CHAPTER III

PERFORMANCE REVIEWS

This Chapter presents six performance reviews. The performance reviews are on 'Implementation of Project Tiger', 'Implementation of VAMBAY and SUDP by Karnataka Slum Clearance Board', 'Development and Maintenance of Major District Roads', 'Urban Water Supply Schemes', 'Sarva Shiksha Abhiyan' and 'Computerisation of Treasuries in Karnataka (Khajane). Besides, there is one long paragraph on 'Working of Horticultural Farms'.

FOREST, ENVIRONMENT & ECOLOGY DEPARTMENT

3.1 Implementation of Project Tiger

Highlights

'Project Tiger' – a Centrally sponsored scheme is implemented in Karnataka in three Tiger Reserves viz. Bandipur National Park, Bhadra Wildlife Sanctuary and Rajiv Gandhi (Nagarahole) National Park for maintaining a sustainable tiger population in these reserves. The conservation and protection measures initiated by the Department in these reserves, however, remained by and large ineffective due to deficiencies in planning, inadequate release of funds, omissions to include potential tiger habitats in the Tiger Reserves and non-observance of scheme guidelines.

The budget provision made by the State Government during 2001-06 was short by Rs.2.77 crore compared to that approved in Annual Plans of Operation. The funds were also short released (Rs.4.77 crore) during the period.

(Paragraph: 3.1.6.1)

Conservation and protection measures in the Protected Areas of the three Tiger Reserves were not implemented in full due to deficiencies in formulating Management Plans and Annual Plan of Operations.

(Paragraph: 3.1.7)

Non-demarcation and consolidation of Bhadra Wild Life Sanctuary declared as Tiger Reserve in March 1998, non-inclusion of potential tiger habitats in the reserve and irregular diversion of wildlife areas for non-forestry purposes adversely affected the conservation measures of the reserve.

(Paragraphs: 3.1.8.1 to 3.1.8.3)

The estimation of tiger population in the State was not carried out regularly and on a scientific basis thereby not ensuring the reliability of the data.

(Paragraph: 3.1.10)

The tourism activities in the three Tiger Reserves were not carried out in accordance with the laid down guidelines.

(Paragraph: 3.1.14)

Shortage of frontline protection staff, lack of training in use of sophisticated fire arms and their supply and deficient communication network in the Protected Areas rendered the protection measures largely ineffective.

(Paragraph: 3.1.15)

3.1.1 Introduction

Tiger is one of the major predators in India which keeps the population of herbivores under control which in turn allows growth of vegetation thereby saving land from denudation. Its existence also helps in checking the impairment of the ecological conditions of a given area and maintaining the balance in nature. The animal has been on the brink of extinction since the middle of twentieth century due to shrinkage of its habitat, destruction of its prey animals and its poaching for skin and body parts.

Government of India (GOI) launched (April 1973) the scheme 'Project Tiger' to ensure the maintenance of a sustainable population of tiger in India and to preserve for all times such areas as part of our national heritage for the benefit, education and enjoyment of future generations. In Karnataka, the Project Tiger is implemented by the Forest Department in Bandipur Tiger Reserve (BTR) (1973), Bhadra Wildlife Sanctuary (BWLS) (1998) and Rajiv Gandhi (Nagarahole) National Park, (RGNNP) (2002).

3.1.2 Organisational set-up

The Principal Secretary, Forest, Environment and Ecology Department is the administrative head at the Government level. The Principal Chief Conservator of Forest (Wildlife), Bangalore {PCCF (WL)} who is also the designated Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 is responsible for the implementation of the project. The PCCF (WL) is assisted by two Field Directors, Project Tiger (FDPTs) at Mysore and Chikmagalur and three Deputy Conservators of Forests (Wildlife) (DCFs), one for each of the above three[1] Tiger Reserves (TRs). The DCFs are assisted by Assistant Conservators at sub-divisional level and Range Forest Officers at Range level.

[1] DCF, Bhadra Wildlife Division-Chikmagalur, DCF, Project Tiger Division-Bandipur and DCF, Wildlife Division, Hunsur

3.1.3 Audit objectives

The main Audit Objectives were to assess whether:

- availability of funds was adequate and financial management efficient and effective,
- project formulation was effective for achieving maintenance of sustainable tiger population,
- programme management was efficient and the various conservation and protection activities undertaken yielded the desired results,
- adequate and trained manpower was available and utilised efficiently,
- an efficient and adequate monitoring mechanism was in place.

3.1.4 Audit criteria

The performance of the project in the State was assessed with reference to:

- National Wildlife Action Plan (NWAP);
- Guidelines issued by the Wildlife Institute of India;
- Forest (Conservation) Act, 1980;
- Wildlife (Protection) Act, 1972 and
- Codes and Manuals of the Forest Department.

3.1.5 Scope and methodology of audit

The implementation of the Project in all the three Tiger Reserves in the State for the period 2001-06 was reviewed in audit between January 2006 and July 2006 by test-checking the records of the three DCFs and the FDPTs besides reviewing the records of PCCF (WL).

The audit objectives and criteria were discussed in an entry conference with the Principal Secretary, Forest, Environment and Ecology Department and PCCF (WL) in January 2006.

The audit findings relating to Project formulation and its implementation were based on the examination of various documents, data/reports. The audit findings were communicated to the Government in September 2006 for their comments and were also discussed in the exit conference held on 13 November 2006.

3.1.6 Audit findings

3.1.6.1 Financial management

Delay in submission of APOs to GOI and consequential delays in release of funds by the State Government coupled with inadequacy of funds affected adversely the implementation of the project

'Project Tiger' is a Centrally sponsored scheme for which *cent per cent* Central assistance is given by Government of India for non-recurring items of work and 50 *per cent* for recurring items. The remaining 50 *per cent* funds for recurring items are borne by the State Government. The funds for the Project were to be released on the basis of the approved Annual Plan of Operations (APOs) by Government of India.

Funds required for the project are provided in State Budget. On approval of the budget, the departmental officers incur expenditure either by drawing bills on treasuries to meet administrative expenditure or by drawing cheques against Letter of Credit to meet scheme expenditure.

