest thereon against revenue of ₹ 2,600 crore accrued during 1998-99 to 2009-10. Since the KIDC is not empowered to utilise the revenue collected through the projects assigned and situated in the Region, the GoM is providing funds to meet the requirement. But, the funds provided were not sufficient leading to non-execution of projects, delay in land acquisition, payment of compensation to PAPs *etc.*

#### 2.1.6.2 Administrative approval, planning, funding, tendering and execution

Scrutiny (April-June 2010) also revealed that planning for execution of the ongoing projects also needed approval of the Department. The powers regarding inviting and accepting of tenders were restricted and administrative approval were also not vested with the KIDC. Project wise allocation of funds was done either by Planning Department or WRD. The funds demanded by the KIDC based on the yearly requirement were never provided in the budget. This had an adverse affect on timely execution of the projects.

The KIDC while accepting (August 2010) the facts stated that it had partial financial control only and that as per GRs of October 2006 and May 2007, the source of revenue from water charges in the Region was withdrawn from the KIDC as the Government was repaying all liabilities arising out of borrowings and interest thereon.

#### 2.1.6.3 Creation of allied benefits

Allied activities as envisaged in the Act were to be created after completion of the dam but some areas of allied benefits such as Fisheries and Pisciculture were deleted from the jurisdiction, and project wise allocation was done at Government level with no power to the KIDC to re-appropriate the funds as per the requirement. This also led to delay in physical progress of the projects.

Thus, the autonomy envisaged in the Act for expeditious completion of ongoing irrigation projects was not given to the KIDC which merely functions as a wing/section under the Department.

#### 2.1.7 Planning

The KIDC was established to expedite completion of the ongoing irrigation projects in the Region which would increase the agricultural production in the area and improve the living standards of the local people. On completion of projects, it would also facilitate Hydro electric power generation, apart from allied benefits such as Tourism, Fisheries, Sports, Industries *etc.*

The KIDC did not have adequate financial autonomy affecting timely execution of the projects

The KIDC was formed to complete the first 38 projects (transferred in 1998) by 2002-03 (extended to 2003-04). However, 17 new projects (transferred in 2000 budgeted in 2005-06) and 35 ongoing projects (transferred in 2007) were taken up which further pushed the scheduled period of completion of projects to 2012. As the GoM could not provide sufficient funds and even the KIDC did not exercise the powers given to it, the scheduled date of completion was further extended to 2017.

The KIDC prepared a five year plan for the period 1998-2003 (extended up 2003-04), during which 38 projects were to be completed. Out of these projects, the financial progress on 17 projects was above 75 *per cent*, on 11 projects between 50 and 75 *per cent* and for the remaining 10 projects less than 50 *per cent*, as of 2002-03. During that period no project was completed. Thereafter, project-wise yearly budget allocations were made by the GoM.

Further, the GoM issued instructions (August 2006) that the KIDC's budget proposals for the next year should not exceed 10 *per cent* of the previous year's budget allocation. This also adversely affected the KIDC's planning process. Further, none of the objectives were achieved fully and allied activities such as fisheries and pisciculture were deleted from the KIDC's purview in 2001.

It was noticed that the KIDC failed to achieve the objectives as 13 out of 90 projects were not fully completed even after 12 years and the targeted IP was not created as these projects were neither planned effectively nor executed efficiently, as discussed in the subsequent paragraphs.

#### **2.1.7.1 Recommended prioritisation ignored by the KIDC**

A High Power Committee (HPC) headed by the Secretary, Planning Department, GoM was set up to review the status of irrigation projects across the State. The HPC recommended (November 2001) prioritisation of allocation of funds to the projects in order to expedite their completion in the following manner:

- Projects on which expenditure incurred was 75 *per cent* or more of the project cost were to be completed first;
- Projects on which 50 to 75 *per cent* expenditure was incurred to be taken up next so that the remaining works could be completed within the stipulated period and
- Projects on which expenditure incurred was less than 50 *per cent* should be stopped.

Details of projects with financial progress of less than 50 *per cent*, less than 75 *per cent* and above 75 *per cent* are given in **Table 1**.

**Table 1: Expenditure incurred on projects in terms of financial progress**

Percentage of expenditure incurred on individual projects (2002-03)	Number of projects
75 <i>per cent</i> and above	17
50 to 75 <i>per cent</i>	11
Less than 50 <i>per cent</i>	10

Due to execution of projects in disregard to HPC recommendations, most of the 90 projects remained incomplete even after spending ₹ 4,364 crore up to 2009-10

The Irrigation Department accepted the recommendations and issued instructions (January 2002) to plan and execute the projects accordingly. But disregarding HPC recommendations and Government orders, the KIDC allocated the available funds to all the ongoing projects without prioritising it. The KIDC also took up execution of 17<sup>5</sup> new projects since 2005-06. Thus, even after incurring an expenditure of ₹ 4,363.84 crore up to 2009-10 on 90 projects, only 13 projects could be completed (leaving some residual works) and IP of only 63,145 ha was created. Handing over the new projects and spreading the scarce budgetary resources thinly over too many projects contrary to the recommendations of the HPC led to a situation in which most of the projects (77 projects) remained incomplete.

Audit observed that as on 31 March 2003, more than 50 *per cent* expenditure was incurred on 28 out of the above 38 ongoing projects. Considering the financial status of these 10 projects, the HPC recommendations could have been implemented from 2003-04, because planning and budget provisions had already been decided/approved for the year 2002-03.

The KIDC continued to incur expenditure of ₹ 333 crore during 2003-04 to 2009-10 on 10 projects where the actual expenditure was below 50 *per cent*. The amount could have been utilised against the 17 advanced projects (out of the 38 transferred in 1998) on which 75 *per cent* or more expenditure had already been incurred. Incurring of expenditure on these 10 projects till date had a cascading effect on execution of other projects (**Appendix 2.2**).

Scrutiny (April-June 2010) of records revealed that even after incurring an expenditure of ₹ 893.80 crore<sup>6</sup> on such 27<sup>7</sup> projects, no IP could be created as of March 2010 in violation of the recommendations of the HPC.

Thus, taking up of projects without prioritising as recommended by the HPC resulted in delay in completion of the projects and consequent cost over run.

The ED accepted (August 2010) the fact that the KIDC could not implement the instructions and recommendations of the HPC and stated that the projects were taken up as per public demand from various parts of the Region. The execution of 17 new projects was taken up on the assumption of cash flow through borrowings. The reply was not tenable as the HPC recommended execution of the projects with financial progress of more than 50 *per cent* only. Besides, execution of these projects was started (2005-06) after the financial power of the KIDC had been curtailed.

#### 2.1.7.2 Commencement of works without acquiring land

According to para 251 of the MPW Manual, no work should commence without acquisition of the entire land required for it. Further, as per the Forest Conservation Act 1980, prior approval of the Government of India (GoI) for use of forest land for non-forest purpose was mandatory. The Act also stipulated that if the proposed work involves forest as well as non-forest land,

<sup>5</sup> Out of 33 new projects transferred to the KIDC in 2000.

<sup>6</sup> ₹ 500.31 crore on 10 projects since 1998-99 and ₹ 393.49 crore on 17 projects since 2005-06.

<sup>7</sup> 17 new and 10 ongoing projects with less than 50 *per cent* financial progress during 2003-04

work should not be commenced on the non-forest land until the approval of GoI for release of the forest land was received.

Further, as per Government Resolution dated 14 September 2004 issued by Revenue and Forest Department (RFD), GoM, irrigation projects should be taken up on the pre-condition that the dam works should not commence unless rehabilitation of PAPs is completed.

Rehabilitation of the PAPs, change in designs and payment of idle charges against the stalled projects had delayed the completion of the projects which in turn resulted in time and cost over run as discussed in the succeeding paragraphs.

Out of 30 test-checked projects (**Appendix 2.1**) handed over to the KIDC, works of 14 projects were already in progress at the time of handing over to the KIDC. It was revealed from the status report of projects that work orders for the remaining 16 projects were issued (May 1999 to December 2008) by the KIDC before acquisition of entire land. Of these 16 projects, works of 12<sup>8</sup> projects were stopped by PAPs between June 2001 and February 2010 due to non-acquisition of land and non-settlement of PAP problems. Further scrutiny revealed that total requirement of land was not enunciated in the proposals submitted by the KIDC to the Special Land Acquisition Officer (SLAO).

Scrutiny of two out of four test-checked SLAOs viz., Ratnagiri and Sindhudurg revealed that the SLAOs were required to quantify and confirm the geographical contours of the entire required area of land, so as to prepare for the acquisition of land. However, no scheduling of land acquisition could be done by the SLAOs as the Divisions submitted piecemeal proposals of land required. It was confirmed during the exit conference that the forest land proposal was submitted as one single proposal.

The apparent reason for piecemeal projection of land requirement was the condition of depositing of the 2/3<sup>rd</sup> of the amount with the SLAOs (required for payment to PAPs) in advance, which the KIDC could not bear financially (**Appendix 2.3**). The CE, WRD stated that due to submission of proposals in piecemeal/village-wise, proposals were pending at various stages with the SLAO such as joint measurement (JM), non-issue of notification/final award and non-allotment of funds etc. Therefore, works could not be executed continuously without any break or hindrance.

The details of the test-checked projects affected due to hindrances in acquisition of land are shown in **Table 2**.

**Table 2: Details of projects affected due to hindrances in acquisition of land**

Reasons	Names of the affected projects
Projection of Piecemeal land requirement	All the test-checked projects except Dhasai and Waygholpada
Forest/ <i>Vansandya</i> land acquisition	Deoghar*, Naradave, Shirsinghe, Talamba and Tillari*
Payment of compensation to PAPs and rehabilitation of PAPs	Chavanwadi, Jamda, Kakeywadi, New Mandave, Poynar, Sakharpa, Shirshinge, Talwat, Tarandale and Wagh

\*The forest/*Vansandya* in respect of Head works of these projects were resolved.

<sup>8</sup> Chawanwadi, Jamda, Kakeywadi, Nardave, New Mandve, Poynar, Sakharpa, Shirshinge, Talamba, Tarandale, Talwat and Wagh.

Commencement of project works without ensuring clear possession of land, delay in settlement of compensation claims of the PAPs etc., adversely affected completion of the projects

The KIDC was established to raise funds and execute the projects speedily in the Region in public interest, but it was seen that the KIDC was treated as a Government Department without any special powers for land acquisition. Therefore, the land acquisition cases remained unsettled years together which defeated the purpose of formation of the KIDC.

#### **Acquisition of forest/*Vansandya* land**

A typical problem of *Vansandya* (forest on private land) prevailing in the Region particularly in Sindhudurg District where a forest developed on private land is also treated as forest land for all purposes including acquisition for non-forest use. This added another dimension to the problem in the form of providing compensation to forest as well as the private owner. The KIDC requested RFD for submitting an affidavit in the court of law to treat the said land as private land by removing *Vansandya* restriction. The issue was pending with the RFD and the progress of five selected projects in Sindhudurg District was adversely affected. As the KIDC issued work orders and commenced execution of projects without acquiring the land and without obtaining forest clearance, the works were stopped after commencement leading to abnormal delay, escalation of cost and payment of idling charges to contractors. Some instances noticed in audit are given below:

- The work of major irrigation project at Talamba, Sindhudurg District was awarded (September 1999) to a contractor at an estimated cost of ₹ 176.29 crore. The work was to be completed in five years. The KIDC applied (1999-2000) for forest clearance. In February 2008 when KIDC had tried to commence the work on some portion of private land already acquired for the dam seat, project affected persons (PAPs) agitated due to non-settlement of compensation and rehabilitation problems and stalled the work. They demanded joint measurements for both forest and private land simultaneously and payment of compensation immediately. Against the demand of ₹ 57.42 crore for Net Present Value (NPV), only ₹ 6.03 crore was deposited with the RFD. The work was stopped from March 2002 to February 2008 and again from June 2008 to February 2010 by PAPs due to non-payment of compensation and delay in forest clearance. An expenditure of ₹ 4.83 crore was incurred during March-May 2008 on desilting and dressing of cut off trench and reconstruction of embankments work which was washed away due to heavy rains. As a result, the project remained incomplete after incurring an expenditure of ₹ 61.44 crore (March 2010). Further, the claims of the PAPs were not settled and forest clearance was also not obtained as of July 2010. Out of 2618.81 ha of land required for dam and canal works, only 374.30 ha land was acquired since 1998 and proposal for 1199.24 ha was yet to be submitted.





**Talamba dam seat**



**Talamba –COT work in progress**

- Execution of the Medium Irrigation Project, Nardave remained incomplete from October 2007 for want of forest clearance. The KIDC did not pay the NPV of ₹ 3.40 crore to the Forest Department for acquisition of the forest land, but paid the idle payment charges of ₹ 7.48 crore to the contractor. The expenditure of ₹ 217.18 crore incurred on the project remained blocked since October 2007. Out of 677.93 ha of land required, only 487.11 ha of land was acquired.
- The work of the Minor Irrigation Project, Shirshinge remained incomplete for five years during June 2001 to May 2006 for want of forest clearance. The KIDC was yet to pay the NPV of ₹ 14.46 crore for the forest land, but paid idling charges of ₹ 2.70 crore to the contractor and also approved further idle payment of ₹ 15.45 crore in August 2007 and January 2009 which was yet to be paid. Expenditure of ₹ 79.89 crore incurred on the project could not yield any benefit so far. Out of 500.45 ha of land required, only 111.40 ha of land was acquired.

**Projects affected due to non-settlement of compensation claims and rehabilitation problems of PAPs**

- The work of right bank canal of the Minor Irrigation Project Wagh, Thane District was awarded in 2003-04 to a contractor at an estimated cost of ₹ 1.46 crore. The land owners (at chainage 7.893 km to 8.753 km), who had given verbal consent, refused to part with the land and the matter was sub-judice since the year 1996. The canal work was to be completed in March 2005 but extended up to March 2006, and stopped since January 2006. As far as dam work was concerned, water could not be stored in dam due to leakages and even water storage level could not be maintained. The dam was completed in June 2001 and the canal work was also completed in 2008-09 (except the disputed portion of land) at a total cost of ₹ 29.35 crore as of March 2010. However, the projected irrigation potential of 842 ha (crop) could not be created as the land dispute and the leakage problem could not be sorted out.



#### Wagh – disputed land

- The work of the Minor Irrigation Project, New Mandve, Ratnagiri District was awarded (September 2001) to a contractor for ₹ 11.77 crore. The work was to be completed in 36 months. The work was stopped since April 2002 due to agitations by the PAPs for want of compensation and suitable rehabilitation. The KIDC demanded ₹ 44.10 lakh since 2006-07 for payment of compensation and rehabilitation of PAPs. However, the amount was not received so far (June 2010). As a result, the project remained incomplete even after incurring an expenditure of ₹ 22.82 crore. Out of 195 ha land required, 30 ha land was yet to be acquired as of March 2010.
- Execution of the Minor Irrigation Project Kakeywadi, Ratnagiri District was awarded (August 2004) to a contractor. The work was to be completed in 48 months. The work could be executed intermittently between November 2004 and February 2008 because of opposition from PAPs for not disbursing the compensation amount as the KIDC failed to deposit the full amount (₹ 54.63 lakh) in time with the SLAO. As of March 2010, ₹ 11.54 crore spent on the work remained blocked and the headwork was in progress (May 2010). As a result, the KIDC paid ₹ 0.90 crore to the contractor towards idle charges for the period. Further, out of 86.14 ha land required, only 49.71 ha land was acquired.
- In the case of the Medium Project Jamda, Ratnagiri District, the work was stopped because of opposition by the PAPs between February 2005 and May 2009 for joint measurement of land. Compensation amount of ₹ 8.25 crore demanded by the SLAO was also not deposited by the KIDC. Further, out of 867 ha land required, only 44.21 ha land was acquired. However, the KIDC paid idle charges of ₹ 26.33 crore to the contractor.
- The work of the Minor Irrigation Project, Talwat was stopped from January 2003 to April 2010 because of PAP problems and the expenditure of ₹ 14.14 crore incurred on the project remained blocked as on March 2010. Further, out of 101.23 ha land required only 80.27 ha land was acquired.





**Talwat**



**Nardave**

- Execution of the Minor Irrigation Project, Tarandale remained suspended from October 2007 to June 2010 because of non-payment of compensation of ₹ 8.23 crore to PAPs. Entire land of 128.30 ha for the project was not acquired so far.
- Execution of the Minor Irrigation Project, Sakharpa stood suspended from 2005 as PAPs stopped the work for non-payment of compensation. As a result, the expenditure of ₹ 13.01 crore incurred on the project remained blocked as of March 2010. Land to the extent of 11.98 ha was yet to be acquired as of May 2010.
- Execution of Minor Irrigation Project, Poynar, District Ratnagiri, was stopped by PAPs since April 2004 for want of basic facilities at rehabilitation site and non-payment of compensation to PAPs. Out of 304.65 ha of land required, 215.15 ha of land only was acquired.
- Execution of Minor Irrigation Project, Chawanwadi, District Ratnagiri stood suspended from October 2003 to September 2010 due to PAPs agitation. Land acquisition cases were also pending for settlement since October 2003 due to lack of funds. Land required for rehabilitation was not acquired. Out of 148.95 ha of land required, only 2.07 ha of land was acquired as of May 2010.



Poynar



Chavanwadi

Non-settlement of PAPs issues due to lack of funds for payment of compensation and their rehabilitation had further aggravated the problems. The non-availability of substitute land for rehabilitation as well as farming was also a major reason for delay.

The CE accepted (November 2010) that the proposals for private land acquisition cases are submitted in piecemeal basis and single proposal submitted for forest land acquisition in “*Vansandya*” area. It was also stated that total fund required for land acquisition were not generally available. The ED, KIDC explained that the major problem lies with the forest land and *Vansandya* in Sindhudurg District.

### 2.1.7.3 Non-settlement of land acquisition cases in time

As per the existing orders, final award of land acquisition cases should be declared by the Land Acquisition Officer within two years after receiving proposals from the concerned department.

Scrutiny of records of 10 selected divisions revealed that even though the KIDC deposited ₹ 17.81 crore with the SLAOs as 2/3<sup>rd</sup> advance amount of the awarded value of land in respect of 63 cases of 20 projects during 2003-04 to 2007-08, the SLAOs had not finalised the cases as of May 2010 (**Appendix 2.3**) due to lack of coordination between the SLAO and the KIDC.

Three irrigation Divisions had deposited ₹ 13.82 crore as 2/3<sup>rd</sup> advance amount of the awarded value of lands with the SLAOs during 2003-04 to 2008-09 in respect of 13 cases of three projects<sup>9</sup>. However, the payment made as per the final award was ₹ 9.69 crore only. The excess amount of ₹ 4.14 crore remained with the SLAO as of May 2010 (**Appendix 2.4**).

In respect of 14 cases of nine projects, though the final awarded value of land was declared at ₹ 13.92 crore by the SLAO, the KIDC had not deposited two-third advance of ₹ 9.21 crore (May 2010) due to non-availability of funds (**Appendix 2.5**).

<sup>9</sup> Arjuna: 346.92 ha (includes land for canals), Nardave 190.82 ha, Tillari: 796 ha (includes land for canals)

#### **2.1.7.4 Co-ordination among various departments for settlement of PAP problems**

Since land acquisition is a lengthy and cumbersome process beginning with Joint Measurement (JM) to final award declaration, it requires proper planning, involvement of responsible authorities (*viz.*, RFD, Agriculture, District Rehabilitation Officer) and time schedule to settle the matter speedily. Scrutiny of the related records revealed that land acquisition and PAP problems persisted due to the following reasons:

- i) The land acquisition issues were not discussed in the Governing Council meetings held during December 1997 to July 2001.
- ii) There were lack of monitoring, inadequate fund flow and follow up by the GC and the EC to ensure expeditious settlement of the land acquisition issues.
- iii) The KIDC did not keep the Additional Chief Secretary (ACS), RFD informed about its difficulty in acquiring land and the cases valued ₹ 4 crore or above only were referred to him.

In order to discuss the land acquisition issues (including rehabilitation), monthly/periodical meetings were held under the Chairmanship of Collector of each district which were attended by the EEs concerned. However, the problems of land acquisition and rehabilitation of PAPs persisted as discussed in Paragraph 2.1.7.2 and 2.1.7.3.

The KIDC stated (August 2010) that the problems which were not solved during the meetings were discussed with the Secretary or Minister-in-charge. Four meetings were held at the level of the Secretary, RFD and 48 meetings were held at the level of Minister during 2007-08 to 2009-10. Problems relating to land acquisition, selection of rehabilitation site and providing basic civil amenities to the PAP were the major problems discussed in the meetings. However, most of the problems are yet to be resolved.

Thus, the problems of land acquisition and rehabilitation of PAPs persisted due to lack of coordination between the KIDC and various departments, proper monitoring and involvement at the highest level.

#### **2.1.8. Financial management**

##### **2.1.8.1 Funding**

The Act envisaged<sup>10</sup> (November 1998) that the GoM would provide the KIDC ₹ 273 crore initially as its share capital on instalments over a period of five years from the date of establishment. However, the GoM provided ₹ 57.93 crore only to the KIDC as share capital up to 2003-04. According to the Act, other sources of funds for the KIDC include GoM grants, subventions, loans, advances, fees, costs and charges, water charges received rents and profits *etc.* The KIDC was also empowered to borrow money from financial institutions or from the open market by issue of bonds, debentures *etc.* subject to a ceiling of ₹ 1,000 crore.

For settlement of PAP problems, coordination among various departments and involvement at the highest level was missing

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<sup>10</sup> Clause 31 of the KIDC Act as amended on 23 November 1998

The funds demanded by the KIDC *vis-à-vis* funds provided by the GoM including borrowings during 1998-99 to 2009-10 and expenditure incurred are as detailed in **Table 3**.

**Table 3 Funds demanded vis-à-vis received and expenditure incurred (₹ in crore)**

Year	Demand	Funds received from the GoM		Funds raised by the KIDC through bonds	Total funds available	Expenditure			Closing balance	Cumulative balance
		Execution of works	Salary grant			On works	Establishment charges	Total		
<b>A Up to 2004-05</b>	<b>1229.82</b>	<b>113.48</b>	<b>26.90</b>	<b>573.90</b>	<b>714.28</b>	<b>608.96</b>	<b>89.11</b>	<b>698.07</b>	<b>16.21</b>	<b>16.21</b>
2005-06	233.00	165.28	13.66	0	178.94	148.08	15.19	163.27	15.67	31.88
2006-07	278.00	238.39	14.21	0	252.60	230.02	15.34	245.36	7.24	39.12
2007-08	305.80	341.48	32.96	0	374.44	288.90	37.54	326.44	48.00	87.12
2008-09	269.79	408.26	45.57	0	453.83	429.78	48.04	477.82	(-)23.99	63.13
2009-10	504.07	688.88	53.77	0	742.65	609.18	52.97	662.15	80.50	143.63
<b>B Total 2005-10</b>	<b>1590.66</b>	<b>1842.29</b>	<b>160.17</b>	<b>0</b>	<b>2002.46</b>	<b>1705.96</b>	<b>169.08</b>	<b>1875.04</b>	<b>127.42</b>	
<b>Total (A + B) 1998-2010</b>	<b>2820.48</b>	<b>1955.77<sup>11</sup></b>	<b>187.07</b>	<b>573.90</b>	<b>2716.74</b>	<b>2314.92</b>	<b>258.19</b>	<b>2573.11</b>	<b>143.63</b>	

Further, as per the Act, out of the required funds of ₹ 1,034 crore for the 38 ongoing projects initially transferred to the KIDC in 1998, ₹ 672.85 crore only were made available by GoM during 1998-99 to 2003-04. However, the funds received were also not utilised fully, leaving a balance of ₹ 36.38 crore at the end of 2003-04. The KIDC incurred ₹ 74.27 crore towards salary of its establishment during 1998-99 to 2003-04, against ₹ 48.98 crore provided by the GoM to the KIDC. The KIDC borrowed funds of ₹ 25.29 crore for establishment charges.

Out of ₹ 1590.66 crore demanded during 2005-06 to 2009-10 for execution of the projects, the GoM had provided ₹ 2002.46 crore, against which ₹ 1,875.04 crore was spent leaving a balance of ₹ 127.42 crore as of March 2010.

Out of the 90 projects, GoM did not provide funds (2009-10) for 13 nearly completed projects for which ₹ 13.14 crore was required. The KIDC estimated (March 2010) that ₹ 5,766.92 crore was required to complete the 77 projects under execution. As the completion dates for the projects were extended by the KIDC up to the year 2017, the KIDC required at least ₹ 824 crore *per annum* excluding price escalation. However, the KIDC demanded between ₹ 233 crore to ₹ 504 crore (*i.e.* with an average demand of ₹ 318 crore *per annum* only) during 2005-06 to 2009-10, as shown in the **Table 3** above; which was indicative of deficiency in financial planning.

The KIDC set a target of creation of 6500 ha of IP every year during 2005-06 to 2009-10. As of June 2009, KIDC had created 63,145 ha of IP against the projected 2.57 lakh ha. Setting up of abnormally inadequate physical and financial targets indicated lack of will to achieve the objectives envisaged in the Act.

<sup>11</sup> Including funds received through Accelerated Irrigation Benefit Programme: 1998-2003: Nil; 2003-04: ₹ 15.50 crore; 2004-05: ₹ 5.32 crore; 2005-06: ₹ 29.68 crore; 2006-07: Nil; 2007-08: ₹ 55.48 crore; 2008-09: ₹ 165.86 crore; 2009-10: ₹ 215.53 crore

On the basis of such inadequate funding and lack of physical progress it is not clear how these projects would be completed within the stipulated date of completion.

Thus, due to slow progress of the projects the very objective of forming the KIDC *i.e.* for expediting the entire process of completing the ongoing projects had failed.

The ongoing projects which otherwise would have been completed by the Irrigation Department in 10 to 12 years could not be completed by the KIDC even after 12 years of its formation. Only 13 such projects were stated to be 'almost completed' with some residual works (March 2010).

### 2.1.8.2 Increase in cost due to poor planning

The KIDC had taken up the projects without ensuring clear possession of land and prioritising the projects as per the recommendations of the HPC. Improper planning, inadequate funding, change in design and scope contributed to delay in rehabilitation of the PAPs, cost escalation, and time over run, payment of idle charges against the stalled projects which resulted in cost over run of the projects as shown in the Table 4.

Table: 4 Increase in cost of projects as of March 2010

<b>Increase in cost of projects</b>	<b>₹ in crore</b>	<b>₹ in crore</b>
Expenditure incurred up to March 2010 on 55* projects transferred to KIDC in 1998 and 2000	2,144.81	
Balance cost of the 55 projects as of April 2010	3,499.38	
<b>Total cost</b>	<b>5,644.19</b>	
Less estimated cost of the 55 projects	3,356.47	
<b>Increase in cost of the 55 projects</b>		<b>2,287.72</b>
Expenditure incurred up to March 2010 on 35 projects transferred to KIDC in 2007	2,219.03	
Balance cost of the 35 projects in April 2010	2,267.54	
<b>Total cost</b>	<b>4,486.57</b>	
Less estimated cost of the 35 projects in April 2007	3,509.55	
<b>Increase in cost of the 35 projects</b>		<b>977.02</b>
<b>Increase in cost of all the 90 projects</b>		<b>3,264.74</b>

\*Projects include 9 projects where height of the dams were increased after commencement of works, which had caused additional financial burden of ₹ 383.62 crore, as discussed in paragraph 2.1.9.3. There was no increase in scope in respect of 35 projects transferred in 2007.

Thus, the delay in completion of projects in the scheduled period resulted in increase in cost of ₹ 3,264.74 crore during 2005-2010. Besides, the projected IP could not be created, which indicated defective planning.

Shortfalls in terms of land acquisition, rehabilitation and its repercussions are discussed in Paragraph 2.1.7.2 above.

### 2.1.8.3 Non-provision of matching share for AIBP Projects

Five<sup>12</sup> test checked projects fall under the Accelerated Irrigation Benefit Programme (AIBP). While the Tillari Project (major) received Central

<sup>12</sup> Arjuna, Devghar, Gadnadi, Nardave and Tillari.



assistance under AIBP since 2005-06 onwards, the remaining four projects were brought under AIBP in 2009-10.

Scrutiny (April 2010) of records of Tillari project revealed that State share of ₹ 158.67 crore (75 *per cent*) was to be released as stipulated in the agreement. However, the GoM had provided only ₹ 128.75 crore during 2007-09. As a result, the GoI restricted the Central share to ₹ 33.40 crore against ₹ 52.89 crore, thus depriving the project of ₹ 49.41 crore (Central share: ₹ 19.49 crore; State share ₹ 29.92 crore).

#### **2.1.8.4 Short release of funds under special packages**

The GoM (July 2007) decided, under special package for Konkan region, to release additional grant of ₹ 1,098.19 crore to the KIDC during 2007-08 to 2009-10 to complete the ongoing projects. However, GoM released only ₹ 382.99 crore during 2007-08 and 2009-10 to the KIDC.

Under another special package, GoM decided (June 2009) to provide ₹ 3,993 crore for development of the Konkan region which included ₹ 1,550 crore to be provided during the period 2009-10 to 2011-12 for completion of 39 irrigation projects under the KIDC. However, no funds were provided for the irrigation projects under KIDC as of June 2010. Release of funds under both the packages would have helped the KIDC to meet the fund requirement for execution of projects.

The Secretary stated (November 2010) that no funds were released to the KIDC against any special packages announced by the GoM as it was to be provided through the regular budget available to the Department.

The reply was not tenable as GoM decided to give the special package to complete the advanced projects speedily and regular budgetary allocation was not sufficient for the same.

#### **2.1.8.5 Excess expenditure over administrative approval**

According to para 134 (c) of MPW Manual, revised administrative approval (AA) was to be obtained if expenditure exceeds the amount of AA by more than 10 *per cent* or ₹ 1 crore, whichever is less. No officer should allow any excess over the AA without permission of the authority competent to approve the cost so enhanced. It was noticed that in respect of 12<sup>13</sup> out of 30 selected projects, where original AAs sanctioned were for ₹ 47.27 crore, the revised AAs were for ₹ 275.74 crore only whereas the KIDC had incurred an expenditure of ₹ 407.80 crore as of March 2010 thereby exceeding the AA by ₹ 132.06 crore *i.e.* by 45 *per cent* (**Appendix 2.6**).

In the exit conference (November 2010) the Secretary stated that funds were released beyond administrative approval so as to continue the work without any hindrance, as stoppage of work abruptly may lead to cost escalation and additional burden on Government and assured to check such expenditure in future.

<sup>13</sup> Minor Irrigation Divisions at Chiplun, Ratnagiri and Thane,

The reply was not tenable as the action of the Government was in contravention of the MPW Manual.

#### 2.1.8.6 Outstanding advances

According to para 10.2.21 of MPW Account Code, advances to contractors are prohibited and every endeavor should be made to maintain a system under which no payments were made except for work actually done. However, recoveries of advances paid to the contractors should not be postponed until the whole of the work entrusted to the contractor was completed.

Scrutiny of records in two out of ten test-checked irrigation divisions<sup>14</sup>, revealed that advances of ₹ 11.81 crore were paid to the contractors during 2002-03 and 2006-07 for which recovery of ₹ 15.62 crore was to be effected along with interest, but the KIDC recovered only ₹ 2.33 crore as of November 2010 as detailed in the **Table 5**. In the test-checked divisions, no advances were paid to contractors after 2006-07.

**Table 5: Outstanding work advances as of May 2010**

Name of the project	Name of the contractor	Advance sanctioned (interest rate per annum)	Advance paid in	Recovery due including interest	Advance recovered	Recovery outstanding
New Mandve.	M/s Master Construction	₹ 1.50 crore (16)	2002-03	₹ 2.94 crore	₹ 0.99 crore	₹ 1.95 crore
Gadgadi	M/s F.A. Construction	₹ 0.31 crore (9.25)	2002-03	₹ 0.57 crore	₹ 0.19 crore	₹ 0.38 crore
Deharji	M/s. P.V.R. Projects Ltd.,	₹ 10 crore (13)	2006-07	₹ 12.11 crore	₹ 1.15 crore	₹ 10.96 crore
		<b>₹ 11.81 crore</b>		<b>₹ 15.62 crore</b>	<b>₹ 2.33 crore</b>	<b>₹ 13.29 crore</b>

- In respect of Gadgadi project, only ₹ 0.19 crore was recovered from the contractor through running account (RA) bills till August 2007. However, no recovery was made though payments of ₹ 91.80 lakh were made during August 2007 to June 2009 for the work executed up to May 2009.
- In respect of New Mandve Minor Irrigation scheme, the work was stopped since April 2002 due to agitation of PAPs and non-availability of funds. The bank guarantee against which the advance was paid expired in May 2003, but not yet renewed (May 2010).
- Mention was made in Paragraph 3.5.1 of the Audit Report for the year 2008-09 regarding irregular sanction of advance of ₹ 10 crore in April 2007 for the work of Deharji Medium Project, Thane District. The work has not been started as of December 2010 due to non-acquisition of forest land. No action was initiated by the ED to recover the advance from the contractor except interest of ₹ 1.15 crore recovered up to May 2010.

While the KIDC had shortage of funds for payment of compensation to PAPs, advances paid to contractors were pending for adjustment/recovery for long periods. In the exit conference, the CE, WRD, stated (November 2010) that

<sup>14</sup> M.I. Division, Chiplun and Raigad Irrigation Division No.2, Konkan Bhavan, Navi Mumbai.



the advance given to the contractors would be recovered from the future bills paid to the contractor. The fact remains that the advances remained unrecovered for long periods.

#### **2.1.8.7 Accounting policy and assets management**

Grants received by the KIDC from the Department are disbursed to the Divisions project-wise as per allocation made by the Department. Physical and Financial reports are being prepared monthly and submitted by each Division headed by EE and assisted by Divisional Accountant (DA), to the Circle headed by Superintending Engineer and consolidated at the CE's Office with the help of Accounts wing. Thereafter, the Consolidated Report is submitted to ED who in turn submits it to the WRD on monthly, quarterly and annual basis. The Chartered Accountant appointed by the KIDC finalises the accounts and submits it to CAFO.

The Act provides preparation of Receipt and Payment Account, Balance Sheet *etc.* The annual accounts prepared are examined by CAFO and with the approval of ED, the Final Accounts are in turn submitted to the Governing Council for approval. Thereafter, approved accounts are submitted to the Pr. Accountant General for certification. The certified accounts are submitted to the Government for placing before the Legislature.

Audit observed that the Annual Accounts were prepared by the KIDC on cash basis instead of accrual basis. Hence, correct financial position of the KIDC such as 'Amounts receivable and payable' was not reflected in the Annual Accounts. Further, the KIDC could not confirm the balances under the Head "Current Assets-Loans and Advances" and under "Current Liabilities and Provisions". The KIDC had neither maintained Asset Register nor provided depreciation to the assets. Due to these deficiencies correct financial picture was not depicted in the Annual Accounts. Further, there was a delay of 10 months in submission of Annual Accounts for the year 2006-07 to 2008-09 to Audit.

In the exit conference, the Secretary stated (November 2010) that instructions would be issued to the CAFO and the ED to look into the matter and streamline the issue accordingly, so as to reflect all financial transactions in the Annual Accounts to give fair view of the accounts of the KIDC.

#### **2.1.8.8 Accumulated liabilities of the KIDC**

The KIDC prepared a statement of liabilities every year for submission to the Government. The KIDC failed to make timely payment of its liabilities such as compensation to land owners, rehabilitation of PAPs, pending bills of contractors for construction activities due to insufficient funds.

Even though there were balances of funds at the end of each year, the KIDC had considerable liabilities. The liability at the end of 2009-10 was ₹ 352.66 crore while the balance available was ₹ 143.63 crore only and the liability increased to ₹ 1,066.87 crore as on March 2010 (**Appendix 2.7**). Liabilities carried forward from year to year adversely affected the progress of the projects and there was abnormal delay of five to 20 years in completion of projects. Further, the funds demanded by the KIDC and that provided by the

GoM were also very much insufficient to meet the requirement. As a result, an increasing trend has been noticed in accumulation of liabilities.

In the exit conference, the Secretary accepted that the liabilities had increased as timely funds could not be provided and stated that the same would be settled on availability of funds.

## 2.1.9 Execution of projects

### 2.1.9.1 Defective execution

The dams were constructed as per the designs approved by Central Design Office (CDO), Nashik. Scrutiny of records and site visits of 30 test-checked dams (**Appendix 2.1**) revealed that five dams *viz.*, Bholwali, Dhasai, Kondivali, Tangar, and Tulyachapada, were under repair for more than four to 10 years. Consequently water storage was either reduced or kept below sill level necessitating stoppage of irrigation for two to 10 years. In the Health Status Report 2009, the Dam Safety Organisation, Nashik (DSO)<sup>15</sup> also pointed out to the CE, KIDC about the leakages in the dams and recommended that urgent remedial action should be taken to avoid any mishap. But the repair works were not completed as of June 2010, as shown in the **Table 6** below:

**Table 6: Details of defective projects**

Name of the project	Year of gorge filling	Leakage noticed during	Proposal for repair submitted in	Sanctioned amount (₹ in lakh)	Position of repairs	Position of irrigation
Bholwali	2001-02	July 2001	2003-04	58.28	Grouting of head works was in progress.	No irrigation since October 2001.
Dhasai	1984-85	July 2008	2008-09	34.54		No irrigation since October 2008.
Kondivali	1995-96	July 2003	2005-06	18.03		No irrigation since November 1998.
Tangar	1995-96	January 1999	2008-09	49.01	Repairing of underground pipes was in progress	No irrigation since November 1999.
Tulyachapada	1995-96	July 2008	2008-09	77.47		No irrigation since October 2008.
Source: Executive Engineers of the divisions concerned						

In the exit conference the CE stated that the repairs of the dams are in progress.

<sup>15</sup> DSO is a unit under the WRD, GoM, which sets the safety norms for dams and verifies the compliance reports prepared by the Executive Engineers based on six monthly (pre and post monsoon) inspection of the dams.