Funds required for the project as per the approved APOs, funds released by Central and State Governments and the expenditure incurred during the period 2001-06 was as follows:

Table 1: Details of funds required, released and expenditure

(Rupees in crore)

Year	Funds required as per APO		Budget provision of the State Govt	Funds allotted/ released by Govt of India	Funds to be released by Govt of Karnataka including State Share (Col 3 + 5)	Funds actually released by Govt of Karnataka	Excess (+) / Shortfall (-) in release of funds (Col 6 – 7)	Expenditure incurred
	Central	State						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001-02	1.91	0.91	2.84	1.87	2.78	2.65	(-) 0.13	2.55
2002-03	2.96	0.89	2.51	2.91	3.80	2.59	(-) 1.21	2.50
2003-04	3.28	1.16	5.66	2.66	3.82	4.06	(+) 0.24	3.91
2004-05	7.62	2.10	8.40	4.84	6.94	6.19	(-) 0.75	5.32
2005-06	4.97	2.95	6.57	4.97	7.92	5.80	(-) 2.12	5.69
Total	**20.74**	**8.01**	**25.98**	**17.25**	**25.26**	**21.29**	**(-) 3.97**	**19.97**

The budget provisions made by the State Government were short (Rs.2.77 crore) of the funds required to be provided as per approved APOs during the period 2001-06. The funds released by the State Government were also short of the budget provision (Rs.4.77 crore) during all the years 2001-06 except during 2002-03. This resulted in shortfall in release of funds to the Project Authorities to that extent. There was also delay (**Appendix 3.1**) in release of funds by the State Government to the implementing officers by more than 6 weeks to 22 weeks despite assurance given (May-July 2000) by the State Government in the meeting of Chief Secretaries that Central funds would be made available to the implementing officers within six weeks of receipt. The State Government also did not release its share to the extent of 50 *per cent* due to the projects.

There was also shortfall in incurring of expenditure *vis-à-vis* release made to the extent of Rs.1.32 crore during all the years from 2001-02 to 2005-06 reasons for which were not on record.

All the above mentioned factors adversely affected the implementation of the programme of works as indicated in **Appendix 3.2**.

3.1.6.2 Diversion of Protected Area Development Fund (PADF)

Funds collected under PADF were diverted for purposes other than community benefit and development/ management of Protected Areas

The National Wildlife Action Plan (NWAP) formulated by GOI provided for creation of a Local Trust Fund for each Protected Area/Tiger Reserve (PA/TR) to be funded from tourism receipts such as entry fees, safari fees, penalties, *etc.*, collected in each PA/TR. Seventy *per cent* of the fund is to be appropriated for community benefit programmes and the remaining 30 *per cent* for the management and development of each PA. A separate PADF was required to be set up and administered for each PA/TR. The Government created (2002-03) only one consolidated PADF for the entire State. The reasons for the deviations were not on record.

The revenues generated from the PAs after credit to the State Revenue Account are transferred to the fund on quarterly basis. The Government allocated the revenue so accumulated to different National Parks (NPs)/Sanctuaries. It was, however, observed that against Rs.3.88 crore collected from the three TRs, only Rs.0.70 crore was allocated to the two TRs at BTR and RGNNP. No funds were allocated to BWLS. The balance amount of Rs.3.18 crore was allotted to other NPs/Sanctuaries of the State outside the project tiger areas. The allocated amount (Rs.0.70 crore) was spent by these TRs on repairs to quarters and purchase of vehicles which was not contemplated in the NWAP.

3.1.6.3 Diversion of Central assistance

Grant of Rs.7.75 lakh was provided to RGNNP during 2003-04 for the construction of quarters, anti-poaching camps, formation of anti-poaching patrolling tracks and census work under non-recurring items. In addition, Rs.6.54 lakh was provided under the recurring head for maintenance of roads and employment of tribal people for protection duties. The entire provision of Rs.14.29 lakh under these heads were, however, diverted towards payment of outstanding wages of anti-poaching watchers engaged on daily wage basis for the reason that no separate allocation of funds was provided for the same.

Programme management

3.1.7 Preparation of Management Plans

Deficiencies in management plans and Annual Plan of operations of three Tiger Reserves hampered long term conservation and protection measures in Protected Areas

The 'Project Tiger', envisages management of TRs on sound principles of scientific conservation. This includes maintaining a 'core area' in each TR where there would be no biotic interference like forestry operations, collection of minor forest produce, bamboo extraction, grazing of domestic cattle and any human activities including tourism so as to maintain the area in as near natural conditions as possible. The area other than the 'core area' called the 'buffer area' is available for wildlife oriented forestry purposes.

The integrated development of a TR is achieved by undertaking all necessary conservation, protection and promotional measures through long term perspective plans called 'management plans' (MPs) which deal with all existing programmes and description of future programmes required to achieve the area objectives over a period of 5 to 10 years. The management plan of every TR is to be executed in annual phases after drawing up APOs. The APOs are, therefore, an overall coordinated programme of the works under the scheme and the other works to be executed under the State Sector.

In BTR and BWLS, the MPs were formulated without providing for training requirements of the working staff, buffer zone development plan, degraded habitat restoration plan and tourism management plan. Likewise, MP of RGNNP did not contemplate the training plans and the tourism management plan.

The APOs of BTR did not provide for measures to meet the demand for fuel wood, grasslands for cattle, linkage of corridors and planting fruit bearing species despite envisaged in its MP. The APOs of BTR and BWLS did not contain any action plan to eradicate weeds despite the fact that depletion of fodder due to weeds was recognised by the Department in their MPs.

The sustainable population that could be maintained in each reserve had also not been spelt out by the Department. Wildlife Advisory Board under Wildlife Protection Act, 1972 to formulate the policy of protection and conservation of Wildlife was also not constituted as of March 2006.

3.1.8 Consolidation of Tiger Reserves

3.1.8.1 Survey and Demarcation

Non-consolidation of the boundaries in two TRs exposed the tiger habitats to encroachments and trespassing

The Wildlife (Protection) Act, 1972 provides that as soon as the Government notifies the area of a TR, the boundaries thereof shall be demarcated and consolidated after conducting a proper survey.

The entire core and buffer zone area of 492.30 sq km of BWLS had not been demarcated and consolidated as of March 2006 despite issue of final notification declaring the areas as a reserve in March 1998. No proposal was made in this regard in any of the APOs. In the absence of consolidation of the boundaries, the TRs were exposed to encroachments and trespassing detrimental to the wildlife conservation. As of March 2006, 0.39 sq km was encroached upon by public in this TR during 1997-98 to 1998-99. In BTR 12.80 hectares of land had been encroached upon by 23 families. In RGNNP, 7.04 sq km was under occupation of the tribals, as assessed in 2000. The extent to which the occupation had extended after the year 2000 had not been assessed (March 2006).

3.1.8.2 Inclusion of potential tiger habitats in protected areas

Non-inclusion of potential tiger habitats in the Tiger Reserves and irregular diversion of wildlife areas for non-forestry purposes adversely affected conservation measures

An area of 67.80 acres of private land situated within the core area of BWLS was rich in wildlife. The fauna has to move across this area on their way to and from the back waters of the Bhadra Reservoir. The Deputy Conservator of Forests, Bhadravathi proposed (January 1990) to acquire the area for development of Bhadra Reserve Forest. The Deputy Commissioner, Chikmagalur District dropped (June 1991) the acquisition proceedings as the department failed to remit the required land compensation to the Revenue Department. No action was taken to acquire the land which was rich in wildlife and even after its surrounding areas had been declared (1998) as Wildlife Sanctuary.

3.1.8.3 Leasing/diversion of wildlife areas

Under the Wildlife (Protection) Act, 1972, any activity in a protected area which damages and deprives wildlife of its habitat is strictly prohibited. The core zone in a sanctuary is to remain undisturbed for providing uninterrupted habitation to wildlife. Contrary to this, an area of 68.15 sq km in the core zone of RGNNP was converted as Tourism Zone.