**Tangar (leakage at dam flank)**



**Tangar (main outlet at sill level)**



**Kondivali (pilot cut in spillway)**



**Tulyachapada  
(breakage of underground pipeline)**

### **2.1.9.2 Extra expenditure due to extra items executed**

While executing the projects it is required to exercise utmost care so as to complete the projects effectively, efficiently and economically and as per schedule. Scrutiny of records (April 2010 to June 2010) revealed that due to lack of proper monitoring and supervision, the KIDC had to incur extra expenditure on execution of the following test checked projects:-

- In respect of Domihira Minor Irrigation Project, the contractor had executed 5,77,243 cum on excavation of earth work on the Left and Right flanks of the dam during February 2006 to March 2007 respectively. As protective work for earth work was not done by the contractor, the earthwork of 74,862.10 cum. of both the flanks was washed away in heavy rainfall during the years 2007 and 2008. This was not pointed out by any of the officials responsible for supervision of the work. The KIDC

noticed the mishap only at the time of measurement of earthworks gorge filling in December 2008. Subsequently, the KIDC had to incur an extra expenditure of ₹ 1.33 crore for refilling the washed out portions on the side slopes of both the flanks in July 2009. However, the contractor was not penalised for non-construction of the protective work.

- The work order for Talamba Major Irrigation project in Sindhudurg District was placed in 1999-2000 and the headwork was started in November 2001. The stipulated date of completion was September 2004. The project work was suspended due to non-acquisition of forest land, private land and non-settlement of PAP problems since 2002 to 2007 and again during 2008 to 2010. The bank work executed (2000-2002) was washed out in heavy rains and the cut off trench (COT) was also filled with silt between 2002 and 2007. Therefore, the repairing work of re-embankment of the headwork and removal of accumulated silt was executed during 2008-09 at a cost of ₹ 4.83 crore, thus causing additional financial burden due to non-suspension of the work. The expenditure was approved by the CE during March 2008 to January 2009.

In the exit conference, the Secretary stated that the matter would be verified.

#### **2.1.9.3 Increase in height of dams**

Height of nine<sup>16</sup> out of 30 test-checked dams was increased during the execution to enhance water storage capacity of the dams. As a result, height of the spillways and the head regulators was also required to be increased proportionately. Increasing the height of the dams caused additional financial burden of ₹ 383.62 crore. However, none of these dams were completed till date nor was the water storage capacity enhanced in any of the dams. Considering the poor utilisation of the IP potential in the Region *i.e.*, 0.02 *per cent* to 58 *per cent* during 2004-05 to 2008-09, increase in the height of the dams may not have any added advantage in terms of increase in agricultural output and an additional financial burden was not justified. Further, increase in submergence area would lead to requirement of more land and related rehabilitation problems had to be faced by the KIDC. Even the revised AAs for increase in height in respect of four dams<sup>17</sup> were yet to be accorded (June 2010).

In the exit conference, ED stated that the height of the dams was increased only to store the available water so that it can be used for more irrigation and other purposes. As the projects were affected due to insufficient funds and land acquisition problems, there was a need to assess realistically the increase in height of dam which necessitates additional expenditure and land acquisition issues as well.

#### **2.1.9.4 Payment of idle charges due to stoppage of work**

As per clause 15(3) of tender conditions of the contract, where the Engineer required the contractor to suspend the work for period in excess of 30 days at any time or 60 days in the aggregate, the contractor was entitled for pecuniary

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<sup>16</sup> Aruna, Berdewadi, Gadnadi, Nadhavade, . Nardave, Otav, Rangav,, Shirshingi and Tarandale

<sup>17</sup> Otav, Rangav, Shirshingi and Tarandale.



loss suffered by him as the machinery remained idle on the site and to pay the salary or wages of labour engaged during the period of suspension. Further, under Clause 38 of the tender conditions, if the contractor executes excess quantity/extra item, the department had to bear extra expenditure thereof.

Scrutiny of records of the 30 selected projects revealed that in respect of seven projects, the KIDC had to incur extra expenditure of ₹ 44.17 crore<sup>18</sup> towards payment of idle charges on machineries and manpower to the contractor due to stoppage of works by the PAPs for fulfilment of their demands.

The CE stated (November 2010) that the expenditure was incurred due to PAP and land acquisition problems.

### 2.1.9.5 Non-achievement of projected Irrigation Potential (IP)

Phase-wise transfer of 90 projects to the KIDC during 1998-99 to 2007-08 and the status of IP created as of July 2010 are detailed in Table 7.

**Table 7: Projects transferred to the KIDC and achievement of IP and water storage**

Year of transfer to the KIDC	Projects			Total	IP in ha.		Water storage (in million cum.)	
	Major	Medium	Minor		Projected	Created	Projected	Created
1998-99	1	4	33	38	97,789	14,821	1,073.50	390.59
2000-01	0	5	12	17	46,558	0	482.65	9.21
2007-08	3	2	30	35	1,13,017	48,324	1,992.55	1,830.32
<b>Total</b>	<b>4</b>	<b>11</b>	<b>75</b>	<b>90</b>	<b>2,57,364</b>	<b>63,145</b>	<b>3,548.70</b>	<b>2,230.12</b>

It was noticed that water storage of 2,230.12 Mcum (63 *per cent*) and IP of 63,145 ha (25 *per cent*) could be created as of July 2010. Further, against the target IP of 6,713 ha for the year 2008-09, an IP of 5,094 ha was only created (76 *per cent*).

Test-check of records (April–May 2010) and joint field visits (April–May 2010) revealed the following:

- Against the water storage capacity of 4.869 MCum of Waygholpada project nearly completed, only 2.967 MCum water was stored during the year 2009-10 due to leakages in the head regulator. As a result only 160 ha out of 590 ha of IP could be created during the years.
- The entire projected IP of 459 ha was created for Dhasai project nearly completed. However, water could not be released for irrigation for the last two years *i.e.*, 2008-10 as the canals required repairs and work of Chaffa distributory canal was not completed as of June 2010.
- Against the projected IP of 648 ha of Chalmukh Minor Irrigation Project nearly completed, only 480 ha was created and the IP utilisation during 2005-06 to 2008-09 was 60 ha to 151 ha.

Irrigation potential of 63,145 ha (25 *per cent*) could be created up to July 2010

<sup>18</sup> Minor Irrigation Division Chiplun: (i) Gadnadi Medium Project: ₹ 5.08 crore; (ii) Jamda Medium Project: ₹ 26.33 crore; (iii) Kakeywadi Project: ₹ 0.91 crore & (iv) Pimpalwadi Minor Project: ₹ 1.15 crore and Medium Irrigation Project Divn., Ambadpad, Sindhudurg: (i) Narandave Medium Project: ₹ 7.48 crore; (ii) Shirshinge M.I. Project: ₹ 2.70 crore & (iii) Devghar Medium Project: ₹ 0.52 crore.

- In the case of 38 projects on which ₹ 717.69 crore were spent, neither water storage nor IP was created though these projects were under execution during last five to 20 years (**Appendix 2.8**).
- In respect of five projects<sup>19</sup> on which an expenditure ₹ 167 crore was incurred; only water storage was created up to July 2010, but no IP was created. In respect of 15 projects<sup>20</sup> constructed at a cost of ₹ 2,353.52 crore (**Appendix 2.9**), full water storage was created but only two *per cent* to 38 *per cent* projected IP was created.
- In the case of Sakharpa project, IP of only 10 ha was created which was two *per cent* of the projected IP of 429 ha.

In the exit conference, the Secretary confirmed that the projected IP could not be achieved due to various problems such as lack of sufficient funds, rehabilitation, payment of compensation and land acquisition.

#### **2.1.9.6 Underutilisation of irrigation potential**

Scrutiny revealed that out of 90 ongoing irrigation projects under KIDC, 13 nearly completed minor projects with minor residual works were remaining and eight other projects were nearing completion, IP of 4,410 ha and 5,967 ha respectively was created. Scrutiny of records of five selected units revealed that during the period 2004-05 to 2008-09, utilisation of the created IP was only 0.02 *per cent* in Tillari project and 0.8 *per cent* in Awashi project. Utilisation of IP in seven projects ranged between 12 *per cent* and 38 *per cent*. Only Waygholpada project showed better utilisation of IP at 58 *per cent* of IP created. This was due to leakages in the dam and because water could not reach the end users. Further, even the beneficiaries in the vicinity of the dam were not willing to take water as their land became muddy and infertile due to constant leakage of water.

In respect of Awashi, Panchnadi, Tillari and Wagh projects, the projected IP was not created till date though the gorge filling was done between 1984 and 2006. In the case of all the above projects, the IP created remained largely underutilised and therefore value for money from these projects on which ₹ 919.70 crore was invested remained largely unachieved. The position of IP utilisation in 10 selected projects is given in **Appendix 2.10**.

In the exit conference, the Secretary stated that though utilisation of IP was less, optimum utilisation was possible with change in attitude of farmers by organising training programmes as well as their participation in water management. Audit observed that formation and registration of water users' association was not satisfactory as discussed below.

#### **Formation of water users association (WUA)**

As per the Act, WUAs were required to be formed for each completed project. Further, GoM reiterated (July 2001) the need for formation of WUAs for optimum and efficient utilisation of water for irrigation purpose, whenever a dam was ready for distribution of water to the beneficiaries. GoM also

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<sup>19</sup> Amboli, Berdewadi, Dendonwadi, Korle-Satandi and Ottawa

<sup>20</sup> Awashi, Bhatsa, Deoghar, Hetwane, Pimpalwadi, Roshni, Sakharpa, Shivdawa, Srimant Surya, Talwade, Tillari, Tulyachapada and Wagh,

clarified that there should be no supply/distribution of water to the beneficiaries until WUA was formed.

Scrutiny of status reports in respect of 13 completed projects and information furnished to Audit by the divisions revealed that though 50 WUAs were formed up to November 2010, no WUAs were registered. As a result, efficient distribution of water to the beneficiaries and its utilisation could not be ensured and the revenue projected could not be realised.

The CE stated (August 2010) that 46 WUAs were formed in four districts in the Region and process of formation of WUAs in other places was in progress. However, the status report of the KIDC indicated that only four WUAs were registered and none of them were functioning. Further, out of 50 WUAs formed in four districts, Raigad had 31 WUAs and other three districts together had only 19 WUAs as of March 2010.

The KIDC replied that it had conducted 32 training courses for farmers during 2006 to 2010 in Thane Circle (20) and Ratnagiri Circle (12) through Water and Land Management Institute (WALMI).

Non-formation of WUAs in respect of the nearly completed projects resulted in poor utilisation of IP created.

The Secretary stated (November 2010) that WUAs were being formed and functional in some districts, but, their pace was very slow. It was further stated that KIDC was pursuing the matter to achieve the target. The Secretary emphasised the need of an Agency for Command Area Development in Konkan region to enhance utilisation of IP and improve cropping pattern.

### **Cropping pattern**

The cropping pattern is largely influenced by the type of soil and the climatic conditions of the Region, and has to be decided in consultation with the Agriculture Department to improve the overall utilisation of land and enhancing agricultural and horticultural production.

The IP created was only 25 *per cent* of the projected IP and even the IP created remained largely underutilised as brought out in **Appendix 2.11**. Underutilisation of IP was also related to the cropping pattern. As the farmers were reluctant to deviate from the traditional cropping pattern the yield expected from both Kharif and Rabbi could not be achieved. Even the demand for water in Rabbi season was negligible which in turn had a negative impact on yield. Further, agricultural extension activities were not undertaken by the Department to make the farmers aware of the benefits of multiple crops. The project also failed to curb migration of people from the Region which remained above 10 *per cent*.

The CE attributed (August 2010) the meagre utilisation of IP to change in attitude of the cultivators towards traditional paddy crops, unauthorised use of water by breaking the pipelines and penetration of roots of nearby trees into the pipelines *etc.* However, action initiated to prevent sabotage of irrigation pipelines was not intimated.



In the exit conference, the Secretary stated that awareness about new crops, cultivation methods and facilities were being imparted to farmers through training and by introducing suitable cropping pattern for the Region.

#### **2.1.9.7 Hydro-electric power generation**

Clause 18(c) of Act stipulated that the KIDC should plan, investigate, design, construct and manage the scheme of generation of hydro-electric energy including hydro-electric power projects as were assigned, handed over or transferred to the KIDC by GoM. But the scheme of power generation was not assigned to the KIDC. The Chief Engineer, Hydro-electric Projects carried out the construction and operation of the Hydro-electric Power Projects in the Region with the help of other bodies on Built Operate and Transfer (BOT) basis after completion of dam works. Further, the KIDC was entrusted with execution of only civil work of hydro-electric projects and water supply from the reservoirs for power generation. There were 47 hydro-electric projects with installed capacity of 404.29 mega watt (MW) in the Region. In 11 out of 30 test-checked projects; irrigation cum power outlet (ICPO) with total installed capacity of 25.90 MW was envisaged in the project plan. But only 0.20 MW of power generation could be achieved at Teravanmedhe, pick up weir, (Sindhudurg) since May 2002.

The ED, KIDC, stated (August 2010) that some power projects were proposed to be constructed on BOT basis.

The reply was not tenable as power generation could not start since the head works and canal works were not completed by the KIDC. Thus, even after spending ₹ 2,515.98 crore on dam works, the ICPOs could not be made operative due to non-completion of dams.

The CE stated (November 2010) that power generation of 20 MW was dealt by the CE, Electrical. He, however, accepted that the envisaged power generation can be done only after completion of the dams and the ICPOs.

#### **2.1.10 Monitoring**

##### **2.1.10.1 Internal control mechanism**

Internal control is an integral component of an organisation's management process. It is intended to give reasonable assurance that its operations are carried out according to laid down rules and regulations in promoting orderly, economical, efficient and effective operations to provide quality products and service consistent with the organisation's mission.

##### **2.1.10.2 Non-posting of Accounts and Finance Officers**

As per clause 12 of Act, State Government shall appoint Chief Accounts and Finance Officer (CAFO) not below the rank of Director from Maharashtra Finance and Account Services for the KIDC. There is a regular post of CAFO in the KIDC since its inception. However, out of 17 officials who held the charge till June 2010, only six officials were posted as regular CAFOs covering a period of nine years, for the remaining period, additional charge was held by the EEs. Since September 2009; no regular CAFO was posted and the additional charge was held by the EE.

Out of 14 Divisional Accountants (DAs) required at Divisional level, only seven DAs were actually posted from 2008-09 onwards. As a result, omissions and errors in dealing with funds and receivables as well as accumulation of liabilities were noticed. Further, there was delay in finalisation and submission of annual accounts as discussed in paragraph 2.1.8.8.

In the exit conference, the Secretary stated that regular CAFO from Finance Department is mandatory and the accounts would be maintained once full time regular CAFO is posted in the KIDC. Due to dearth of staff/officers it could not be maintained. The fact remains that accounting of the KIDC suffered due to non-posting of regular CAFO.

#### **2.1.10.3 Monitoring by the Governing Council**

The Governing Council (GC) functions as the monitoring body to review the financial and physical progress of the projects and is required to convene meetings once in a month. Even though the projects were held up for long periods due to land acquisition problems, PAP compensations, forest clearance *etc.*, these issues were not discussed in the GC meetings held up to July 2001. As envisaged in the Act, the GC decided (February 1999) to appoint a consultant for expeditious settlement of land cases and rehabilitation cases for 38 projects. However, no consultant was appointed so far.

As against 144 meetings due to be held by the GC during 1998-2010, only 49 meetings were convened to discuss the issues such as demand for funds, land acquisition problems, change in designs, taking up of new projects, IP utilisation, crop pattern *etc.* Only 21 meetings were held during 2005-10. However, proper follow up action was not taken by the KIDC. As a result, these problems could not be settled in time and the target date for completion of the projects was extended from 2003-04 to 2012, which was further revised to 2017. Further, the Secretaries of RFD, Finance Department, Planning Department and Agriculture Department, who were the members of the GC had attended the meetings on eight to 15 occasions, against 49 meetings held.

In respect of RFD and Agriculture Department, which deal with land acquisition cases, forest clearance and crop pattern respectively, no representative was present in 23 and 34 meetings respectively. Absence of these key officials in the GC meetings defeated the purpose of establishment of the monitoring system under the Act.

In the exit conference, the Secretary stated (November 2010) that the Governing Council meeting is held only when it is required.

#### **2.1.10.4 Monitoring by the Executive Committee**

As per provision of the Act, the KIDC constituted an Executive Committee (EC) headed by the *ex-officio* MD in 1998. The EC was entrusted with powers to accept tenders above 5 *per cent* to 15 *per cent* of the estimated cost and to deal with contractors' claims up to ₹ 15 lakh. However, no norms were fixed by the KIDC or the GoM for holding meetings. The EC met on 12 occasions during 1999 to 2001 and thereafter no meetings were convened.

The ED stated (January 2010) that the EC met as and when required.

#### **2.1.10.5 Monitoring of safety of dams**

As per the guidelines issued by DSO, Nashik, dams should be inspected by the respective EEs at pre monsoon and post monsoon period and inspection report submitted to the DSO. The discrepancies, defects, omissions noticed during the inspection were to be rectified and attended to urgently by the EEs for safety of dams and the adjoining areas.

Scrutiny of the inspection reports submitted by EEs of two selected divisions viz., Minor Irrigation Division, Chiplun, Irrigation Project Division, Ratnagiri and DSO, Nashik revealed that immediate remedial measures were not initiated against discrepancies/defects pointed out in respect of several dams. Fourteen dams had leakage problems either in the earthen dam section, at head regulators or in concrete structure, which required immediate repairs. Out of the five<sup>21</sup> selected dams having leakages, in the case of two dams, water was allowed to flow down the stream to save the dams.

In two<sup>22</sup> cases the tail channels (spillway) were not provided with protection walls where soil erosion was noticed. In the projects at Shinde and Panhale, spill ways which were mandatory to allow excess water into the nallah/river at downstream to save the dams were yet to be constructed. In the case of Wagh, Tulyachapada, Dhasai projects, the discharge measuring devices were not installed to record the actual water discharged or leakage occurring. Thus, the guidelines of DSO, Nashik were not adhered to by the KIDC.

The ED stated (January 2010) that while constructing the dams suitable instructions were given to contractor as per guidelines.

In the exit conference, the Secretary instructed the CE to carry out repairs of the dams.

#### **2.1.11 Conclusion**

Autonomy envisaged in the Act for raising funds, planning, execution and timely completion of irrigation projects was not given to the KIDC which adversely affected completion schedule of the projects. Release of insufficient funds by the GoM led to non-execution of projects, delay in land acquisition and payment of compensation to PAPs. Revenue generated from water charges not given to KIDC as envisaged in the Act as such the KIDC became totally dependent on Government grants. Recommendations of the High Power Committee for prioritisation in allocation of fund to project were not adhered to which led to non-completion of 85 *per cent* of the projects. Works were taken up without acquisition of required land, clearance from Forest Department and settlement of compensation claims of project affected persons, which contributed to abnormal delays in completion and increase in cost. The GoM had not released the entire share capital as envisaged in the Act. Irrigation potential and water storage created were well short of the projections and created irrigation potential remained largely unutilised. Monitoring of the projects by the Governing Council/ Executive Committee was inadequate. Adequate follow up action was not taken after the pre/post monsoon inspections of the projects.

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<sup>21</sup> Bholwali, Dhasai, Kondivali, Tangar and Tulyachapada

<sup>22</sup> Kondivali and Tangar

**2.1.12 Recommendations**

- The Government should re-prioritise the execution of the projects on the basis of the High Power Committee's recommendations. Budgetary allocation should also be prioritised so that the projects in advance stage of completion do not suffer due to spreading of resources thinly on all projects, leading to time and cost overruns.
- Since the KIDC's performance was hampered by lack of administrative and financial autonomy, the Government should reconsider granting sufficient autonomy to the KIDC for completion of projects in a time bound manner.
- The Government could consider giving KIDC powers to work as a special purpose vehicle in respect of land acquisition, rehabilitation and other related PAP problems for timely completion of projects.
- The Government should arrange imparting training and conducting demonstrations in respect of farming for optimum utilisation of the created irrigation potential and water storage.

## Medical Education and Drugs Department

### 2.2 Government Medical Colleges and Hospitals in Maharashtra

#### Executive summary

*Progressive improvement in medical education, research and health care with modern scientific methods is of great importance in every society. Director of Medical Education and Research under the Medical Education and Drugs Department is responsible for producing skilled medical and para-medical personnel. In Maharashtra, there are 41 medical colleges including 14 Government Medical Colleges (GMCs).*

*An audit review of the working of six GMCs along with the attached hospitals for the period 2005-10 revealed lack of planning to increase medical seats, shortage of teaching and para-medical staff, non-approval of post graduate courses by Medical Council of India (MCI), idling of machinery and equipment and lack of amenities in hostel for medical students.*

*There is no specific Government policy and programme for improvement of medical education in the State, particularly in tribal areas. Number of medical seats was not increased despite increase in population and the demand of the aspiring students. Research activity was inadequate, as the DMER did not have any programme for research.*

*MCI norms regarding teaching staff, infrastructure, diagnostic equipment, staff quarters etc., were not followed in some GMCs. Most of the hospitals were lacking the super specialty treatment facilities. Machinery and equipment (M&E) remained idle for want of repairs and supply of electricity, while funds provided for procurement of new M&E remained largely unutilised.*

*Post Graduate courses could not start for want of teachers and infrastructure. Nursing courses were conducted without fulfilling Indian Nursing Council norms for teaching staff. Large number of passed out students did not render services for Government hospitals.*

*The GMC hostels lacked the facilities like hygienic drinking water, furniture in students' rooms. Canteen and toilets were also unclean.*

### **2.2.1 Introduction**

The Medical Education and Drugs Department (MEDD) was established with the primary objective of producing highly skilled medical and paramedical personnel for providing quality health care services to people. With a view to expanding medical education and research activities, Directorate of Medical Education and Research, Mumbai (DMER) came into existence in May 1970 and started functioning under the administrative control of MEDD. The main function of the DMER is to give medical education to undergraduates (UG) and postgraduates (PG) on Medical, Dental and Nursing Education and also to promote medical research to enhance the quality of human life. In Maharashtra, there are 41 medical colleges (MCs) as listed in **Appendix 2.12** with an intake capacity of 4610 undergraduate students which include 14 Government Medical Colleges (GMCs), four run by Municipal Corporations, two by Central Government, 11 private colleges and 10 medical colleges having the status of deemed university. The Medical Council of India (MCI) controls the standards of medical education as per rules laid down by the Council irrespective of the status of the colleges. Each medical college is attached to one or more hospitals having proportionate bed strength in the ratio as laid down by the MCI. The total bed strength in 27 hospitals and health units, attached to 14 GMCs is 12,221 as detailed in **Appendix 2.13**.

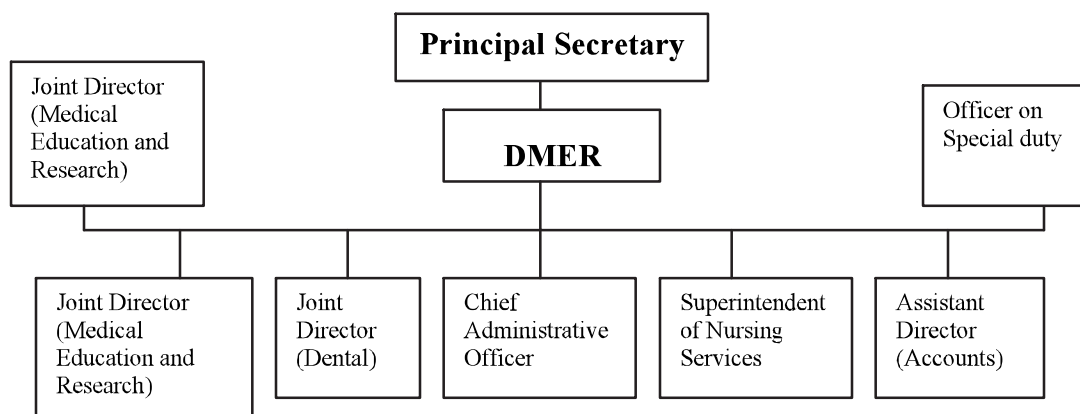
Medical science plays a vital role in saving the people from various diseases and epidemics. Thus, progressive improvement in education, research and health care with modern scientific methods is a matter of great importance. Considering the importance of medical education, social obligation for delivery of quality health care services as well as the large amount of funds provided for the medical institutes, the performance audit of Government Medical Colleges and Hospitals in Maharashtra was undertaken.

### **2.2.2 Organisation set up**

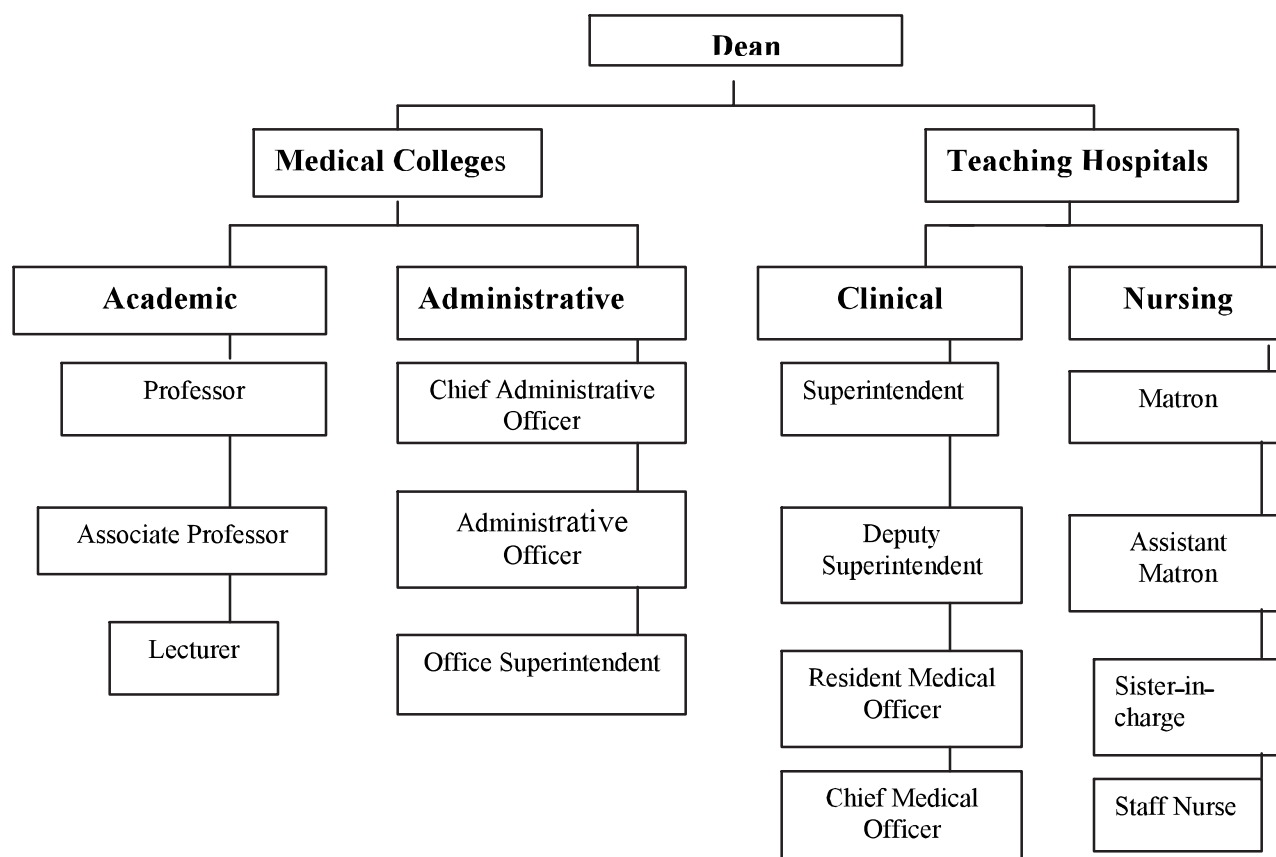
Principal Secretary (Medical Education and Drugs), Government of Maharashtra is the Head of the Department. The DMER is responsible for direction and administration of all the Government Medical Colleges and Hospitals (GMC&H). He is assisted by three Joint Directors, one Chief Administrative Officer, one Superintendent of Nursing Services and one Assistant Director (Accounts).

In 1988, Maharashtra University of Health Sciences (MUHS) was established. The MUHS grants recognition to the courses of the medical educational institutions in the State of Maharashtra. All institutions providing medical education under the University are affiliated to the MUHS.

The organisational set up of the Directorate is as under:



Administrative set up of the Medical Colleges and Hospitals is as under:



### 2.2.3 Audit objectives

The audit objectives were to assess whether:



- the MCI guidelines on Minimum Standard Requirement for Medical Colleges were complied with and upgradation of the Medical Colleges and Hospitals was effected;
- allotment of funds was adequate and fund management was effective and efficient;
- there were adequate faculty and health personnel;
- procurement of machinery and equipment was done economically and effectively;
- patient care including diagnosis, treatment in the teaching hospitals was adequate and effective; and
- adequate monitoring and internal control system was in existence.

#### **2.2.4 Audit criteria**

The audit criteria adopted for performance audit were:

- guidelines issued and standards set by Medical Council of India for the Medical Colleges and hospitals;
- instructions issued by Government while sanctioning the UG and PG courses, intake capacity, bed strength, upgradation of institutes and purchase of machineries and equipments; and
- purchase Manual, Hospital Manual and Bombay Financial Rules

#### **2.2.5 Scope and methodology of audit**

Performance audit was conducted between February and July 2010 covering the period from 2005-06 to 2009-10 by collection of information through audit queries/questionnaire and test check of records in MEDD in the Secretariat, DMER, six<sup>1</sup> Government Medical Colleges along with the attached Hospitals (GMC&H) and MUHS, Nashik. Three colleges<sup>2</sup> running BSc (Nursing) course were also covered. The GMC&Hs (six units) were selected by adopting Simple Random Sampling without Replacement (SRSWOR) Method.

The audit objectives, audit criteria, scope and methodology of audit were discussed in an entry conference held on 08 June 2010 with the Principal Secretary, MEDD. Exit conference could not be held as no response was received from Government in spite of repeated requests in October and November 2010 and January 2011.

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<sup>1</sup> Government Medical College, Akola, Swami Ramanand Tirth Rural Medical College, Ambejogai, Government Medical College, Aurangabad, Government Medical College, Miraj, Government Medical College, Nagpur and B.J. Medical College, Pune

<sup>2</sup> Aurangabad, Nagpur and Pune

## Audit findings

### 2.2.6 Planning

#### 2.2.6.1 Absence of specific Government policies and planned programmes

No specific Government policies and programmes regarding improvement in medical education

As per the report submitted by a committee<sup>3</sup> appointed (September 2008) by the State Government, Maharashtra has the largest number of Medical Colleges with highest number of medical seats (4610) in the country. While the all India average of doctor population ratio was 1:1750 people, for the State of Maharashtra it was 1:1191, which was far below the new standard of 1:250 recommended by the World Health Organisation (WHO). The ratio was very much adverse for tribal areas, in the tribal district of Gadchiroli the ratio was 1:11,000. As per the said report, the intake capacity to population ratio was one medical seat per 23,810 people, while in the neighboring States viz., Tamil Nadu (1:11,111), Gujarat (1:14,286), Karnataka (1:15,625) and Andhra Pradesh (1:19,607) the position was much better.

Section 64(1) of Maharashtra University of Health Sciences Act stipulates that the University has to prepare a Perspective Plan for educational development and equitable distribution of facilities of health sciences education having due regard to the needs of unserved and underdeveloped areas in the State.

The MUHS, Nashik prepared a Perspective Plan in October 2005 for the period 2006-11 for improvement in quality of medical education keeping in view the needs of the unserved and underdeveloped areas in the State. Since there was no medical college in 15<sup>4</sup> out of 35 districts, MUHS recommended (October 2005) the Government to establish three medical colleges covering these districts every year in the State. It also emphasised the need for new medical colleges and hospitals in tribal districts. However, Government did not formulate any plan for opening of new GMCs, even in the tribal districts, where doctor population ratio was very poor. The intake capacity in the existing Government Medical Colleges was also not increased during 2005-10. However, Government accorded (2005-10) approval for opening of three new private unaided medical colleges at Pune, Jalgaon and Sangli with the total intake capacity of 300 students where medical colleges were already in existence except in Jalgaon. DMER stated that no survey was conducted either for considering the doctor to population ratio or for identifying the deficiencies in infrastructure facilities in the existing hospitals as well as students' hostels by DMER during the period 2005-10. This indicated non-availability of required inputs for proper and effective planning.

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<sup>3</sup> Committee to make suggestions for policy changes arising out of the issues discussed in the National Seminar on 'Medical education : need for paradigm changes' held in July 2008.

<sup>4</sup> Bhandara, Buldhana, Chandrapur, Gadchiroli, Gondia, Hingoli, Jalgaon, Jalna, Mumbai Suburban, Nandurbar, Osmanabad, Parbhani, Ratnagiri, Sindhudurg and Washim

It was noticed that for execution of various civil works, spill over works, upgradation of medical colleges, purchase of machineries and equipments, *etc.*, in the existing institutions, the DMER proposed the item-wise annual requirement to the Planning Department in a General Statement (called as GN-2)<sup>5</sup>. However, the annual outlay sanctioned by the Planning Department was 38 *per cent*, 36 *per cent* and 68 *per cent* of the demand placed by DMER in GN-2 during 2006-07, 2007-08 and 2008-09 respectively.

As regards the programmes prepared based on the reduced outlay sanctioned by the Planning Department during 2005-10, DMER stated that no detailed Annual Action Plan prioritizing the items of works was prepared. It was obvious that due to short sanction of the budget outlay by Planning Department, the GMCs could not take up all the activities as contemplated in GN-2. Scrutiny also revealed that budget estimates proposed for construction works as well as 'Register for Progress Report of Expenditure on Plan Schemes' were not maintained. As a result, the impact of less budgetary provision on execution of various activities for improvement in medical education could not be verified in audit.

### 2.2.6.2 Compliance to MCI guidelines

The MCI formulated Minimum Standard Requirements for Medical Colleges vide Regulations in 1999. The objective of these regulations is to prescribe for a medical college and medical institution approved for admissions of MBBS students, the minimum requirements of accommodation in the college and its associated teaching hospitals, staff (teaching and technical both) and equipment in the college departments and hospitals.

The MCI conducts inspection for compliance of these standards before granting recognition to medical institutes and as and when required thereafter.

In test checked units, MCI guidelines were generally complied. However, inadequacy in availability of teaching staff, infrastructure, diagnostic equipments, staff quarters, auditorium *etc.*, as compared to the MCI norms, was noticed in audit as discussed in Paragraphs 2.2.8.1, 2.2.8.2, 2.2.10.3, 2.2.10.4, 2.2.10.5 and 2.2.10.6.

### 2.2.6.3 Inadequate planning to increase MBBS seats

Taking into account the growth in population, assessment of requirement of medical and para medical personnel was essential for proper and effective planning.

In the Perspective Plan 2006-11, the MUHS has projected 11 *per cent* population growth in Maharashtra. However, the intake capacity for undergraduate courses in 14 GMCs as on April 2005 was 1,600 with the sanctioned bed strength of 12,221 of the teaching hospitals which remained

**Number of MBBS seats and bed strength not increased despite increase in population.**

<sup>5</sup> Detailed statement of demand on schemes included in draft annual estimates submitted by DMER to MEDD which in turn submitted to Planning Department as a demand for a year

static as of May 2010. DMER stated (August 2010) that since all the teaching hospitals had the bed strength as per MCI norms, the increase in bed strength of the existing medical hospitals was not proposed.

Though the bed strength was as per MCI norms, it should have been increased with the population growth to cope up with increased demand of health care.

Further, the number of aspiring students appearing in the examination of MHT-CET has increased during 2005-2010. The ratio of such students to the present intake capacity (2,060) of the existing GMCs (including Corporation Medical Colleges) is shown in **Table 1**.

**Table 1: Demand and availability of medical seats**

CET Year	Number of students eligible for MBBS courses	Ratio <sup>6</sup> Students : Seat
2005	27,047	13
2006	32,429	16
2007	39,686	19
2008	40,811	20
2009	46,349	22

Source: DMER

It is evident from above that the gap in demand vis-à-vis availability of medical seats was increasing every year.

#### **2.2.6.4 Research activities**

One of the main objectives of the Department was to pursue and encourage research in the field of medical sciences.

Scrutiny revealed that no proposal for research activities was sent by the DMER to Government during 2005-10. However, Maharashtra Medical Research Council (MMRC) sanctioned ₹ 12 lakh to six teachers of four GMCs including GMC, Nagpur during August-September 2006 for conducting studies on six topics (at ₹ 2 lakh per topic).

Further, MUHS in the perspective plan 2006-11 has decided to award research scholarships at ₹ 25,000 each for 25 teachers and at ₹ 2,500 each for 100 students every year. During last four years (2006-07 to 2009-10), the MUHS awarded scholarships to 18 teachers and 106 students only as against the targets of 100 teachers and 400 students respectively. MUHS stated that the shortfall was due to inadequate applicants.

#### **2.2.6.5 Availability of super specialty treatments**

MCI guidelines have not prescribed any specific norms towards availability of super specialty services. However, super specialty services like open heart surgery, kidney transplantation and dialysis, plastic surgery, eye ball

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<sup>6</sup> Ratio is calculated on number of students eligible for MBBS course with the total intake capacity for MBBS course

**Inadequate research activities**

**Majority of the test checked hospitals were lacking super specialty treatment facilities**

implantation and vital diagnostic service like Magnetic Resonance Imaging (MRI) should be made available for the benefit of the patients. Sasoon Hospital, Pune and GMC&H, Nagpur were equipped with above super specialty services except kidney transplantation. GMC&H, Akola had none of the above services. Ambejogai, Aurangabad and Miraj were also lacking in super specialty services of open heart surgery, kidney transplantation and plastic surgery.

Dean, Akola and Miraj, stated that the patients were referred to Mumbai, Nagpur or Pune for treatment of heart diseases and kidney transplantation.

Though deficiency in medical education for want of the super specialty facilities could not be assessed, the poor patients could not get the desired Government facility at their station.

### 2.2.7 Financial Management

The funds provided in the budget and the expenditure incurred by DMER during 2005-10 are given in **Table 2**.

**Table 2: Provision of funds and expenditure**

(₹ in crore)

Year	Plan		Non-Plan	
	Final Modified Grant	Expenditure	Final Modified Grant	Expenditure
2005-06	37.76	32.98	426.85	384.94
2006-07	25.39	25.60	451.25	451.08
2007-08	53.34	53.78	527.36	519.31
2008-09	119.99	119.93	680.80	609.47
2009-10	71.60	71.60	801.77	795.82
<b>Total</b>	<b>308.08</b>	<b>303.89</b>	<b>2888.03</b>	<b>2760.62</b>

(Source: DMER)

Government provided funds to DMER for execution of various civil works, spill over works, upgradation of medical colleges, purchase of machineries and equipments, purchase of material and supplies (M&S), *etc.* However, for construction works, funds were provided to Public Works Department. During 2005-10, ₹ 296.75 crore were provided for this purpose.