An area of 89.94 hectares in the Buffer Zone of BWLS had been leased out (1979) for 20 years to set up Kuvempu University after issue of preliminary notification (1974) under Wildlife Protection Act, 1972 for declaring the area as a sanctuary. The area was included as part of the Sanctuary while issuing final notification in March 1998. However, the lease was further extended (August 2002) beyond February 1999 with the approval of Indian Board for Wildlife on the condition that the leased area be excluded from the reserve and another contiguous area of 339 hectares of degraded forest land added to it in lieu thereof within 90 days. The leased area was, however, neither excluded from the reserve nor was any other contiguous area added to it. This defeated the spirit of approval of the Board.

3.1.8.4 Conservation of tigers outside the Tiger Reserves

Protection measures for tigers outside the Protected Area were lacking

As per 2001-02 census, 401 tigers were estimated to be living in the State, of which 182 lived in TRs. Of the 219 tigers living outside the three TRs, 140 tigers lived in the territorial forest areas while 79 tigers lived in Wildlife Sanctuaries and National Parks. The guidelines of the 'Project Tiger' Scheme provide for undertaking of conservation measures in populated tiger areas outside the TRs. These measures would include dedicating pockets of undisturbed areas for these tigers, retention of fodder and fruit species, allowing controlled grazing within the carrying capacity of the forests and protecting the tigers from poachers.

No conservation measures had been taken by the Department despite the vulnerability of these tigers to poaching and habitat degradation. In the territorial forests of Chikmagalur Circle, three cases of tiger poaching were reported (2002) indicating lack of protection measures by the Department.

3.1.9 Habitat development and restoration of degraded habitat

3.1.9.1 Grassland management

Measures to grow fodder crops for herbivores were not initiated for sustaining prey species

In order to maintain availability of sufficient prey species such as deer, sambar, wild boars, *etc.*, for the tigers inside the Reserves, adequate availability of fodder for these herbivores is essential. Therefore, grasslands were to be developed within the reserve areas of TRs so as to ensure availability of fodder to herbivores. The management plans of the TRs were to include plans for raising grasslands in the Reserves.

Review of Divisional records revealed that MPs of BTR and BWLS (2001-06) did not include comprehensive proposals for raising grasslands to avoid the incidences of wild animals straying into human habitation and consequential killing of cattle, humans, *etc*. In the three reserves, a compensation of Rs.88.25 lakh was paid towards crop damages, cattle and human deaths in 9,323 cases during 2001-06.

Weeds such as lantana and euphotorium suppress fodder growth which is necessary for the existence of herbivores. These weeds were growing abundantly in BTR and BWLS. Lack of action to remove the weeds was attributed (January/February 2006) by the Divisional Officers to paucity of funds. However, no proposals were made by the Department in their respective APOs so that funds for the purpose could be obtained.

3.1.9.2 Desilting of water bodies

The water bodies in the Reserves are required to be desilted at regular intervals so as to ensure adequate water availability to wildlife during summer. It was observed that out of 300 water bodies available in BWLS and BTR, only 94 were desilted during 2001-06 due to paucity of funds.

3.1.9.3 Wildlife corridors

Absence of wildlife corridors adversely affected the conservation of tigers

Corridors in wildlife areas are not only vital for free movement of wild animals but also for gene flow which facilitates genetic diversity and population viability. BWLS has only one narrow corridor. The existing corridors to the adjoining Kakanahosudi and Aldhara forests got blocked due to execution of irrigation projects and other human activities. No proposals had been mooted by the Department for widening the corridor or opening a new corridor. Deputy Conservator of Forests (BWLS) in reply stated (January 2006) that the matter of providing of corridor through the two forest areas would be examined. Absence of proper corridors would adversely affect conservation attempts made for the wild animals.

3.1.10 Estimation of tiger population

The estimation of tiger population in the State was not carried out regularly and on a scientific basis

GOI issued (1997-2002) several guidelines for carrying out tiger estimation on an annual basis by involving, *inter alia*, retired Wildlife Wardens and experts from reputed institutions like Wildlife Institute of India, Indian Institute of Science, *etc*. Data was also to be compiled by the Forest Guard in his area on a daily basis by recording observations of tiger sightings, pugmarks, animal droppings, tiger-kills, *etc*. It would also include determining the sex ratio and age of the tigers. The quarterly/half-yearly/yearly reports on the data so generated were to be submitted to GOI.

Records revealed that no action was taken by the project authorities to compile the data on regular basis as per the GOI guidelines. Since 1997, the estimation was made on three[2] occasions and the one in 2006 had partly been completed as of July 2006. The estimation of tiger population was done by using only pug mark method. The population of tigers as per these estimations conducted at BWLS, BTR and RGNNP during 1997, 1999 and 2001 was as under:

Table 2: Population of tigers

Name of the TR	1997				1999				2001			
	Male	Female	Cubs	Total	Male	Female	Cubs	Total	Male	Female	Cubs	Total
BWLS	13	13	5	31	17	14	9	40	Not done			
BTR	24	46	5	75	24	48	7	79	26	46	10	82
RGNNP	Not done				NA	NA	NA	55	NA	NA	NA	55 to 60

It would be seen that in RGNNP neither sex ratio of tigers nor number of cubs was determined during any of the estimations. The estimation for 2001 was not based on compiled data of direct tiger sightings, observation of animal droppings, tiger-kills, *etc*. The estimation was also made without involving experts from reputed institutions like Wildlife Institute of India, Indian Institute of Science, *etc*. Thus, the estimation of the number of tigers by the Department, by counting pug marks was not foolproof.

Estimation of herbivore population (prey species) in the TRs had also not been done in BTR since 1996-97, in BWLS since 2000-01 and in RGNNP since 2002-03. Consequently, the adequacy of prey-predator ratio which had a bearing on food chain in these TRs was not assessed.

3.1.11 Protection measures

Anti-poaching camps were not set up according to vulnerability of areas to forest offence cases

To save the tigers from poaching, forest fires, communicable diseases and accidents on highways passing through TRs, the 'Project Tiger' envisaged setting up anti-poaching camps, undertaking of immunisation programmes, training of frontline staff in anti-poaching and fire fighting techniques, equipping the staff with arms and ammunitions, fire protection measures and constructing speed barriers and displaying sign boards on highways besides creating awareness about wildlife conservation.

[2] In 1997, 1999, 2001

3.1.11.1 Poaching of Tigers and Anti-poaching Camps

Tigers are often poached for their skin, bone and other body parts which fetch lucrative prices in global markets. In RGNNP, a case of laying metal traps for poaching tigers was booked (May 2002) by the Department on the basis of incident reported by the tourists. In BTR, a tiger aged six to seven years was poached (August 2004) in Gundre Range but the Department did not investigate the case treating it as a case of natural death although the post mortem report revealed evidence of inflicted injuries and absence of nails. In another case, forest cell of Crimes Investigation Division of Police Department, Bangalore seized (December 2005) four tiger skins in the vicinity of BTR and RGNNP. Despite occurrences of such poaching, no case of tiger poaching was recorded by the Department in these TRs indicating slackness in protection measures.