Though expenditure of ₹ 119.99 crore was incurred by DMER during 2008-09, Government reduced the outlay to ₹ 71.60 crore in 2009-10.

Scrutiny revealed that the six test checked units had incurred excess expenditure during 2009-10 over and above the sanctioned grant as on 31 March 2010 under the sub-head M&S and created a liability for payment of outstanding bills amounting to ₹ 25.35 crore. The amount included ₹ 15.96 crore (62.96 *per cent*) for procurement of medicines and drugs alone.

Dean, Miraj/Sangli stated that they had requested for allotment of additional grants, but Government did not provide additional allotment in the revised estimates which led to incurring of extra expenditure and creation of liability

**Insufficient provision of funds under material and supply resulted in creation of additional liability of ₹ 25.35 crore**



to Government. Further, due to non-settlement of bills; a few rate contract firms refused to supply the medicines/ drugs indented by units.

### 2.2.7.1 Drawal of funds to avoid lapse of budget grants

As per Maharashtra Treasury Rules, 1968 read with Rule 57 of Bombay Financial Rules, no money shall be drawn from the treasury unless it is required for immediate disbursement.

The Bombay Financial Rules provide that all material received should be examined, counted, measured or weighted as the case may be, when delivery is accepted. Further, these should be received by a responsible officer who should see that the quantities are correct and certify that they are of good quality and that he has actually received the material and recorded it in the appropriate stock register.

In two test checked units, ₹ 30.53 crore were drawn in January, February and March of the respective financial years and paid to the suppliers in the subsequent financial year as detailed in **Table 3**.

**Table 3: Drawal of funds at the end of the year**

(₹ in crore)					
Sl. No	Name of unit	Year	Dates of drawal	Amount	Dates of payment
1	GMC&H, Miraj	2007-08	28.02.08 to 26.03.08	2.83	26.05.08 to 04.08.09
		2008-09	19.01.09 to 31.03.09	1.93	05.05.09 to 20.11.09
2	B.J.MC&H, Pune	2008-09	17.03.09 to 31.03.09	22.55	07.05.09 to 16.10.09
		2009-10	21.03.10 to 31.03.10	3.22	Lying with cashier till 15.05.10
TOTAL				30.53	

It was seen that the amount payable to suppliers was drawn from treasury and kept in the form of Demand Drafts based on the bills preferred by the supplier before the receipt of the M&E to avoid lapse of budget. For this purpose, wrong certificates of receipt and satisfactory installation of the equipments were issued by the storekeepers and heads of the departments to the treasury.

The Dean, Miraj stated that the said procedure was adopted as per the instructions of the Secretary to Government and Director.

### 2.2.7.2 Under-utilisation of funds

In four test checked units, it was observed that the medical colleges did not utilise ₹ 27.07 crore sanctioned for purchase of machinery and equipment as well as for construction work as shown in **Table 4**.

**Funds of ₹ 30.53 crore were drawn at the end of year to avoid lapse of budget grant**

**Out of ₹ 29.74 crore sanctioned for purchase of M&E, ₹ 27.07 crore remained unspent.**

Table 4: Under-utilisation of funds

(₹ in crore)

Sl. No.	Name of unit	Amount sanctioned	Year of sanction	Unspent/ Not drawn amount	Reasons
1	Akola	3.71	2007-08	3.18	A contingency grant of ₹ 3.71 crore was sanctioned during 2007-08 to incur expenditure on handing over of General Hospital from Health Services to DMER. Of which ₹ 53.42 lakh was spent during October to December 2007 and ₹ 3.18 crore lapsed.
2	Ambejogai	0.88 (drawn on Abstract Contingent bill)	2005-06	0.33	Out of proposed seven equipments, four were purchased. As purchase procedure for three equipments was not finalised, unspent fund of ₹ 33.10 lakh was remitted to Government in August 2007.
3	Aurangabad	22.35	2009-10	20.76	Government accorded sanction (March 2010) of ₹ 22.35 crore for purchase of M&E and released ₹ 20.76 crore. However, ₹ 14.36 crore remained unspent (January 2011) due to non-receipt of machinery.
4	Nagpur	0.70	2008-09	0.70	Grant released for construction of ‘Providing extension to casualty department (Trauma centre)’ was lying idle with PWD as plan was not furnished to PWD.
		0.10	2009-10	0.10	
		2.00	2008-09	2.00	Grant released for construction of ‘New library building for digital e-library’ was lying idle with PWD as plan was not furnished to PWD.
TOTAL		29.74		27.07	

As the Government and Directorate did not take timely action, grants of ₹ 24.27 crore could not be utilised. Besides, ₹ 2.80 crore was lying with Public Works Department due to non-submission of plan of civil works to PWD.

### 2.2.7.3 Utilisation of central assistance

Out of ₹ 2.30 crore released by GoI, ₹ 1.86 crore were not utilized for the purpose for which they were sanctioned

Government of India released a total grant ₹ 2.30 crore during 2003-04 and 2008-09 to the following three units for various purposes as given in **Table 5**. However, the grants were either diverted or not utilised.

Table 5: Under-utilisation of central assistance

(₹ in crore)

Name of unit	Central assistance sanctioned	Date of sanction/ amount drawn	Unspent amount	Purpose	Reasons
GMC, Nagpur	0.47	31.3.2004	0.43	For purchase of equipments required for disposal of bio medical waste	Purchase process pending at Government level. Dean, GMC, Nagpur stated that disposal of BMW was being done through MPCB approved contractor. The amount lying unutilised with hospital.
B.J. Medical college & Sasoon Hospital, Pune	0.49	12.2.2004	0.49	For purchase of equipments required for disposal of bio medical waste	Purchase process pending at Government level
	0.80	11.4.2008	0.40	For setting up of Level II Trauma Care centre	The amount was to be utilised after completion of infrastructure work for which ₹ 40 lakh was deposited (October 2009) to Public Works Department.
GMC, Miraj	0.21	30.5.2008	0.21	For starting and development of eye bank and Corneal transplant facility	For the proposal submitted in November 2008, administrative approval received only in March, 2010. Supply of equipment was awaited (April 2010)
	0.33	21.6.2006	0.33	Strengthening of Psychiatric Department	The entire grant of ₹ 32.95 lakh was deposited with PWD for construction, though ₹ 12.95 lakh was allotted for purchase of equipments, drugs and honorary services which should not have been deposited with PWD. This resulted in diversion of Central grant.
				Construction and repairs	
				Purchase of equipments	
				Purchase of Drugs	
				Honorary services	
<b>TOTAL</b>	<b>2.30</b>		<b>1.86</b>		

### 2.2.7.4 Delay in remittance of hospital receipts

The remittance of fees collected from patients delayed by 17 to 115 days

The Public Health Department, Mumbai directed (November 1999) that the hospital fees collected should be remitted in Personal Ledger Account (PLA) on the same day.

In Ambejogai and Sangli, fees collected from patients towards registration and testing charges during 2008-10 were kept as cash in hand and credited to PLA with a delay ranging between 17 and 115 days as shown in **Table 6**.

**Table 6: Delay in remittance of hospital receipts**

(₹ in crore)			
Year	Amount collected	Period of delay in days	Number of occasions
<b>Ambejogai</b>			
2008-09	0.20	18 to 92 days	13
2009-10	0.23	17 to 115 days	25
<b>Sangli</b>			
2008-09	0.44	29 to 93 days	75

Retention of hospital receipts in hand may lead to misutilisation / misappropriation.

### 2.2.8 Teaching staff

#### 2.2.8.1 Shortage of teaching staff

There were shortages of Professor (25 per cent) and Associate Professor (18 per cent)

MCI specified the department-wise requirements of clinical and non-clinical teaching staff. It was however seen that though Government sanctioned the teaching (clinical and non-clinical) staff in excess of the MCI norms, availability of teachers was much below the MCI norms.

The vacancy position as of May 2010 in 14 GMC&Hs in the State in the posts of Professor, Associate Professor and Lecturer in clinical and non-clinical departments is shown in **Table 7**

**Table 7: Vacancy position of teaching staff in the State**

Sl. No.	Name of the post	Sanctioned strength	Requirement as per MCI norms	Staff available	Vacancy against sanctioned strength	Shortfall as against MCI norms
1	Professor	313	293	221	92 (29.39 per cent)	72 (24.57 per cent)
2	Associate Professor	796	576	472	324 (40.70 per cent)	104 (18.05 per cent)
3	Lecturer	1072	731	915	157 (14.64 per cent)	184 (excess)

It could be seen from the above that there was shortage of teaching staff in all cadres as against the sanctioned strength and in the cadre of Professor and Associate Professor as against the MCI norms.

The vacancy position of teaching staff as of May 2010 in respect of six test checked colleges was as given in the **Table 8**.

**Table 8: Vacancy position of teaching staff in test checked units**

Sl. No	Name of the institution	Sanctioned strength			Actually available			Vacancies		
		Professor	Associate Professor	Lecturer	Professor	Associate Professor	Lecturer	Professor	Associate Professor	Lecturer
1	GMC, Akola	17	28	48	11	19	36	6 (35 per cent)	9 (32 per cent)	12 (25 per cent)
2	SRTRMC, Ambejogai	17	37	53	10	16	46	7 (41 per cent)	21 (57 per cent)	7 (13 per cent)
3	GMC, Aurangabad	20	81	81	14	56	70	6 (30 per cent)	25 (31 per cent)	11 (14 per cent)
4	GMC, Miraj	21	57	71	7	23	47	14 (67 per cent)	34 (60 per cent)	24 (34 per cent)
5	GMC, Nagpur	36	108	156	28	80	138	8 (22 per cent)	28 (26 per cent)	18 (12 per cent)
6	B.J. M.C., Pune	33	98	120	29	60	113	4 (12 per cent)	38 (39 per cent)	7 (6 per cent)
	<b>TOTAL</b>	<b>144</b>	<b>409</b>	<b>529</b>	<b>99</b>	<b>254</b>	<b>450</b>	<b>45 (31 per cent)</b>	<b>155 (38 per cent)</b>	<b>79 (15 per cent)</b>

Five<sup>7</sup> out of test checked units (except Nagpur) stated that though there was acute shortage in the teaching staff, no reduction in teaching and practical classes was made and classes were taken as required under course regulations issued by MCI with the available teaching staff. Dean, Miraj accepted that teaching staff was overburdened. The heavy work load on staff and dearth of teachers will have an adverse impact on the quality of medical education.

MCI conducted inspection of GMC&H, Akola in August 2009, observed shortages of teaching staff and issued show cause notice (September 2009) as to why the recognition for the award of MBBS degree should not be withdrawn. The Government submitted (January 2010) that the recruitment drive of teaching faculty was in progress. However, the Government neither submitted the final compliance to show cause notice nor completed the recruitment process (July 2010). This will obviously affect quality of teaching and may result in de-recognition of MBBS degree course of GMC&H, Akola. Audit observed that remaining five test checked units also had vacancies which indicate that they are also on the verge of de-recognition.

<sup>7</sup> Akola, Ambejogai, Aurangabad, Miraj and Pune (Akola did not have PG courses)



### 2.2.8.2 Failure in getting MCI recognition for Post Graduate (PG) courses

**Twenty PG degree and six PG diploma courses could not start due to lack of teachers and infrastructure**

The Residency Scheme for PG students aims at utilisation of services of MBBS graduates admitted for PG medical education in harmony with the interests of patients care based on principles of mutual benefit. Besides, it also provides financial security and equitable work opportunity for the students.

In five<sup>8</sup> test checked units, Government sanctioned (January 1996) 424 Junior Resident Posts (290 PG Degree and 134 PG Diploma) for 149 courses (99 PG Degree and 50 PG Diploma) (Residency Scheme). However, 20 PG degree courses and six PG diploma courses were not started. On an audit query, Deans, Ambejogai, Aurangabad and Miraj stated (March and April 2010) that due to non-filling of required posts of qualified PG teaching staff and non availability of required infrastructure, the courses could not be started. These institutions could not appoint 36 (27 posts of PG Degree and nine posts of PG Diploma) Junior Residents as per sanctioned capacity as shown in **Appendix 2.14** which resulted in depriving the patients of the benefits as also opportunity to acquire higher qualification for the MBBS graduates. The institutions could not get MCI recognition for those PG courses.

### 2.2.8.3 BSc (Nursing) course conducted without fulfilling the Indian Nursing Council norms

**The BSc (Nursing) course was conducted without appointing required teaching staff**

The Government of Maharashtra permitted (November 2005) to start BSc (Nursing) course in Government Medical College, Nagpur with an intake capacity of 50 students and 75 staff (22 teaching staff, 24 administrative staff, and 29 technical staff). The Indian Nursing Council (INC) accorded permission (July 2006) to run the course from the academic year 2006-07 subject to condition that the regular nursing teachers (22) should be appointed within six months. The Maharashtra Nursing Council (MNC) also granted permission to start the said course in July 2006 and the course started in the academic year 2006-07.

The Maharashtra University of Health Sciences, Nashik (MUHS) at the time of granting extension of affiliation for the academic year 2008-09 pointed out (September 2008) that the teachers were not appointed as per the requirement of INC norms and instructed GMC, Nagpur to comply with the norms within six months. GMC, Nagpur submitted (May 2009) a proposal to DMER for filling up of the posts. However, no post was filled in as of May 2010. Thus, the institution continued the course without complying with the conditions stipulated by INC and MUHS till 2009-10 and courses were managed with the teaching staff of General Nursing and Midwifery course. The first batch of 50 students completed the course in 2009-10. The MNC stated (April 2009) that it would not conduct further inspection till the posts are filled in and if there

<sup>8</sup> Ambejogai, Aurangabad, Miraj, Nagpur and Pune

was no inspection, the unit could not continue the course for next year. Hence, the course was on the verge of de-recognition.

Similarly, Government granted (September-October 2009) permission to GMC, Aurangabad and GMC, Pune to start the BSc (Nursing) course from the academic year 2009-10 with an intake admission capacity of 50 students each. Approval of INC was granted (August 2009 and September 2009) subject to appointment of teaching staff as per INC norms and also the affiliation by MUHS. For the academic year 2009-10, 42 students were admitted for the course in each of the institutions. However, the required teaching staff was not appointed in both the institutions as of May 2010. Though the above three institutions had submitted the proposals for filling of posts as per INC norms to Government, approval was awaited (July 2010).

### 2.2.9 Inadequate nursing staff in hospitals attached to GMCs

As per the recommendations of INC in respect of hospital nursing services, the requirement of Sisters and Staff nurses was as shown in **Table 9**

**Table 9: Requirement of Sisters and Staff Nurses**

Particulars	Staff Nurse	Sister
Wards (Medical, Surgical, Orthopaedic, Paediatric, Gynaecology and Maternity including New borns)	1 Staff Nurse for 3 patients	1 Sister for 25 patients
ICU/ICCU	1 Staff Nurse for each patient	3 Sisters
Special Wards Eye, ENT etc.	1 Staff Nurse for each patient	3 Sisters
Operation Theatre	3 Staff Nurses per table	3 Sisters
Casualty & Emergency unit	2-3 Staff Nurses depending upon number of beds	3 Sisters
OPD	1 Staff Nurse for 13 to 140 patients based on actual observations	

Note: - 30 per cent leave reserve posts are mandatory

The vacancy position of Sisters-in-charge and Staff nurses in the State in 27 attached hospitals and health centres existed as against the INC requirement and sanctioned strength as of August 2010 was as shown in **Table 10**.

**Table 10: Vacancy position of Sisters and Staff Nurses**

Name of the post	Bed strength	Requirement of nursing staff as per INC norms	Sanctioned strength of nursing staff	Nursing staff actually available	Vacancies against INC norms	Vacancies against sanctioned strength
Sister	12221	2008	796	623	1385 (68.97 per cent)	173 (21.73 per cent)
Staff Nurse	12221	10986	5021	4773	6213 (56.55 per cent)	248 (4.94 per cent)

(Source: DMER)

As compared with the INC standards there was a shortage of 69 and 57 per cent in posts of Sister and Staff Nurse respectively

It could be seen that there was an acute shortage in the posts of Sister and Staff nurse to the extent of 69 and 57 per cent respectively against the INC norms which would have an adverse impact on the quality of nursing services to the patients. Again, sanctioned strength was also much lower to the extent of 40 and 46 per cent than INC norms in the posts of Sister and Staff Nurse and person in position was even lower by 22 and 5 per cent respectively. Government did not furnish any specific reason for not observing the INC norms and not sanctioning the required posts of Sister and Staff Nurse.

## 2.2.10 Material Management

The M&E costing ₹ 3.96 crore were not put to use for want of infrastructure and required staff

### 2.2.10.1 Utilisation of machineries and equipments (M&E)

#### Machineries and equipment not put to patients service

In three test checked units, M&E valuing ₹ 3.96 crore were not put to use till May 2010 for want of infrastructure and manpower, as shown in **Table 11**.

**Table 11: Machineries and equipments not put to use**

(₹ in crore)

Name of Unit	Name of Machinery & Equipment	Date of purchase / installation	Cost of M&E	Reasons
Akola	Mini Projection Panoramic X-Ray Unit for dental department	March 2009	0.10	For want of proper electricity supply, air conditioning and dark room facility. The work has been entrusted to Public Works Department in May 2009.
Ambejogai	Hemodialysis machine with R.O. Plant for dialysis	August 2009	0.11	For want of civil work for installation of the machine, non provision of main water supply line and drainage line
Aurangabad	Neonatal Intensive care Unit (Neonatal ventilator, Phototherapy unit, Transport incubator and accessories)	August 2009	3.75	The unit was inaugurated on 17.8.2009. The proposal to fill up 24 posts submitted to Government on September 2009 and the proposal to issue administrative approval (October 2009) for the work of 'providing of supply cable and replacement of Transformer' were pending at Government level.
<b>Total</b>			<b>3.96</b>	

**In four test checked units, a good number of machines lying idle for want of repairs**

### **Machineries and equipments lying idle for want of repairs**

For efficient functioning of the hospitals, the M&Es require regular maintenance, so that patients are not put to hardship.

In four units, the following M&Es could not be put to patients services for considerable period due to breakdown, which adversely affected the delivery of health care services.

#### **Swami Ramanand Tirth Rural Medical College and Hospital, Ambejogai**

A Sonography Machine purchased for Obstetrics and Gynaecology department at ₹ 6.75 lakh and installed in March 2008 with the warranty period of two years went out of order since July 2008. Despite several attempts with the supplier the machine was not got repaired.

Cell Counter (costing ₹ 4.75 lakh) required for Haematological Tests (CBC) installed in Physiology department in June 2005 had developed technical defect and was out of order since February 2009. The equipment was yet to be repaired and Haematological Tests were not conducted since then.

A Computerised Tomography (CT) Scan machine purchased for X-ray department in May 2000 for ₹ 2.25 crore was not continuously put to patients services due to frequent breakdown as shown in **Table 12**.