To prevent poaching, the project envisaged setting up of anti-poaching camps (APCs). Each camp was to cover a minimum area of 25 to 30 sq km. As against 67 camps[3] to be set up, 81 APCs existed (March 2006) in the three reserves of BTR, BWLS and RGNNP.

Records revealed that APCs in many cases were not set up on the basis of vulnerability of the area to forest offences. In BTR, only five camps were set up in Maddur Range which registered 327 forest offence cases (FOCs) during 2001-06 while five camps were set up at AM Gudi Range, which registered only six FOCs. In RGNNP, Antharasanthe range which registered 298 FOCs during 2001-06 had only three APCs while Kallahalla Range which had 82 FOCs during 2001-06 had four APCs.

Similarly, there were wide discrepancies in deployment of frontline staff at beats in the protected areas. In BTR, two Ranges with an area of 6,125 hectare and 6,100 hectare respectively had 11 beats each, while one Range with an area of 12,050 hectares had only nine beats. In RGNNP, while one Range with an area of 5,039 hectares had 12 beats, another Range with an area of 13,647 hectares also had the same number of beats. In another Range of BTR (Maddur) near the State border where 327 FOCs had been booked during 2000-06, only 13 beats had been set up while 12 beats had been set up for AM Gudi Range which was less vulnerable with only six FOCs booked during 2002-06.

Setting up of APCs not in accordance with vulnerability of forest areas adversely affected anti-poaching activities.

3.1.11.2 Immunisation programme

Regular immunisation of the village cattle around the Reserve is required to prevent spread of communicable diseases from domestic cattle to wild animals. The details of immunisation programme carried out around BTR and BWLS during 2001-06 were not available except for 0.23 lakh out of three lakh cattle in BTR and 0.06 lakh out of 0.40 lakh cattle in BWLS carried

[3] At the rate of one camp for every 30 sq km

during 2005-06. The divisional officers stated that the shortfall was due to funds constraint. Shortfall in immunisation of cattle around the tiger reserves would render the wild animals vulnerable to communicable diseases.

3.1.11.3 Fire Protection measures

During the period 2001-06, forest area of 123.96 sq km was destroyed in fire in the three reserves of BTR, BWLS and RGNNP. The Project authorities tackle the forest fires by keeping and maintaining a network (4,624 kms) of fire-lines. Besides, fire watchers are deployed for preventing/controlling fires.

The Ministry of Environment and Forest (MOEF) issued (June 2000) guidelines for prevention and control of forest fires which, *inter alia*, would include identification and mapping of fire prone forest areas for creating a data base on forest fires and analysing their occurrence and assessing the fire damages and submission of proposal to them for releasing grants. The MOEF also suggested appointment of a 'Fire Warden' and constitution of a 'Crisis Group' at Circle and Divisional level so as to closely monitor and coordinate various preventive measures.

The Project authorities, however, had not taken action to comply with these guidelines so as to equip themselves with preventive measures and prevent forest fires. Consequently, effective fire protection measures were not in place.

3.1.12 Communication network

Communication is important for protecting forests from fire, poaching, timber felling, grazing, encroachments and other illegal activities.

3.1.12.1 Roads, vehicles and wireless sets

Patrolling of reserves was ineffective due to poor maintenance of roads and fleet of old vehicles

There was a total road network of 1,970 kms in the three TRs of which only 497 kms (BTR), 444 kms (RGNNP) and 141 kms (BWLS) were maintained annually by the Department during 2001-06. The roads were not all weather roads and their condition was poor. Sixty vehicles were available for patrolling the protected areas and for tourism. Out of 46 vehicles in BTR and RGNNP, 38 vehicles were 5 to 22 year old. In BTR, absence of roads for patrolling along the sensitive border of Karnataka-Kerala States rendered tigers vulnerable to poaching. In 2002-03, six cases of elephant poaching were reported in that area. Also in BWLS, one Range was totally cut off from the rest of the Reserve due to collapse of a bridge which had not been reconstructed for want of funds. In this Range alone (2001-06) 197 FOCs were registered which were more than 50 *per cent* of the total number of FOCs (346) booked in the Reserve during that period.

Against the requirement of 34 static and 24 mobile wireless sets and 188 walky-talky sets at RGNNP, only 19, 18 and 108 respectively were available. In BTR, against the requirement of 97 walky-talky sets, only 88 sets were available. The poor maintenance of the roads together with the fleet of old vehicles and shortage in communication equipment affected effective patrolling of the reserves.

3.1.13 Forest offence cases

As of March 2006, 1,208 FOCs in three TRs were pending finalisation of which 213 cases were more than four year old. The cases required adjudication by courts (294 cases) and disposal by Department (914 cases). National Wildlife Action Plan required the States to set up designated courts for speedy trial of wildlife and forest related offences. However, the State had not set up any designated court to try forest offences so far (October 2006).

3.1.14 Promotional activities in Tiger Reserve

Activities for regulation of wildlife tourism were lacking

Regulated, low impact tourism has the potential to act as a vital tool for gaining support for wildlife conservation. The objective of wildlife tourism is to inculcate the importance of wildlife amongst the visitors, develop empathy for nature, both animate and inanimate and provide a communion with nature, rather than to merely ensure sighting of animal species. Eco-tourism was to primarily benefit local communities in the form of generation of employment.

The GOI evolved (1998) Revised Guidelines for Wildlife Tourism in Protected Areas including TR. Records revealed that the guidelines for waste disposal and water and energy consumption were not issued in any of the three reserves. Tourist guides for briefing the tourists about the forest and wildlife were also not provided in any of the reserves. The tourist carrying capacity and vehicle carrying capacity in one (BWLS) of the three reserves had not been prescribed. The Dos and Don’ts to regulate the activities of visitors at BWLS were also not prescribed.

Thus the promotion of wildlife tourism in these TRs was not carried out as envisaged in the guidelines.

3.1.15 Human Resource Management

No action was taken to train the frontline staff in wildlife management and engage regular protection staff in TRs

The position of sanctioned posts, working strength and vacant posts of the frontline staff such as Foresters, Forest Guards and Forest Watchers in the three TRs as of March 2006 was as follows:

Table 3: Details of sanctioned/working strength and vacant posts

Name of the Reserve	No. of Posts sanctioned			No. of Posts filled up			No. of Posts lying vacant		
	Forester	Forest guard	Watchers	Forester	Forest guard	Watchers	Forester	Forest guard	Watchers
BTR	24	101	27	11	34	25	13	67	2
BWLS	17	39	7	13	32	5	4	7	2
RGNNP	39	120	40	16	55	32	23	65	8
Total	**80**	**260**	**74**	**40**	**121**	**62**	**40**	**139**	**12**

The frontline staff of Foresters and Forest Guards was short of sanctioned strength by 50 and 53 *per cent* respectively. Records also revealed that nearly 64 *per cent* of the Foresters and 31 *per cent* of forest guards in the three TRs were aged above 50 years against the average age of 18-35 years recommended by Wild Life Institute of India. Thus, old age of front line staff coupled with lack of training and non-supply of arms adversely affected the wildlife protection.