**Table 12: Break down period of C.T. Scan Machine**

<b>Period</b>	<b>No. of months / days</b>	<b>Reasons for break down</b>
2005-06	2 months	The frequent disruption was due to non availability of continuous and stabilized electricity supply.
2006-07	3 months 13 days	
2009-10	11 months 26 days	

**Due to deficient power supply, equipments were under-utilised**

The frequent disruption was due to non-availability of continuous and stabilized electricity supply. Even though it was pointed out by the supplier / AMC holder on 9.5.2000 and 31.7.2000, the Dean took up the matter with MSEB only in November 2009 and the rectification work was reported to be in progress. Due to non initiation of timely action, the machine could not work to its capacity and the patients were deprived of the intended benefits.

Besides, Mammography machine and Color Doppler were also out of order since December 2004 and June 2005 respectively. A 500 MA X-ray machine was also out of order since September 2006.

The Dean stated that a proposal for purchase of 500 MA X-Ray machine was submitted to Government in July 2009 and approval was awaited (March 2010). However, no specific reply was given for not getting the Mammography machine and Color Doppler repaired (March 2010).

#### **GMC&H, Aurangabad**

The following M&Es were not working for want of repairs as shown in **Table 13**.

Table 13: Machineries and equipments not working for want of repairs (₹ in lakh)

Sl.No.	Name of the Department	Name of the machinery / equipment	Cost of the machinery/ equipment	Not in use with effect from
1	Obst. & Gyneac	Video Laparoscope	14.90	Since 6 months
2	Radiotherapy	Gammarex –R Cobalt Unit	7.84	September 2003
3	Orthopedics	C-Arm Image Intensifier (Meditronics)	11.91	Since 3 years
4		Surgical cautery	0.48	Since 2 months
5	Surgery	Mobile C-Arm Image Intensifier & Hydraulic O.T. Table	20.00	Since 8 years
6	Medicine	Non-invasive Ventilator – Bi-Pap Vision (101972)	7.69	November 2009
7		Ventilator (Puritan Bennat)	7.25	September 2009
8		Newport Ventilator – 207	9.10*	August 2005
9		Bronchoscope	9.38	January 2010
10		16-bedded central monitoring system with multi-parameter bedside monitors	26.43	August 2006
11		Multichannel Multiparameter pts. Monitoring system	31.00	September 2009
12		Hemodialysis Machine (NICU-10-E)99T0043	6.56	December 2009
13	Bio-chemistry	Fully Automatic Chemistry Analyzer	11.20	July 2001
* \$ 20,200				

The Dean did not furnish any specific reply about the action taken to repair the above equipments.

#### **GMC&H, Miraj**

A CT Scan machine installed in Radiology department in the year 2001 was out of service during March to September 2008 due to non-working of X-ray tube. The institute did not replace the tube for over six months. As per the records for the months January and February 2008 and October to December 2008, when the machine was in operation, on an average 275 patients were scanned per month. Thus, due to non-working of C.T. Scan machine during the period 17 March 2008 to 20 September 2008, about 1650 patients were deprived of the CT Scan facility. Dean has accepted the point.



### Sasoon General Hospital, Pune

One Colour Doppler purchased for ₹ 16.47 lakh in July 2006 and installed in Radiology department in August 2006 was covered by warranty for initial two years and under AMC for further eight years.

As per report of the service engineer (July 2007), the machine went out of order since July 2007 due to rodent entry and rat droppings on printed circuit boards (PCB). The AMC holder declined to repair the machine as the damage by rodent entry was not covered under the AMC and gave (July 2007) an estimate of ₹ 5.51 lakh to replace the PCB. Approval of Government for the proposal sent in January 2009 was awaited as of May 2010.

#### 2.2.10.2 Under-utilisation of equipments

In Microbiology department of the GMC, Aurangabad, the following equipments procured and installed satisfactorily during January to March 2009 could not be used for long period due to various reasons as given in **Table 14**.

**Table 14: Under-utilisation of equipments**

Name of equipment	Cost (₹ in lakh)	Date of installation	Date from which put to use	Remarks
Automated Microbiology Bench Model – Bee T/Alert 120 Mini API	22.00	20.3.2009	7.11.2009	These equipments need air conditioners for its functioning. However, due to persistent low voltage electric supply, the air conditioners did not work. Thus, the equipments were kept out of use till the atmospheric temperature became low. In winter the equipments were used. The department has taken up the matter with Public Works Department.
Cold Centrifuge	1.63	27.1.2009	14.9.2009	
Thermal Cycler	1.65	29.1.2009	14.9.2009	
Gel-Doc	2.15	29.1.2009	14.9.2009	
PH Meter	0.20	12.3.2009	14.9.2009	
PCR Work Station	0.31	12.3.2009	14.9.2009	
Platform rocker	0.17	13.3.2009	14.9.2009	
Micro Centrifuge	0.23	13.3.2009	14.9.2009	
Automated Immunoassay System	8.10	30.3.2009	1.9.2009 up to 5.9.2009 (5 days)	The equipment was used only for five days since installation with the available Pathological kits. It was not in use since September 2009, as the required kits for conducting pathological test were not available.

Though the costly equipments were installed, these could not be utilised for the patients services due to irregular electric supply and for want of pathological kits.

### **2.2.10.3 Deficiency in diagnostic equipments**

Audit scrutiny revealed that the Swami Ramanand Tirth Rural (SRTR) Medical College, Ambejogai did not have the diagnostic equipments required as per MCI norms viz. Fluoroscopic unit used for contrast media test, MRI scan machine and 800 MA X-ray machine were not available in SRTR Medical College, Ambejogai.

The Dean stated that a proposal for purchase of new Fluoroscopic unit was submitted to Government in July 2009 and approval was awaited (March 2010). However, due to non availability of funds, proposal for purchase of MRI scan machine and 800 MA X-ray machine were not submitted.

### **2.2.10.4 Non-availability of Central Mechanical Laundry**

As per the MCI norms, a Central Mechanical laundry should be installed with bulk washing machine, hydro-extractor, flat rolling machine to ensure cleanliness and disinfection of linen issued to the patients in all GMC&Hs. Also the facilities for drying, pressing and separate storage of soiled and cleaned linens should be available.

It was observed that in Miraj and Sangli hospitals there were no mechanical laundries. As the hospital linen was washed manually, supply of disinfected linen to the patients could not be ensured.

In Ambejogai, even though a full fledged mechanical laundry plant was installed, one washing machine out of two, drying tumbler and flat bed press had gone out of order since August 2009. The machines were not got repaired as of March 2010. Dean stated that efforts were being made to get the machine repaired (January 2011).

In the other test checked units, Central Mechanical laundry was available.

### **2.2.10.5 Insufficient staff quarters**

MCI guidelines envisaged that all nursing staff as well as residential doctors should be provided with residential quarters and also there should be quarter facility for 50 *per cent* of the teaching and Class IV staff.

As per information obtained from the test checked units, the number of staff quarters available for nursing staff in GMC, Miraj was only 60 (24 *per cent*) as against the sanctioned strength of 246. For teaching staff the number of quarter available was only 45 (27 *per cent*) against sanctioned strength of 167. For Class IV staff, no quarter was available. While construction work of quarters for residential doctors was in progress, there was no proposal for construction of quarters for nurses. It was seen that the other medical colleges had the required number of quarters.

### **2.2.10.6 Non-availability of Auditorium**

As per MCI norms, every medical college shall have an auditorium where 500-700 persons could be seated.

Scrutiny revealed that there was no auditorium in Akola and Miraj. It was seen that other medical colleges were equipped with this facility.

#### 2.2.10.7 Deficiencies in Rural Health Training Centres (RHTCs)

The RHTC is a training centre having medical facilities to impart training to the students in community oriented primary health care and rural based health education.

Out of four RHTCs test checked, the RHTC, Tasgaon (Miraj) was sanctioned a General OPD, Dental OPD, Mother & Child Care Centre and the Gynecology ward with 25 beds. Audit scrutiny revealed the following deficiencies:

- The RHTC was housed in a very old building owned by Municipal Council. The roof of Operation Theatre (OT) was leaking from all corners during rain and was kept closed since January 2002 on the recommendation of Hospital Infection Control Committee.
- No separate Medical Officer for Gynecology stream was posted. Dean stated that the cases were attended by the doctors of Miraj Hospital as and when the need arose.
- No separate Pediatrician was available. In case of emergency, the patients were referred to Sangli or Miraj hospitals which were 25 km away.
- Ambulance was not available. On an average, yearly 50 emergency cases were referred to Sangli hospital for treatment.

This led to low bed occupancy adversely affecting medical education/treatment.

#### 2.2.10.8 Lack of basic amenities in hostels

In six test checked units, 2906 hostel rooms with intake capacity of 4946 students were available. Against this, 4342 students were accommodated during the academic year 2009-10 as shown in **Table 15**.

**Table 15: Hostel accommodation**

Name of GMC&H	Rooms available		Intake Capacity		Students accommodated	
	UG	PG	UG	PG	UG	PG
Akola	254	—	508	—	445	—
Ambejogai	145	124	290	124	275	70
Aurangabad	426	147	777	294	475	175
Miraj (including Sangli)	337	150	541	387	542	277
Nagpur	626	40	810	40	717	40
Pune	428	229	856	319	856	470
<b>TOTAL</b>	<b>2906</b>		<b>4946</b>		<b>4342</b>	

In three<sup>9</sup> medical colleges, it was observed in visual inspection by Audit that the hostel facilities provided to the students were very poor as detailed below:

Name of Units	Deficiencies noticed
Ambejogai, Aurangabad and Miraj	<ul style="list-style-type: none"> <li>Hygienic drinking water facility was not available. Stored water/ tap water was supplied for drinking purpose.</li> </ul>
Ambejogai and Aurangabad	<ul style="list-style-type: none"> <li>The glass panes of windows of almost all the rooms were broken.</li> <li>Tables, Chairs, mattresses were not provided in students room.</li> <li>Canteen was not in hygienic condition.</li> <li>Recreation room installed with a TV did not have a sitting arrangement.</li> <li>In Aurangabad, entire hostel building and surroundings was full of filth.</li> </ul>
Miraj	<ul style="list-style-type: none"> <li>Ceiling fan was not provided in students' room.</li> <li>Entire hostel building including bathrooms and toilets and the rooms occupied by the students were unclean and unhygienic.</li> </ul>

The Deans stated that necessary steps would be taken to rectify the deficiencies. The fact remains that the medical students were not provided with adequate facilities and a healthy environment.

### 2.2.11 Unfruitful expenditure on upgradation of Miraj Hospital

**An expenditure of ₹ 3.60 crore on upgradation of Miraj Hospital remained unfruitful due to stay ordered by DMER.**

Prior to 1999, Miraj Medical Centre (a private hospital) with 400 beds and PV Patil Government Medical Hospital<sup>10</sup>, Sangli (14 KM away from Miraj) with a bed strength of 388 were shown as attached teaching hospitals to GMC, Miraj having admission capacity of 100 UG students and 120 hospital beds. MCI revised the norms of students to bed ratio in March 1999 and recommended that each medical college should be attached with hospitals with bed strength of 1:5 and the hospital should be located within a radius of five kilometers of the GMC. Miraj Medical Centre has since been discontinued to be an attached hospital (April 2004).

In order to comply with the MCI norms issued in 1999, GMC&H, Miraj had proposed (November 2007) to upgrade the GMC&H, Miraj to 500 beds from 120 beds for which it had sought for ₹ 27.52 crore from Government for procurement of M&E, M&S and construction works, *etc.*

Government accorded approval for upgradation of GMC&H, Miraj in November 2008 and transfer of PV Patil Government Hospital, Sangli to the Department of Public Health as a 200-bedded District General Hospital.

Government also released grants for upgradation of the Hospital from 2006-07 onwards. The position of grant received and expenditure incurred during 2006-10 was as shown in **Table 16**.

<sup>9</sup> Ambejogai, Aurangabad and Miraj

<sup>10</sup> Under the control of Department of Public Health

Table 16: Grant received and expenditure incurred on upgradation (₹ in crore)

Sl. No.	Year	Construction of building and electrification		Machinery and Equipment	
		Grant received	Expenditure incurred	Grant received	Expenditure incurred
1	2006-07	0.33	0.33	0.18	0.18
2	2007-08	0.34	0.34	5.01	5.01
3	2008-09	14.71	1.65	2.89	2.89
4	2009-10	3.45	0	0.31	0.29
<b>TOTAL</b>		<b>18.83</b>	<b>2.32</b>	<b>8.39</b>	<b>8.37</b>

Even though Government accorded approval for upgradation in November 2008, it started releasing funds from 2006-07 onwards. DMER stated (July 2010) that upgradation of Miraj Hospital was under consideration since 2005-06 and funds were released from 2006-07 onwards. The reply was not tenable as Government issued upgradation orders only in November 2008.

While the process of upgradation was in progress, DMER with the consent of Government stayed (December 2008) the Government order in view of public agitations and protests against the downgrading of Sangli Hospital and ordered to maintain the original position. Thus, the bed strength of the Miraj Hospital was retained at 120 and PV Patil Government Hospital, Sangli with 388.



Cots and bed side lockers not put to use

Audit observed that due to stay order issued by DMER some major machineries, equipments, etc. purchased under upgradation programme as given in Table 17 could not be put to any use.



Table 17: Machineries and equipments not put to use (₹ in lakh)

Sl. No.	Particulars of M&Es	Date of purchase / installation	Cost
1	Four Over Head Ceiling Lamps	June 2009	23.00
2	Two Hydraulic Operation Tables	May 2008	5.74
3	Two Eliza Reader Computer and Washers	February 2009	8.60
4	Blood Storage Refrigerator	February 2009	6.08
5	Four Blood Donor Chairs with accessories	January 2009	3.97
6	Operative ENT microscope	July 2008	18.08
7	Four Operation Tables	May 2009	12.36
8	Four Electroquateries	January 2009	14.20
9	Ten Pulse Oxymeters with Plethismograph	June 2009	2.90
10	Iron Cots ( Nos. 280)	January - February 2008	10.08
11	Bed side lockers (Nos. 320)	February 2008	10.88
12	ICU Foulter bed ( Nos. 16)	January 2008	2.56
13	Trolleys, wooden chairs, stools and benches	January - February 2008	7.62
14	Beds and pillows	January 2008	1.92
<b>TOTAL</b>			<b>127.99</b>

This resulted in unfruitful expenditure of ₹ 3.60 crore on construction and purchase of M&E.

### 2.2.12 Rendering of service to Government by passed out medical students

**Ninety per cent passed out medical students did not render service to Government**

The Government prescribed (April 1966) a bond for the students admitted to MBBS course in GMCs. In accordance with the Government orders (February 1996) every student who had completed MBBS from GMCs should render service to Government for a period of one year, failing which they should pay ₹ 1 lakh (up to 2003) to Government which was raised to ₹ 5 lakh from 2004. In July 1997, Government ordered that the PG students should serve for two years, failing which they should pay ₹ 1 lakh which was raised to ₹ 15 lakh from 2004.

MEDD vide GR (July 2006) prescribed that the list of students who had completed the MBBS course should be forwarded by Deans to the Director of Health Services (DHS) under the Department of Public Health, who is responsible for offering appointment to passed out students. A list of students who failed to join the service within 15 days from offer of appointment should be forwarded by DHS to DMER for initiating action for recovery of bond money.

Government also directed (February 2008) that the names of the students who were not given offer of appointment by DHS within three months should be submitted to DMER in order to relieve the students from bond conditions.

DMER stated that the details of number of students offered appointments, number of students joined or failed to join Government service were not provided by the DHS despite repeated requests from Deans / DMER. As such, the total number of UG and PG students passed out to whom offer of appointment was issued and the number of students from whom the bond money is required to be recovered during 2005-10 was not available with the DMER.

Five<sup>11</sup> out of six test-checked medical colleges stated that they did not receive any information in respect of appointments offered to medical students by DHS.

DMER confirmed (August 2010) that due to non-receipt of information in respect of bond service by the passed out students, the process of recovery of bond money was delayed. Further, there was no condition of fulfillment of bond service for registration as Registered Medical Practitioner (RMP) of passed out students with Maharashtra Medical Council.

Thus, lack of co-ordination between the MEDD and Department of Public Health resulted in ineffectiveness and poor implementation of the scheme of bond causing loss to the health programme of the Government.

### **2.2.13 Monitoring and Evaluation**

#### **2.2.13.1 Management Information System (MIS)**

**Consolidation of MIS was not done by DMER since 2006**

On scrutiny of records of test checked units, it was observed that the DMER has introduced the system of submission of Management Information System (MIS) in 2004. All the GMC&Hs were required to send monthly Management Information System (MIS) in 13 statements<sup>12</sup> to DMER by 5th day of every month.

It was observed that Ambejogai and Miraj units did not send any MIS to the DMER during 2005-10. The remaining four<sup>13</sup> units furnished MIS in incomplete shape. However, no instructions were issued by the DMER to the medical colleges for submission of up to date, complete and correct MIS.

In response to the audit query, DMER stated that most of the units were neither submitting the MIS regularly nor insisted upon by the Directorate. It was further stated that the meetings for collection and consolidation of the MIS was also stopped since 2006.

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<sup>11</sup> Ambejogai, Aurangabad, Miraj, Nagpur and Pune

<sup>12</sup> Statements containing information regarding OPD/IPD patients, Blood bank, stock of material and equipments, staff position budget and expenditure, complaints and results of academic examinations

<sup>13</sup> Akola, Aurangabad, Nagpur and Pune

Thus, there was no effective monitoring of MIS.

### 2.2.13.2 Lack of internal controls

Internal Audit Department in the Directorate headed by the Assistant Director (Accounts) is responsible for examining and evaluating the level of compliance to the departmental rules and procedures. He was to carry out internal audit of all the institutions under the DMER at least once in two years. The position of internal audits conducted during 2005-10 is shown in **Table 18**.

**Table 18: Position of internal audit**

Year	Number of institutions to be audited	Number of Internal Audit to be carried out as per norms	Number of Internal Audit carried out
2005-06	42	20	7
2006-07	42	20	5
2007-08	42	23	5
2008-09	47	23	5
2009-10	47	23	12

(Source: Performance Budgets of MEDD)

Further, Government set up (April 1984) a Vigilance Cell in MEDD at Mantralaya consisting of an Accounts Officer and a Superintendent to monitor and control utilisation of funds by GMC&H. The details of inspection conducted by vigilance squad during 2005-10 revealed heavy shortfall towards conduct of inspection, as shown in **Table 19**.

**Table 19: Inspection by vigilance squad**

Sl. No.	Year	No. of MC&Hs available for inspection	Target for inspection	Inspection actually done	Shortfall
1	2005-06	78	39	10	29
2	2006-07	78	39	7	32
3	2007-08	78	39	5	34
4	2008-09	78	39	2	37
5	2009-10	78	39	Nil	39
<b>Total</b>		<b>390</b>	<b>195</b>	<b>24</b>	<b>171 (87.69 per cent)</b>

Government did not furnish any specific reply towards non achievement of target of inspection.

### 2.2.14 Conclusion

There is no specific Government policy to improve medical education in the State. The number of medical seats in Government Medical Colleges and Hospitals remained stagnant for the last five years despite increase in the demand for Doctors and constant rise in population. No new Government Medical College was opened during this period in any tribal district, though

doctor to population ratio in the tribal district Gadchiroli was significantly high at 1:11,000. Neither the Government nor the Directorate of Medical Education and Research had drawn annual action plans to implement the programmes for improvement in medical education and health care. Research activity was inadequate. Shortage of teaching staff and para medical personnel affected the quality of medical education and services to patients. Non-approval of sanctioned PG courses by Medical Council of India too affected both the students and patient service. Super specialty medical facilities were not available in many hospitals. Many items of machineries and equipments procured continued to remain idle for want of repairs or supply of electricity and the hostels lacked essential facilities. Effective monitoring of the Medical Colleges by Government or DMER was absent. There was heavy shortfall in inspection and internal audit.