To overcome the shortage of frontline staff for wildlife protection work, each TR engaged on an average 104 persons every year during the period 2001-06 on daily wage basis. However, no action was taken to engage regular protection staff and train the front-line staff in wildlife management in the TRs.

3.1.15.1 Training of field staff

Frontline staff were not trained and provided with sophisticated weapons

Government of India guidelines envisaged equipping the staff with sophisticated weapons including automatic and semi-automatic weapons and equipments after proper training. It was agreed during the meeting of Chief Secretaries with the MOEF, GOI (May-July 2000) that wherever necessary, training of forest staff would be organised through the State Police Department. In pursuance of this, the Project Directorate of GOI also directed (November 2000) the Chief Wildlife Wardens to organise the protection staff into viable units to ensure effective use and safe custody of sophisticated arms to be supplied by the Project Directorate.

It was observed that the frontline forest staff numbering161 were not trained in the use of sophisticated fire arms or in skills required to combat armed and mobile offenders. Semi-automatic and automatic weapons were not procured for any of the three TRs during 2001-06 for want of clearance from Ministry of Home, GOI as the viable units were not set up by the Department. Eighteen available slide action guns were issued to the three reserves (six each). However, only nine persons had been trained in their use. Lack of training and weapons left the wildlife staff ill equipped in combating poaching and other forest offences. The forest offence cases booked in the three reserves during 2001-06 were 2,305 involving an amount of Rs.40.06 lakh[4] towards illegal felling of sandal wood, timber, *etc*.

3.1.16 Monitoring

The project guidelines stipulated preparation of monthly, quarterly, half-yearly and annual reports on physical and financial progress of works for submission to PCCF/Project Director. Further, the guidelines envisaged submission of monthly monitoring and mortality reports of tigers, annual reports on estimation of tigers, bi-annual tiger mortality and seizure reports.

[4] Excludes the value of 310 cases booked in BWLS but not assessed and the value of 66 cases booked during 2005-06 at BTR and RGNNP but not assessed

Test-check of divisional records, however, revealed that except for quarterly and annual expenditure reports, no other reports had been submitted during the period from 2001-02 to 2004-05. As a result, the implementation of programme was not monitored closely during 2001-05.

3.1.17 Conclusion

Conservation and protection measures undertaken in the three tiger reserves, for maintaining a sustainable tiger population in them, were not effective to a large extent due to deficiencies in preparing appropriate management plans, shortages in allotment and release of funds and delay in their release. The conservation measures were adversely affected due to delay in consolidation of boundaries, non-eviction of encroachers and relocation of local population in TRs, non-inclusion of potential tiger habitats and irregular diversion of wildlife areas for non-forestry purposes. The protection measures were deficient due to shortage of frontline protection staff, non-supply of sophisticated fire arms and training in their use and insufficient communication net work.

3.1.18 Recommendations

- Budget allocations should be made as per approved Annual Plans of operation and released in full and in time to the Implementing Officers.
- Comprehensive Management Plans need to be drawn up for each reserve covering all areas of conservation and protection which should be followed by time bound Annual Plans of operation. These plans should also provide a measure for achievement of targets against efforts made.
- Demarcation and consolidation of boundaries need to be completed in all cases including all potential tiger habitats in the reserves without diverting any wildlife areas for non-forestry purposes.
- Firm action need to be taken to evict encroachers and relocate the local/tribal population in the TRs.
- Estimation of tiger population should be carried out on a regular and scientific basis.
- Action should be initiated for engaging wildlife protection staff and train them in the use of sophisticated fire arms.
- Deficiencies in communication net work need to be removed for effective protection of the protected areas.

3.1.19 The above points were referred to Government in May 2006; reply had not been received (October 2006).

HOUSING DEPARTMENT

3.2 Implementation of VAMBAY[◈] and SUDP[⊗] by Karnataka Slum Clearance Board

Highlights

The Valmiki Ambedkar Awas Yojana (VAMBAY), a Centrally sponsored scheme was introduced in the State in August 2001 with the aim of providing shelter or upgrading existing shelter in the slum areas. The State Government had earlier (January 2001) introduced Slum Upgradation and Development Programme providing common infrastructure facilities in these areas. Review of these schemes disclosed that houses were constructed in non-declared areas and on private land. The process of transfer of title of the houses to the beneficiaries was very low. Under SUDP, works undertaken in four cities scheduled for completion in one year were incomplete even 14 to 25 months after the due dates as all of them were entrusted to a single contractor.

Out of 26,053 houses to be constructed under VAMBAY during 2002-03 to 2005-06, 25,841 had been completed and 25,132 houses allotted to beneficiaries. However, conferment of title to the beneficiaries was completed only in respect of 96 houses. In respect of 2,881 houses constructed at a cost of Rs.13.10 crore in non-declared slums or on private lands transfer of title could not be effected.

(Paragraphs: 3.2.6.1 to 3.2.6.3)

Despite spending Rs.74.70 lakh (98 *per cent* of the estimated cost) during 2004-05 on a model slum under VAMBAY, the houses constructed had not been allotted even as of June 2006 thereby failing to serve as a demonstration unit.

(Paragraph: 3.2.6.4)

The Board had not recovered initial deposit of Rs.4.37 crore from VAMBAY beneficiaries as of June 2006. Control mechanism for monitoring recovery of dues from the beneficiaries was not in place.

(Paragraph: 3.2.6.5)

Irregular expenditure of Rs.13.82 crore was incurred under SUDP during 2002-03 to 2005-06 on maintenance of assets in areas handed over to local bodies.

(Paragraph: 3.2.7.5)

The Board had not raised demands for Rs.13.24 crore from SUDP beneficiaries on the on-site works undertaken in eight cities.

(Paragraph: 3.2.7.6)

◈ Valmiki Ambedkar Awas Yojana

⊗ Slum Upgradation and Development Programme

3.2.1 Introduction

With the objective of improving and clearing slums in the State, the Karnataka Slum Areas (Improvement and Clearance) Act, 1973 (Act) came into force in 1974. The Act provides for removal of unhygienic and insanitary conditions prevailing in the slums, better accommodation and improved living conditions for slum dwellers, promotion of public health generally and acquisition of land for the purpose of improving, developing or re-developing slum areas, clearance of slums and rehabilitation of slum dwellers. These schemes were implemented by the Karnataka Slum Clearance Board (Board). The Government sanctioned (January 2001) Slum Upgradation and Development Programme (SUDP) for providing common infrastructure in the slum areas. Subsequently, Valmiki Ambedkar Awas Yojana (VAMBAY) a Centrally sponsored scheme was also launched in the State in August 2001 for providing shelter or upgrading shelter in these areas. As of March 2005, 1,954 slum areas had been declared under the Act. These included 560 slums on lands belonging to private persons.