### **2.2.15 Recommendations**

- There is a need for increasing intake capacity of medical seats considering the population increase and demand of medical services.
- Government should chalk out a programme for improvement of medical education including sufficient teaching faculty to improve the quality of medical education and to avoid derecognition of courses by MCI.
- Availability of super specialty medical services should be ensured in all teaching hospitals to enable poor patients to get such Government facilities at their station.
- Infrastructure facilities and hygiene in the GMC hostels need to improve.

## Finance Department

### 2.3 Budget Estimation, Allocation and Monitoring System (BEAMS) of the Government of Maharashtra

#### Executive summary

*The objective of BEAMS is to build up a transparent and effective process for transferring budgetary allocation and to control over monthly expenditure. This also aimed at maintaining financial discipline to create effective Management Information System (MIS) for various departments of Government, Accountants General and general public and to develop a decision support system for monitoring the day to day financial position. The BEAMS started in Maharashtra from June 2007. But the system was made functional from 2008-2009. The users of the system are Finance Department, Administrative Heads, Controlling Officers (COs) and drawing and disbursing officers (DDOs) of all the Departments of the State.*

*Audit noticed that largely the objectives of BEAMS were not achieved. The delay in releasing grants by the Administrative Department and the COs to the DDOs defeated the very purpose of quick online release of grants. Major audit findings are as under:*

*The server was unable to sustain the load of the BEAMS users.*

*Lacunae in system design of the BEAMS application led to generation of unreliable data.*

*The system is vulnerable to high risk due to non-encryption of web data.*

*Input validation control and output control were inadequate.*

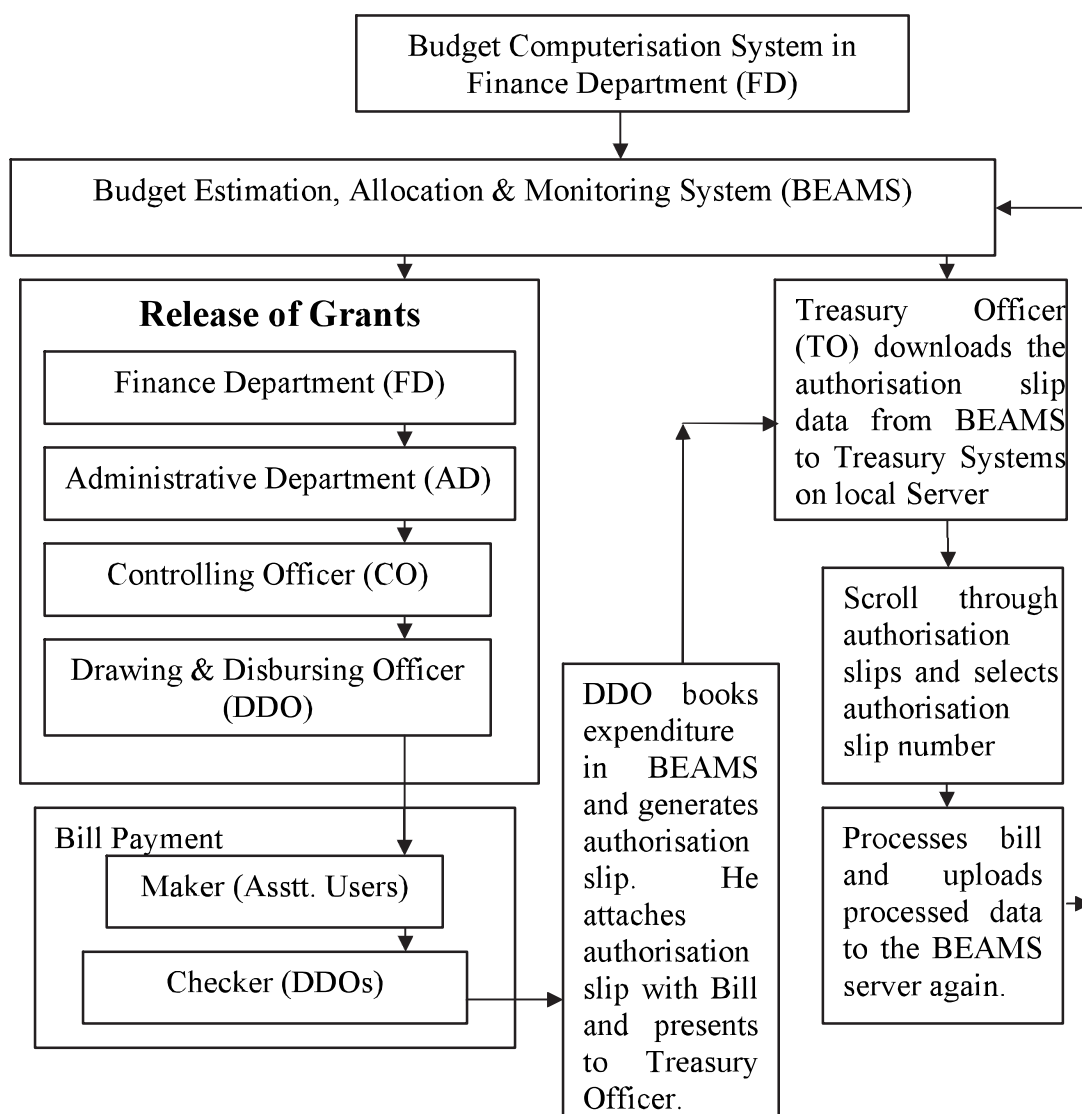
*Monitoring of the BEAMS implementation was inadequate and inefficient.*

*Pay and Accounts Officer (PAO), Mumbai, was not updating the BEAMS data owing to low capacity of server.*

### 2.3.1 Introduction

Budget Estimation, Allocation and Monitoring System (BEAMS) is an online computerised system to distribute the budget and to authorise expenditure.

The BEAMS receives budget data in electronic format from the Budget Computerisation System of Finance Department. The BEAMS at a glance is shown as under:



The BEAMS is a web enabled system which is developed using Java Script and backend database DB2. This application is running on four centralised servers i.e. one database server, one backup server and other two web servers. All the users<sup>1</sup> across the State are accessing this system through broadband

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<sup>1</sup> Finance Department, Administrative Departments, Controlling Officers and Drawing – Disbursing Officers

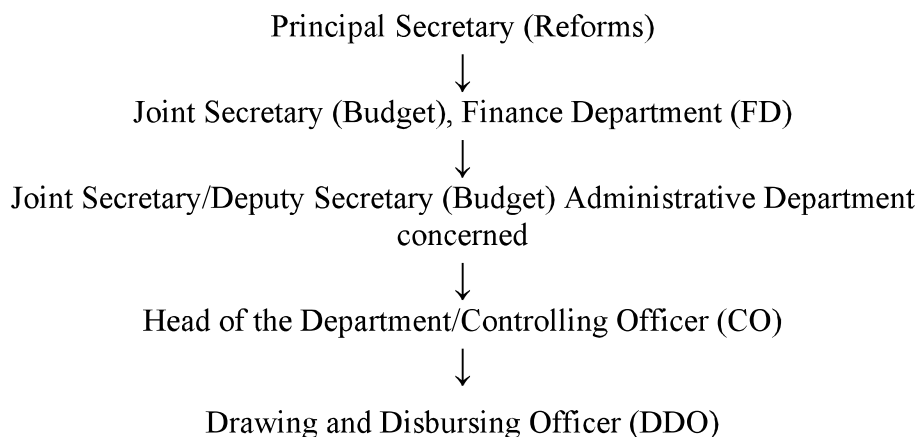


services provided by Bharat Sanchar Nigam Limited/Mahanagar Telephone Nigam Limited and Intranet of Government of Maharashtra (GoM).

The BEAMS was made functional from the financial year 2008-2009 in the State with the help of National Informatics Center (NIC), Pune. The expenditure incurred on the project as of May 2010 was ₹ 1.03 crore (₹ 7.65 lakh on procurement of Hardware, ₹ 24.84 lakh on programmer remuneration and ₹ 70.93 lakh for DB2 licenses).

### **2.3.2 Organisational set up**

The organisational set up for operation of the BEAMS with details of reporting and responsibilities is as under:



### **2.3.3 Audit objectives**

The objectives of audit were to examine whether:

- implementation of the system was preceded by a systematic planning and adequate assessment of operational requirements;
- controls including Information Technology (IT) security built in the IT system were adequate and to bring out the areas of risks, if any;
- adequate business continuity plan and disaster recovery plan were in existence;
- data available in the system and the information generated through the IT system was complete, accurate and reliable; and
- flow of information from apex level to DDO and Treasury Officer is seamless and was made available to end users in time.

### **2.3.4 Audit criteria**

The audit criteria adopted were:

- Instructions issued by the Finance Department from time to time,

- Budget Manual,
- Civil Budget Estimates,
- Monthly Cash Flow Statement and
- Generally accepted best IT practices.

### 2.3.5 Scope and methodology of audit

Implementation of the BEAMS and policies were scrutinised in Finance Department (Department) and eight<sup>2</sup> out of 31 Administrative departments. For detailed scrutiny, nine<sup>3</sup> districts out of 35 were considered and 113 DDOs, 26 COs and nine Treasuries including PAO, Mumbai were selected. The selection of administrative departments and districts was done through statistical random sampling<sup>4</sup>. Methodology adopted was assessment of controls by issue of questionnaire, comparing BEAMS data for financial year 2009-2010, with electronic treasury data and manual records besides analysis of modules of BEAMS. Integration of BEAMS with treasury computerisation system<sup>5</sup> and database created were scrutinised to check the quality and reliability of data. Entry conference was held in June 2010 with Principal Secretary (Reforms), Finance Department at Mumbai. Exit conference could not be held due to no response from Government.

## Audit findings

### 2.3.6 System development

System was developed in an unstructured way without proper documentation

It was noticed that there was lack of documentation at the process of system development. Feasibility study was not conducted and Users Requirement Specification (URS) was also not prepared. System Requirement Specification (SRS) was prepared after the system was deployed. System was developed in unstructured way without proper documentation; as a result, it has serious flaws which are brought out in subsequent paragraphs.

#### 2.3.6.1 Procurement of inadequate capacity servers

Procured servers failed to handle load at the fag end of every year as they were of inadequate capacity

Hardware is an important and costly IT asset and therefore utmost care should be taken during its procurement. Scrutiny of records revealed that the Department in consultation with NIC procured three servers costing ₹ 3.60 lakh (Web Server for Internet, Web Server for Intranet and Backup Server) and one database server at a cost of ₹ 4.05 lakh in July 2007.

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<sup>2</sup> Energy, Power and Labour Department, Home Department, Housing Department, Medical Education and Drugs Department, Minority Development Department, Public Works Department, Tribal Development Department and Water Resources Department.

<sup>3</sup> Ahmadnagar, Bhandara, Hingoli, Jalgaon, Mumbai, Nagpur, Pune, Raigad and Satara

<sup>4</sup> Random sampling of the units was done based on volume and geographical location of units.

<sup>5</sup> Treasury computerisation system is an independent system developed for information management and to increase reporting functions and productivity.

It was seen that the processing speed of the BEAMS web servers was very low as evident from the analysis of database. During 2009-10, the percentage of transactions executed before and after office hours was 36 per cent. The reason attributed by users was difficulty in getting connected to BEAMS website and even if connected, the slow transaction processing speed during office hours.

It was noticed that at the fag end of every year, the server could not handle the load and failed to generate authorisation slips. Therefore, the Department instead of enhancing the capacity of server allowed drawing the bills without authorisation slips by issuing circulars in March 2010 and April 2010. Four out of nine test checked TOs and 22 out of 113 test checked DDOs confirmed this fact (June-September 2010).

Thus, while procuring hardware, the Department had neither taken due care nor any steps to enhance the capacity of server. This was indicative of purchase of server of inadequate capacity.

In reply, Department stated (September 2010) that Government has decided to host the system as a secured website with scalable bandwidth.

#### **2.3.6.2 Non availability of internet services**

The Finance Department vide Government Resolution (GR) dated 15 May 2007, made mandatory to all DDOs to submit bills to treasury by attaching the authorisation slip generated through BEAMS application with the Bill. It was, however noticed that in the case of 15 out of 113 test checked DDOs, basic internet facility was not available in their office. Therefore, DDOs either had to approach nearer private internet cyber cafe or to other Government offices to generate authorisation slips. Thus, without the availability of the infrastructure facility at the DDO level, they were required to process the bills through BEAMS. When this was pointed out, all 15 DDOs confirmed the fact.

**Required infrastructure facility at the DDO level was not ensured**

#### **2.3.7 General controls**

General controls regulate the environment in which the IT application is operated. This includes disaster recovery and business continuity planning, access controls- both physical and logical access and organisational issues such as segregation of duties and providing training.

Audit observed that disaster recovery and business continuity arrangements were inadequate and IT security practises comprising physical and logical access and training of staff were inadequate as brought out subsequently.

##### **2.3.7.1 System design lacunae**

##### **Expenditure reversed after payment of bills**

All the DDOs have to book the expenditure online through the BEAMS and generate the authorisation slip. The bill is required to be submitted to treasury

**Due to payment on deleted authorisation slips, an expenditure of ₹ 228.38 crore was understated in BEAMS**

along with system generated authorisation slip. As the TOs do not have direct link with the BEAMS database server, the BEAMS data is downloaded periodically in the application<sup>6</sup> running at the treasury. At the end of the day, the position of bills passed by treasury is uploaded in BEAMS database server.

Scrutiny of records of DDOs and the web site of BEAMS, it was observed that in 2,276 cases, TOs (1,026 cases)/ DDOs drawing self cheque (1,250 cases) released payments on deleted authorisation slips. Due to this, an expenditure of ₹ 228.38 crore was understated in BEAMS. This occurred because of the following system failures:

- The data downloaded at treasury from BEAMS contained all the authorisation slips irrespective of the status being cancelled (flag D), not finalised and in draft mode (flag N) and finally approved by DDOs (flag Y). However, the TOs were unaware about the status of the authorisation slips. It was also noticed that 772 out of 2,276 cases, were deleted before the date of payment/on the same day;
- The data should be freezed after downloaded by the TO. In the absence of this facility, the DDOs can alter/modify/delete the contents of authorisation slips while the data was under process in treasury;
- Even after passing of the bill by treasury, the DDO can delete the transaction in BEAMS. It was observed that in 1,504 out of 2,276 cases, the DDOs deleted authorisation slips after passing of bills by the TO;

As a result, though the TO/cheque drawing DDOs have passed the bills and issued the cheques and the expenditure was booked in treasury, the same was not booked in BEAMS. Thus, the BEAMS data was unreliable.

Government accepted (September 2010) that no flag for deletion was provided in the downloaded data at treasury. Hence all authorisation slips, irrespective of their status got downloaded.

### **System is prone to high risk due to non-encryption of web enabled data**

**Due to non-encryption, the system is vulnerable to hacking of data during transmission**

BEAMS is globally available on Internet. As per the system architecture, one dedicated database server was connected to two web-servers. One web-server was for Internet (Public-Domain) and other connected to Maharashtra Government Intranet. Though, these web-servers were protected by firewalls, financial data such as grant allotment, booking of expenditure and instructions were transmitted from client end to server and vice-versa without encryption through the internet. Further, security awareness of the users regarding confidentiality of password was very low as evident from 54 instances of sharing password by multiple users. This made the system vulnerable to hacking of data during transmission.

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<sup>6</sup> TreasuryNet

Department accepted the fact and stated (September 2010) that the configuration for secure socket layer (SSL) was in progress and BEAMS would be audited for security purpose by “Standardisation Testing and Quality Certification” (STQC), Pune.

#### **Absence of provision to capture the GPF withdrawal of Class IV**

**There were mismatches in the figures of GPF withdrawals booked by TO and BEAMS**

Scrutiny of records of treasuries revealed that while designing the BEAMS system for withdrawal of bills from GPF of Class IV employees, no provision for the scheme head 80090135 was made. Hence all the DDOs were capturing the details under 80090019 meant for other employees. The TOs were then segregating the bills manually and booked the expenditure accordingly in respect of Class IV and other than Class IV employees. In 64 DDOs, there was thus, mismatch in the figures of GPF withdrawals booked by TO and BEAMS.

Department stated (September 2010) that the Public Accounts did not provide separate heads for the two sets of accounts, they were indicated by common scheme code.

The reply was not tenable as the GPF accounts of other than Class IV employees are being maintained by Principal Accountant General/ Accountant General whereas GPF account of Class IV employees are maintained by the DDOs; there is a necessity for separate code in BEAMS.

#### **No facility in the BEAMS for auto updation of voucher number and date**

The treasury offices at district level and sub treasury offices at taluka level download BEAMS data on TreasuryNet application and after online scrutiny of bills submitted by DDOs make payments to them. As soon as the TO passes the bills, TreasuryNet application generates an auto voucher number with date. However, it was noticed that the same was not updated in BEAMS database while uploading data from TreasuryNet to BEAMS server from time to time.

Therefore, the Department has instructed (September 2009) all the DDOs to capture the voucher number and date of the bills manually, which were already passed by the TO. This resulted in duplication of work.

#### **Non provision of adjustment entries resulted in double booking**

**Due to double booking of expenditure, BEAMS data was unreliable**

Transfer entries are the entries intended to transfer an item of receipt or charge from the account of work in progress or a regular head of account to the account of another work or head.

As per provision contained in note 5 below para 5 of Rule 83 of Maharashtra Public Works Accounts Manual, expenditure incurred on pay and allowances of work charged to establishment initially from regular establishment under the Major Head (MH) 2059, is to be debited to the work charge establishment/concerned works during the financial year by deducting expenditure from MH 2059.

Analysis of the BEAMS revealed that there was no such provision made in the software to carry out such adjustments. Expenditure was booked under both the heads of accounts MH 2059 as well as work concerned (MH 3054). Audit observed this in 13 cases involving an expenditure of ₹ 121.01 lakh. Executive Engineer, Public Works Division No. 2, Nagpur has confirmed the fact. As such, due to double booking of expenditure, data of expenditure is unreliable.

Department accepted (September 2010) that provision of transfer/adjustment entries was not made in BEAMS.

### **Non provision for recording the transaction relating to reduction of expenditure**

It was noticed that the BEAMS does not have facility to record the transaction relating to reduction of expenditure for recording the remittances of unclaimed amount of bills.

In case of General Manager, District Industries Centre, Alibag it was noticed that an amount of ₹ 4,19,000 was booked in BEAMS under MH 6250 and passed by Treasury. But the DDO could incur expenditure of ₹ 3,13,735 only. The balance amount of ₹ 1,05,265 was remitted to Government account. Since BEAMS has no provision to record such transactions, the amount to the extent of ₹ 1,05,265 was not brought back under the MH 6250. Subsequently, on receipt of claim for payment of remitted amount, the DDO again booked the expenditure by generating authorization slips. This resulted in overstatement of expenditure of ₹ 1,05,265 under MH 6250.

The DDO confirmed the fact.

### **2.3.7.2 Training**

**Inadequate training to users resulted in improper handling of online software transaction.**

Effective education of all users of IT systems, including those within IT, requires identifying the training needs of each user group. An effective training programme increases effective use of technology by reducing user errors, increasing productivity and increasing compliance with key controls, such as user security measures.