3.2.2 Organisational set-up

The slum clearance and upgradation schemes were executed through the Karnataka Slum Clearance Board constituted by the State Government. The overall administrative control of the Board vests in the Principal Secretary to Government, Housing Department. The Commissioner of the Board is the Chief Executive Officer. Field work is carried out through five Divisions and 14 Sub-divisions headed by the Executive Engineers (EE)/Assistant Executive Engineers (AEE) respectively.

3.2.3 Audit objectives

The main objectives were to ascertain whether:

- the implementation of VAMBAY and SUDP was in accordance with their guidelines;
- houses constructed under VAMBAY were allotted as targeted and their titles transferred to the beneficiaries;
- mechanism for recovery of dues from the beneficiaries was effective;
- infrastructure works undertaken under SUDP were executed efficiently and effectively;
- quality control mechanism for execution of infrastructure works was effective; and
- mechanism for maintenance of assets was in place and effective.

3.2.4 Audit criteria

The audit criteria were:

- The Karnataka Slum Areas (Improvement and Clearance) Act, 1973 and the Rules framed thereunder in 1975.
- Guidelines for the schemes and orders issued by Central/State Governments from time to time.
- The Karnataka Transparency in Public Procurement (KTPP) Act, 1999.
- Specification laid down for quality control by the Ministry of Surface Transport (MOST) for road works.

3.2.5 Scope and methodology of audit

Implementation of VAMBAY and SUDP during the period 2000-01 to 2005-06 was reviewed in audit during March-July 2006 by test-check of records of the Housing Secretariat, Board's head office at Bangalore, three[⊗] out of five Divisions and six[⊠] out of 14 Sub-divisions selected by multi-stage stratified sampling method, covering 54 *per cent* of the total expenditure of Rs.323.36 crore.

The audit objectives and the methodology adopted for the review were discussed with the Board in the Entry Conference held in March 2006. During the course of the Review, memoranda containing audit observations based on examination of records were issued to the Board and the Divisions. The audit findings were also communicated to the Board/Government for their remarks and also discussed with the Principal Secretary to Government, Housing Department and the Commissioner of the Board during the Exit Conference held in October 2006.

Audit findings

3.2.6 Implementation of VAMBAY

The Centrally sponsored scheme, VAMBAY was launched in August 2001 with the objective of providing shelter or upgrading the existing shelter. The scheme is funded by 50 *per cent* Central subsidy released through the Housing & Urban Development Corporation (HUDCO) and 50 *per cent* by loan from HUDCO on State Government guarantee.

The scheme was implemented in three phases for which the State Government accorded administrative approval in February 2002 (Phase I) and March 2003

[⊗] Bangalore, Gulbarga and Hubli-Dharwad
[⊠] Bangalore (No.1 & No.2), Belgaum, Bellary, Dharwad and Gulbarga

(Phases II and III). The cost of each house was to be limited to Rs.60,000 in Bangalore and Rs.40,000 in other places.

3.2.6.1 Physical and financial progress of construction of houses

The details of funds provided and expenditure incurred during 2002-03 to 2005-06 as also target and achievement of construction of houses under the three phases as of March 2006 were as follows:

Table 1: Physical and financial progress

	Year of sanction	Central subsidy	Loan from HUDCO	Total	Expenditure	Target	Achievement
		(Rs. in crore)				(Number of houses)	
Phase I	2002-03	23.25	23.25	46.50	46.49	10,312	10,312
Phase II	2002-03	10.98	10.98	21.96	21.94	5,000	4,788
Phase III (1st half)	2002-03	13.52	13.52	27.04	27.04	6,461	6,461
Phase III (2nd half)	2002-03	6.76	6.76	13.52	13.52	3,280	3,280
Bagalkot	2002-03	2.00	2.00	4.00	4.00	1,000	1,000
Total		**56.51**	**56.51**	**113.02**	**112.99**	**26,053**	**25,841**

The number of houses constructed in 53 slums ranged between 1 to 9 covering only 3 to 30 *per cent* of the families living in those slums. In 12 slums, only one house was constructed in each phase. Thus, in these slums the effect of improvement as a consequence of implementation of the scheme was negligible.

3.2.6.2 Allotment of houses and conferring title

Conferment of title in favour of beneficiaries was slow as registration had been completed in only 96 out of 25,132 houses allotted

According to the scheme guidelines, beneficiaries were to be identified before commencement of construction of houses. Out of 25,841 houses constructed under the scheme under Phases I to III, 25,132 had been allotted. The remaining 705 houses were yet to be allotted (June 2006). Thus, expenditure of Rs.3.87 crore incurred on their construction remained unfruitful.

The scheme envisaged conferment of title of houses on the beneficiaries. It was, however, noticed that the process of completion of conferment of title was very slow as documentation (including registration) had been completed only in 96 out of 25,132 houses allotted (March 2006).

3.2.6.3 Execution of works in non-declared slums and slums on private land

Expenditure of Rs.13.10 crore incurred on slums in non-declared/ private land was irregular

The Act envisaged declaration of slum areas which are likely to be a source of danger to health, safety or convenience of the public on account of being low lying, insanitary, squalid, overcrowded or otherwise. Similarly, the buildings in any area used for human habitation and unfit for that purpose by being detrimental to safety, health or morals were also to be so declared. The Act also envisaged declaration of any slum area to be a slum clearance area (that is, an area to be cleared of all buildings) on being satisfied that the most satisfactory method of dealing with the conditions in the area is by clearance of such area. The Act further envisaged acquisition of any land within, adjoining or surrounding any slum area. However, according to scheme guidelines, no expenditure for land acquisition is permissible from VAMBAY funds.

It was noticed that during 2002-03 to 2005-06, 2,881 houses were constructed in 69 slums which were yet to be declared as slum areas (nine) or slum clearance areas (46) or for which acquisition proceedings were incomplete (14), as only preliminary notification calling upon owners or interested persons to show cause against such move had been issued. The expenditure of Rs.13.10 crore incurred on these houses was, therefore, irregular. The title to the house could not also be conferred on the beneficiaries, while giving possession. The execution of works on private land was also open to the risk of disputes and/or intervention by courts, *etc*. and consequential delay in completion.

3.2.6.4 Setting up of a model slum

Model slum failed to serve as a demonstration unit as houses constructed after spending Rs.74.70 lakh (98 *per cent*) remained unallotted

The scheme envisaged, as a demonstration project, setting up of at least one model slum to be emulated by all other cities and towns in the State. For this purpose, the Board entrusted (June 2004) the work of construction of 127 houses at Laxminagar slum at Laggere in Bangalore city to Building Materials Technology Promotion Council[@] at Rs.76.20 lakh at the unit cost of Rs.60,000. The work was stipulated to be completed within six months.