During visits to various DDOs/COs it was observed that:

- The software had undergone frequent changes like removal of final mode option, addition/deletion of features in interfaces. However, end users (DDOs/COs) were not properly trained on new modes.
- Inadequate training to users resulted in improper handling of online software as more than one authorisation slips were generated for a single transaction. This resulted in overstating of expenditure and thus, related MIS reports were non-reliable.
- Various modules in BEAMS were used by 31 departments, 604 Controlling Officers, 24,528 DDOs, 34 Treasuries and one PAO. However, the Department had not identified specific training needs for each group of users.



The Department's reply is awaited (January 2011).

### 2.3.7.3 Logical Access Control

**Restricted privileges facility was not used by 99.56 per cent users**

In case of major establishments like Public Works Department (PWD), Water Resources Department, Forest Department and the District Collector, the number of users are assigned with different nature of duties and these users are required to use the BEAMS software for drawal of bills of different nature. In PWD there are different users such as Establishment clerk drawing pay and allowances of the staff, Works clerks preparing the bills relating to works, Store Keepers drawing the bills relating to purchases made for acquisition of stores. Users are thus, performing different nature of duties though they are working under a single DDO. They are also required to draw bills from various MH of accounts.

Though BEAMS provides facility for creation of assistant users along with restricted privileges to access the specific head of account, analysis of the database revealed that this facility was not used by 25,449 out of 25,562 users (99.56 per cent).

Further, the following observations were made.

- In spite of specific provision in the software for maker and checker, it was found in 26 test checked DDOs that the software was being operated at the clerical level.
- The final mode password was shared by draft mode operator. The same password was shared by two to four users and the users were unaware about the security of the password. Thus, the concept of maker and checker was completely defeated.

### 2.3.7.4 Disaster recovery and business continuity plan

**No disaster recovery plan and business continuity plan was developed and documented**

A structured disaster recovery plan is essential to reduce the risks arising from unexpected disruption of the critical systems and to have continuity in business activities. The disaster recovery plan usually includes provision for off-site storage of valuable data and also a back-up server(s) at an alternative location to continue the business operations in the event of a major disaster at the main server site.

It was observed that no disaster recovery plan and business continuity plan was developed and documented. It was also observed that the IT-assets inventory was not maintained. The backup and recovery process was not documented and remote storage of data was also not made. All these were indicative of poor business continuity management policy. In such a scenario, sustainability of the BEAMS in case of disaster was questionable.

The Department accepted (September 2010) the inadequate business continuity plan.

#### **2.3.7.5 Change management procedure**

All changes, including emergency maintenance and patches relating to infrastructure and applications within the production environment are formally managed in a controlled manner. Changes (including those to procedures, processes, systems and service parameters) are logged, assessed and authorised prior to implementation and reviewed against planned outcomes following implementation. This assured mitigation of the risks negatively impacted the stability or integrity of the production environment.

Scrutiny of records in 57 DDOs revealed that the BEAMS had undergone frequent changes such as removal of final mode, carry forward/backward of allotted grants varied from monthly to quarterly and then to annually, introduction of new interfaces for capturing voucher numbers by DDOs themselves. However, there was no documentation for these changes made in system.

The Department replied (September 2010) that the changes in BEAMS were made as per requirement to sustain the pressure in the month of March. But the reply was silent about the documentation of changes made.

#### **2.3.8 Application control**

Application controls ensure that the transactions are carried out according to the business rules of the organisation. These controls include input controls, processing controls and output controls to make the data complete, accurate and reliable.

##### **2.3.8.1 Input control**

##### **Non-authentication of Budget data**

Efficient data validation procedures are important to ensure the reliability of output from the system. Usually in the month of May, Finance Department sanctions/declares the State budget for the current financial year. The system receives budget data in electronic format from the 'Budget Computerised System' of the Department. As per the System Requirement Specification (SRS), there is a provision in the software to import this electronic data of final budget automatically. SRS also provides that, the data is to be authenticated by the administrator of the system and then the data would be made available on the system.

Scrutiny of BEAMS data made available by the Department on its official web site revealed that the Budget figures differ from those available in the Civil Budget Estimates. Though the budget amount actually passed by the Legislature and published in the Civil Budget Estimates for the year 2010-11 was ₹ 15,061.15 crore under 13 grants, it was found that the budget amount available for allocation through BEAMS was ₹ 15,142.50 crore. In one grant it was noticed that ₹ 101.86 crore were provided in Budget Estimates, however,

No system existed in the BEAM server for uploading of the correct budget data and no authentication was done by the administrator

in BEAMS, the amount available for allocation was zero. Department/grant wise difference is given in the **Appendix 2.15**.

Thus, it was seen that no system existed in the BEAMS server for uploading the correct data related to Budget and also no authentication was done by the administrator leading to unreliable data. This would not only mislead the DDOs but may also lead to excess release of grants.

The reply of the Department is awaited (January 2011).

### **2.3.8.2 Processing control**

#### **Authentication of data not possible due to removal of final mode option**

**Non deletions of incorrect slips lead to overstatement of expenditure in BEAMS MIS reports**

Finance Department has removed the earlier provided option of final mode to reduce the network load on the web server. Earlier there was a mechanism of maker and checker but due to removal of this option, only draft mode option remained and hence whatever data was fed by the maker was finalised and authorisation slip was generated. This procedure defeated the reliability and authenticity of the authorisation slips.

Analysis of database revealed that in 16 DDOs, authorisation slips ranging from two to seven were generated for a single transaction. Incorrect/unwanted slips generated were not deleted by the users although the delete facility was provided in the BEAMS. Thus, expenditure was overstated in BEAMS MIS reports.

The Department accepted (September 2010) that final mode option was removed to increase the capacity and to run the system smoothly and uninterruptedly.

#### **BEAMS failed to maintain uniqueness of authorisation number**

As per the database table structure prepared by the NIC, the system is required to generate an authorisation number, which is unique for the DDO so that every transaction will be identified uniquely for the DDO in the database.

Analysis of the BEAMS database revealed that in the financial year 2009-10, 95 authorisation slips with duplicate numbers were generated. Thus, BEAMS failed to maintain uniqueness of authorisation number.

The Department accepted (September 2010) the observation and stated that full care would be taken for synchronising the session.

#### **Non-matching of initial string of authorisation slip number with DDO code**

As per the policy adopted by the Department, the initial string of authorisation slip number should represent the DDO code number.

However, it was observed that in 8,889 cases, involving an expenditure of ₹ 362.78 crore, DDO code did not match with the initial string of authorisation number.

The Department accepted (September 2010) the observation and stated that full care would be taken for synchronising the session.

### Inconsistency of data as BEAMS data not matching with treasury data

Details entered by TO were not available in BEAMS due to non-integration of BEAMS with TreasuryNet

As per the system, all the DDOs have to book the expenditure online through BEAMS, generate the authorisation slip, submit the bills to treasury along with system generated authorisation slip and at the end of the day, the position of bills passed by treasury are uploaded in BEAMS database server. Columns meant for treasury such as Scroll\_Date, Token No., Audit\_Date, Cheque\_Issued\_Date, Cheque\_Delivery\_Date, are duly filled in by treasury.

However, in 15,04,239 out of 18,18,681 cases (82.71 *per cent*), the details were not available in BEAMS database though stated to have been entered by the treasuries. This indicated that the system failed to transfer data completely. In reply, 67 DDOs confirmed the fact of non-updating of data.

Further, in 118 cases, the TO altered the details such as Scheme code, Detailed Head of account and even the bill amount already entered by the DDOs at the time of generation of authorization slip which was submitted with the bill. The changes made by TOs were not getting updated in BEAMS database.

In reply, the Department accepted (September 2010) the inconsistency in data due to non-integration of BEAMS with TreasuryNet.

### Control over expenditure

Excess expenditure of ₹ 15.75 crore over the amount released through BEAMS

Scrutiny of MIS of BEAMS revealed that there was negative balance under the heads '01- Salary', '11-Domestic Travel Expenses', '27-Minor Works', '35-Grant in aid salary' and '53- major works' to the extent of ₹ 15.75 crore for the year 2009-10 as detailed in **Table 1**.

**Table 1: Details of expenditure over grants under various heads**

(₹ in crore)				
Detailed Head	No. of DDOs	Grants	Expenditure	Excess of expenditure
01-Salary	37	135.51	150.00	14.49
11- TE	7	0.01	0.07	0.06
27-Minor Works	1	1.97	1.98	0.01
35-Grant in aid salary	1	3.90	4.85	0.95
53-Major works	2	17.95	18.19	0.24
<b>Total</b>	<b>48</b>	<b>159.34</b>	<b>175.09</b>	<b>15.75</b>

This indicated that there was excess expenditure incurred by the DDOs than the amount released to them through BEAMS.

BEAMS started in the State with effect from June 2007 and even after passage of a period of more than three years, the expenditure under these heads could not be within limits of the grants allocated to the DDOs under that detailed heads of account.

The Department stated (September 2010) that in the absence of historical data, the estimates of the detailed head could not be predicted correctly. Further, the excess expenditure could be covered by revised estimates.

However, no such matching grants were released to cover the excess expenditure.

### **Payment made by TO on time barred authorisation slips**

The authorisation slips generated during the financial year should be used in the same financial year for submission of bills by DDOs to TOs so that the correct expenditure is booked in BEAMS.

However, analysis of the database and records of DDOs revealed that the TO had passed 18 bills on previous year's (2008-09) authorisation slips in the subsequent financial year. Due to this, booked expenditure in BEAMS for the financial year 2009-10 was overstated by ₹ 15.43 lakh.

Department accepted (September 2010) the payment made on time barred authorisation slips.

**Overstatement of  
BEAMS  
expenditure by  
₹ 15.43 lakh due to  
passing of bills on  
previous year's  
authorisation slips**

### **2.3.8.3 Output control**

#### **Control over generation of authorisation slips**

Finance Department laid down (May 2007) the procedure for submission of bills to treasury through BEAMS which specified that every DDO should generate two copies of 'authorisation slips'. Both the copies are to be signed by the DDO and attached with the original bill submitted to treasury. The TO should return to DDO, one copy duly signed and stamped as an acknowledgement. This acknowledged copy should be presented to treasury through an authorised person and the TO would issue the cheque with the authorisation number, auto generated on the authorisation slip.

Scrutiny of records of DDOs revealed that the BEAMS application did not restrict generation of authorisation slips to only two. Due to unlimited generation of slips, there was risk of misuse of unused authorisation slips. Further, the BEAMS did not have provision to mark 'First Copy/Second Copy' on the authorisation slips.

Sixty seven out of the 113 test-checked DDOs accepted the fact.

#### **Recording of authorisation slip numbers on cheques**

Department instructed (May 2007) that the TO should record authorisation slip number generated through BEAMS on cheques issued to DDOs.

Test checked 85 DDOs confirmed that this number was not recorded on any of the cheques issued to them. Therefore, there was no track to map authorisation slip number with the payment made by a particular cheque.

There were delays ranging from 2 to 335 days in distribution of grant from the CO to the DDO

### Delay in releasing grants by the administrative department and the Controlling Officer

“Quick and accurate transfer of budgetary grants” is one of the primary objective of BEAMS System. As soon as the budget is released by the Finance Department, the administrative department (AD) can allocate funds to their field officers through this system. It is the responsibility of the Controlling Officer (CO) that all grants need to be released immediately as soon as they are received from Finance Department /Administrative Department to the DDOs working under their control.

Scrutiny of selected eight grants/Departments (2009-2010) revealed that there was a delay in distribution of grants from AD to CO as detailed in **Table 2**.

**Table 2: Delay in distribution of grants**

Sr. No	Name of the Department (Grant)	Percentage of cases where grant was released			
		Within 7 days	7-15 days	15-30 days	Above 30 days
1	Home (B)	62	35	1	2
2	Housing (Q)	52	9	12	27
3	Tribal Development (T)	65	9	15	11
4	Industry, Energy and Labour (K)	53	19	27	1
5	Public Works (H)	34	29	15	22
6	Medical Education and Drugs (S)	93	5	0	2
7	Water Resources (I)	60	7	3	30
8	Minority Development (ZE)	75	17	7	1

Delay in distribution of grant from CO to DDO in all 33 COs as detailed in **Table 3** was ranging between 2 days and 335 days, thus defeating basic objective of quick transfer.

**Table 3: Delay in distribution of grant**

Percentage of cases where grant was released			
Within 7 days	7-15 days	15-30 days	Above 30 days
41	24	20	15

As more than 35 *per cent* of grants were released beyond 15 days, monitoring facility used for the purpose should be strengthened for timely release of funds.

Replies from the Finance Department, Administrative Department and Controlling Officers were not received (January 2011).



## Monitoring of cash flow through BEAMS

Effective mechanism to monitor uniform cash-flow did not exist

One of the objectives of development of BEAMS was to develop a tool for exercising control over monthly expenditure within the prescribed norms/limits. Finance Department sanctions the budget department wise, scheme head wise and detail head wise. Thereafter each department proposes MH wise monthly cash flow and Non-Plan/Plan wise to Finance Department for approval. The approved monthly cash-flow is made available to every department for budget release.

However, during scrutiny of the database it was observed that the bills were drawn in the month of March and huge expenditure was booked, which was contradictory to Fiscal Responsibility and Budgetary Management Act 2005. The detailed statistics of month-wise expenditure incurred during 2009-2010 showed that out of 126 MHs, in 64 MHs, the expenditure booked in the month of March ranged between 25 *per cent* and 100 *per cent*. This indicated that the effective mechanism to monitor uniform cash-flow did not exist in the system.

In reply, the Department accepted (September 2010) that the expenditure booked in March was certainly higher than rest of the year. Further, due to various practical difficulties, the predicted cash flow could not be observed and grants were carried forward.

### 2.3.9 Monitoring and evaluation process

#### 2.3.9.1 Non-release of grants through BEAMS

The use of BEAMS was made mandatory to every department by Finance Department for releasing grants to sub-ordinate offices and for booking the expenditure.

Scrutiny of records and analysis of the BEAMS database revealed that grant amounting to ₹ 975.92 crore received during the year 2009-2010 by Finance Controller of Maharashtra Housing and Area Development Authority (MHADA), Mumbai had not released to sub-ordinate offices using BEAMS despite DDO codes of the subordinate offices were already available in BEAMS database.

The MHADA had confirmed the facts and stated that due to non receipt of specific instructions from the Department the grant was not routed through BEAMS.

#### 2.3.9.2 Non booking of transactions pertaining to MH 8443 Civil Deposits through BEAMS

The Finance Department circulated (November 2009) procedure for administration of receipt and payment under MH 8443 Deposits through BEAMS in PWD. Accordingly, TO should certify the balances lying in 8443 Civil Deposits upto 31-03-2009 from the statement prepared by PW divisions.

From 01 April 2009 onwards, the division has to enter the same in BEAMS and after approval by Treasury Officer online, the same will be available to division for incurring the expenditure there from.

However, in two<sup>7</sup> out of nine districts test-checked, the above procedure was not followed.

All DDOs attributed the non-implementation of the procedure to lack of awareness of detailed procedure and training. The TO, Jalgaon stated that no proposal for certification of balance under MH 8443 Civil Deposits was received from the DDO.

### **2.3.9.3 Data updation of Pay and Accounts Officer (PAO), Mumbai on BEAMS server not done**

**Non-use of  
BEAMS  
application owing  
to low capacity of  
server**

The PAO, Mumbai acts as treasury officer for all DDOs in Mumbai. It was observed that the PAO was not using the BEAMS application for processing any of the bills presented by the DDOs owing to low capacity of server. All the bills were passed on the basis of hard copy of authorisation slips attached with the bills. In paragraph 2.3.8.3 it has already been mentioned that there is no check for generation of more than one authorisation slips for a single transaction. This poses a risk of duplicate/multiple payments. The fact of low capacity of server and inconsistency in network was confirmed by the PAO (August 2010).

As a result, the details of passed bills in respect of various DDOs under PAO Mumbai were not updated in BEAMS.

From the above, it was revealed that there was inadequate monitoring mechanism for implementation of BEAMS to control the aforesaid instances.

### **2.3.10 Software testing**

The Department has outsourced the work of functionality testing of BEAMS system to Standardised Testing Quality Certification (STQC), Pune at the agreed cost of ₹ 13.24 lakh. However, it was noticed that the testing of BEAMS was done based on old SRS (November 2009). Thereafter, BEAMS has undergone various changes and new modules have been added. The Department has now decided to test BEAMS by STQC with new SRS.

Despite tests being carried out by STQC, Audit noticed many flaws in the BEAMS as mentioned in the aforesaid paragraphs. Thus, the testing remained unfruitful. Therefore, during future testing by STQC, the deficiencies/flaws pointed out by Audit should be taken care of.

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<sup>7</sup> Jalgaon and Mumbai

### 2.3.11 Unreliable MIS

**Unreliable BEAMS data could not be utilised for preparation of MIS and budget**

One of the objectives of BEAMS is to create effective MIS for various departments of Government, Accountant General and Public. For preparation of budget the actual figures of expenditure of previous three years and revised estimated figure of current year are required. However, till June 2010 data pertaining to the earlier years was not made available online to users. Department accepted that (September 2010) the BEAMS data for 2007-08 and 2008-09 was not reliable hence could not be utilised for preparation of MIS and budget. It was observed that the data pertaining to 2009-2010 was also not reliable because of the following:

- BEAMS failed to provide control for submission of all authorisation slip generated through system or not insisted upon for cancellation of unused slips. Because of this, the expenditure was overstated in BEAMS.
- BEAMS was prone to break down as it was unable to sustain the load of transaction due to incapacity of the server. Thus due to drawal of bills by DDOs without authorisation slip, the expenditure booked under BEAMS was understated.
- The System allowed payment on deleted authorisation slip due to uncontrolled migration of data from BEAMS to Treasury as detailed in Paragraph 2.3.7.1. This has resulted into understated expenditure in the system.
- The system allows making payment on previous year authorisation slip. This has resulted into understating of expenditure in BEAMS system during current year.
- The treasury altered the booking head such as Detailed Head (DH), Scheme Code. Even they altered the amount. But same were not updated back to BEAMS system. Therefore, BEAMS system failed to depict the true picture.

Therefore, the MIS report generated through BEAMS was unreliable and did not depict the true picture of the transactions.

### 2.3.12 Conclusion

Audit noticed that largely the objectives of BEAMS were not achieved. The delay in releasing grants by the Administrative Department and the Controlling Officer to the Drawing and Disbursing Officer defeated the very purpose of quick online release of grants. Due to low capacity of server, the system failed at the fag end of every financial year and thus stored incomplete data. The deficiency in system design resulted in reversing of expenditure after payment and thus creation of unreliable data in BEAMS database. The system failed to maintain cash-flow within the prescribed norms/limits. Thus, the data stored in BEAMS was incomplete, unreliable and can not be used for MIS purpose. The system was found prone to high risk of hacking due to non

encryption of data. No tangible benefits have thus accrued so far from the BEAMS.

### **2.3.13 Recommendations**

Following recommendations are made to Government:

- In order to cater to the demands in the peak season, server capacity needs to be enhanced.
- System design issues included in the report need to be addressed along with building of adequate controls to ensure complete and correct data.
- For authenticity of authorisation slip, the software needs to be corrected.
- Proper integration of treasury application and BEAMS is required to be effected so that there is convergence of data.