In spite of spending Rs.74.70 lakh (98 *per cent*) till March 2005, the houses had not been allotted (June 2006) pending Government clearance and thus, it failed to serve as a demonstration unit.

3.2.6.5 Arrears in recovery of cost of houses

Initial deposit of Rs.4.37 crore remained to be recovered from beneficiaries

According to the scheme guidelines, 50 *per cent* of cost of houses is required to be recovered from the beneficiaries as initial deposit (Rs.5,000) and the remaining amount (Rs.25,000/Rs.15,000) in equated monthly instalments (EMI). Since the State Government provided funds for repayment of loans borrowed from HUDCO for construction of the houses, the amounts of initial deposit and EMI recovered were to be credited to Government.

Though the Sub-divisions had maintained the Demand, Collection and Balance (DCB) registers, the Board did not have the position for the State as a whole for each year. However, according to the details of demand of initial deposits, collections and remittance to Government furnished by the Board, as of June 2006, out of Rs.13.02 crore due for the 26,053 houses taken up, the collection amounted to Rs.8.65 crore, leaving Rs.4.37 crore unrecovered. Details of realisation of EMI and its remittance to Government were not furnished.

[@] A Government of India assisted body

Thus, the maintenance of records of dues was incomplete affecting the monitoring of recoveries. The Board did not furnish reasons for non-maintenance of records but stated (October 2006) that a DCB Cell had been constituted (February 2006) to monitor the maintenance of records.

3.2.6.6 Implementation of Nirmal Bharat Abhiyan

Maintenance for 278 toilet complexes had not been arranged

The VAMBAY Scheme provided for a component of infrastructure development titled Nirmal Bharat Abhiyan (NBA) under which construction of community toilet complexes was to be undertaken as a basic amenity in congested metropolitan cities. The estimated cost for a 10 seat toilet complex was Rs.4 lakh at Rs.40,000 per seat. The Board constructed 588 toilet complexes of 10 seat capacity during 2002-03 to 2004-05 at a cost of Rs.23.52 crore.

The State Government exempted the works from the application of KTPP Act and the works were to be executed departmentally. The Board, however, got 19 toilet complexes with 190 seats constructed through three agencies at a cost of Rs.76 lakh. The Board did not furnish reasons for not undertaking these works departmentally.

Maintenance of 310 complexes was entrusted to Non-Governmental Organisations/other agencies on tender basis. As against Rs.39.81 lakh due from these agencies, the Board received only Rs.5.04 lakh leaving Rs.34.77 lakh unrecovered as of June 2006. Maintenance of the remaining 278 toilet complexes had not been arranged even one year after completion exposing the users to the health hazards.

3.2.6.7 Monitoring

According to the scheme guidelines, the State Government was to set up monitoring and coordination committees at the State/District/Municipal levels. The State Government constituted (October 2004) a State Level Coordination Committee (SLCC) with a Chairman✹ and four❖ members to look into the aspects of progress of implementation, quality of construction, transparency and speedy implementation, undertake site visits to submit feedback, follow-up action with implementing agencies and recommend changes/modifications in the scheme. SLCC was to meet as frequently as necessary to facilitate meaningful monitoring of the scheme.

SLCC held its only meeting in February 2005 and its proceedings containing several decisions/recommendations were circulated in March 2005.

✹ Principal Secretary to Government, Housing Department

❖ Commissioner of the Board, an official from the Ministry of Urban Development and Poverty Alleviation, and two non-officials

3.2.7 Implementation of SUDP

The State Government sanctioned (January 2001) a Slum Upgradation and Development Programme (SUDP) to be implemented in 21 cities excluding Bangalore at a cost of Rs.274.02 crore for providing common infrastructure facilities. Of this, 80 *per cent* was to be met from loan provided by HUDCO on Government guarantee and the balance 20 *per cent* by way of subsidy from State Government over a period of four years. In Phase I, 260 slums were to be covered under the scheme at an estimated cost of Rs.65.05 crore. The works envisaged to be taken up included on-site improvement, components of community water supply, community toilets, road improvements, surface water drains, underground drainages and street lights.

During the years 2002-03 to 2005-06, the Board received funds of Rs.67.95[*] crore and incurred expenditure of Rs.63.98 crore, leaving Rs.3.97 crore unspent.

3.2.7.1 Selection of contractors for execution of works

For the purpose of selection of contractors for execution of works, the Board short listed (March 2002) 37 contractors. The Board invited (May 2002) item rate tenders from pre-qualified contractors for execution of works in nine cities. Among the offers received, the lowest offer was from 'G' for works in three cities (Bidar in category-I and Bellary and Gulbarga in category-II). The terms of the notification provided that the contractor was free to quote for all the works but he would be awarded only one work in each category. 'G' was awarded (December 2002) the contracts for Bidar and Gulbarga cities. The contractor was allotted the works in Bellary also as another contractor 'P' did not agree to execute the works at the lowest offered rate of 4.45 *per cent* offered by 'G'. The works at Bellary were entrusted (March 2003) to 'G' at the negotiated rates at 4.41 *per cent* above the estimated cost.

Selection of a single contractor for four cities due to improper evaluation of capacity caused delay in completion of works

In December 2002, the Board invited item rate tenders for execution of works in the remaining 12 cities. Among the offers received, 'G's offer for Hospet was the lowest, and was accordingly awarded (May 2003). Thus, 'G' was the contractor for works in four cities with dates of commencement between February 2003 and August 2003. The time allowed was 12 months in each case and the works were due for completion between January and August 2004. A review of the progress of works showed that the contractor had not completed any of the works in the four cities even after grant of extension of time up to November 2004 for two works as detailed below:

[*] Loan from HUDCO: Rs.54.45 crore; Subsidy from State Government: Rs.13.50 crore

Table 2: Delay in completion of works

(Rupees in crore)

Name of the city	Estimated cost of work	Amount put to tender	Date of commencement	Due date of completion	Expenditure up to March 2006	Delay (months)
Gulbarga	6.51	6.09	01.02.2003	31.01.2004	4.29	25
Bidar	2.77	2.70	05.02.2003	04.02.2004	2.14	25
Bellary	5.59	5.31	04.05.2003	03.05.2004	4.72	22
Hospet	4.94	5.51	03.08.2003	02.08.2004	5.31	19

Audit scrutiny revealed that though the contractor fulfilled all the criteria prescribed for determining eligibility when works were separately considered, he did not satisfy them when works were considered cumulatively as under:

Table 3: Eligibility criteria for the works

(Rupees in crore)

Eligibility criteria	Category of bids		Eligibility required (Cumulative)	G's eligibility	Remarks
	Up to Rs.5 crore	Above Rs.5 crore but below Rs.7 crore			
Pre-qualification required during the last five years *viz*., (1996-97,1997-98, 1998-99, 1999-2000 & 2000-01) was the minimum annual turnover in civil engineering works at least of one financial year.	2.00	3.00	8.00	1996-97 - 10.50 1997-98 - 11.16 1998-99 - 4.99 1999-00 - 8.50 2000-01- 9.13	Did not qualify during the year 1998-99
Liquid assets and/ or availability of credit facility during last 3 years i.e., from 1998-99, 1999-2000 and 2000-01.	1.00	1.50	4.00	1998-99 - 2.99 1999-00 - 1.66 2000-01 - 4.16	Did not satisfy the condition during 1998-99 and 1999-2000.
Company's Net Worth during last three years i.e., 1998-99, 1999-2000 and 2000-01	1.00	1.50	4.00	1998-99 - 0.29 1999-00 - 1.19 2000-01 - 5.24	Did not satisfy the conditions during 1998-99 and 1999-2000.

Further, the tender document required that the contractor must mobilise enough manpower and machinery to start works in several slums simultaneously. There was no evidence on record to show that the capacity of the contractor to tackle works simultaneously in all the four cities was evaluated and found to be adequate.

Thus, entrustment of works in more than one city to the same contractor resulted in non-completion of works and delayed the provision of intended infrastructure to the slum dwellers.

The Board stated (October 2006) that it sought relaxation of retendering with a view to saving precious time and expenditure. It also stated that it had assessed net delay in completion of works for each city after excluding time taken for approval of extra items and modifications and that prescribed penalty would be imposed and recovered from the contractor's bill. Thus, the Board's reliance on a single contractor for execution of works in the four cities at a time was not justified and postponed the availability of infrastructure.

3.2.7.2 Non-obtaining/retention of bank guarantees

The tender conditions of successful contractors entrusted with execution of SUDP works stipulated furnishing of unconditional bank guarantees covering two *per cent* of the tendered amount.

For the 21 cities where SUDP works of Phase-I were entrusted to 21 contractors at tendered cost of Rs.68.21 crore between February 2003 and September 2003, the Board was required to obtain bank guarantees for Rs.1.36 crore. It was, however, noticed that it received bank guarantees for Rs.1.22 crore from only 18 contractors. Of these, confirmation from the concerned banks was obtained in respect of only three cases. The Board stated (October 2006) that necessary action was being initiated against the officials responsible for the lapse.

According to the contracts, the bank guarantees were to be released after payment of final bills or after completion of defect liability period (DLP) whichever was later. It was, however, noticed that bank guarantees in respect of eight contractors were not renewed after expiry of their validity period (December 2003 to June 2005) though works were yet to be completed (three cases) or DLP had not expired (five cases).

3.2.7.3 Deficiencies in execution of works

Preparation of estimates for SUDP works without reckoning site conditions led to works not being taken up or being modified

Out of works in 260 slums of 21 cities, execution was not taken up in 12 slums of nine cities (estimated cost: Rs.1.31 crore) due to non-completion of land acquisition proceedings, non-completion of VAMBAY houses and similar works being executed by the Karnataka Urban Infrastructure Development and Finance Corporation with external assistance. This indicated that execution of works was entrusted to contractors without ensuring availability of clear title to land or sites were otherwise ready for undertaking the construction.

It was also noticed that 84 items of works such as roads, drains, culverts, street lights, water supply, overhead tanks, electricity allotted (February 2003 to September 2003) to contractors in 34 slums of 15 cities were not executed as similar works had already been or were being undertaken by other Government agencies or local bodies (34), facilities were already existing or other proposals were under consideration (41), or legal disputes (9).

In nine slums, in respect of 11 works allotted in June 2003 to August 2003 specifications of road works were changed from asphalting to cement concrete paving or *vice versa*, all of which involved higher expenditure. Thus, as against Rs.14.45 lakh provided in the estimates, actual expenditure incurred was Rs.91.51 lakh resulting in excess expenditure of Rs.77.06 lakh (including Rs.44.95 lakh in respect of change of asphalting to cement concrete in four slums of four cities). The change from asphalting to cement concrete was made on the ground that the roads were less than 3.5/3 metre width and road rollers could not pass through such small lanes.

These indicated that preparation of estimates was also made without taking into account site conditions and also indicated absence of coordination among different agencies undertaking similar works.

3.2.7.4 Quality control

Quality control was inadequate

According to the tender conditions, the contractor was to conduct quality control tests to ensure that characteristics of cement, strength of cement concrete and road works conformed to prescribed specifications.

The cement used for works was to be of high strength Portland cement conforming to Indian Standard (IS) and the contractor was required to furnish laboratory certificate to that effect. In respect of 144 slums of 10 cities, cement was used in works such as paving, construction of culvert, drain, underground drainage, retaining wall, *etc*. However, only one certificate each was kept for eight[*] cities and in respect of two cities (Bijapur and Gulbarga), no test reports were on record.

The minimum sample of concrete of each grade required to be tested was between one and four depending on the quantity of concrete. In respect of 139 slums of nine cities, a total of 94 laboratory test reports only were submitted. Even these did not indicate the number of samples drawn, number of cubes tested for each work/slum. Further, 61 reports produced to audit did not mention the works to which the tests related (*i.e.*, paving, drainage, culvert, *etc.*) 14 did not have dates and 23 did not indicate the slum to which these related.

The terms of the contracts for road works included conducting of various tests as per MOST specifications. While in respect of eight[⊛] cities, no quality control reports were on record, in respect of one city (Gadag), out of 16 slums involved, tests had been conducted for eight slums only.

3.2.7.5 Maintenance of handed over assets by the Board

Expenditure of Rs.13.82 crore on maintenance of assets in areas handed over to local bodies was irregular

According to standing instructions of Government, once the house and primary environment works are completed in the declared slums, the area should be handed over to the concerned local body. In this regard, the date on which a reference is made from the Board to the local body would be deemed as the date of handing over of the slum and responsibility of maintaining them would be of the local body.

[*] Bellary, Bidar, Gadag, Hospet, Hubli-Dharwad, Kolar, Kolar Gold Fields and Raichur
[⊛] Bellary, Bidar, Bijapur, Gulbarga, Hospet, Hubli-Dharwad, Kolar Gold Fields and Raichur

It was, however, noticed that 268 slums in 21 cities where works were taken up under SUDP Phase I, included 55 slums in the cities which had been already handed over to the concerned local bodies during August 1994/ February 2000/June 2000/November 2000. An expenditure of Rs.13.82 crore was incurred on maintenance of these assets during 2002-03 to 2005-06 in these slums which was irregular.

3.2.7.6 Non-recovery of cost of on-site improvements

Demands for recovery of Rs.13.24 crore from SUDP beneficiaries had not been raised

According to the SUDP guidelines, at least 50 *per cent* of the expenditure incurred on slum development/improvement works undertaken was recoverable from the beneficiaries.

The Board completed (April 2005) works in 93 slums in 8 out of 21 cities incurring expenditure of Rs.26.47 crore on on-site improvements like road works, underground drainage and electricity. Of this, a minimum of Rs.13.24 crore was recoverable from the beneficiaries. The Board had not taken steps even for issue of demand notices for effecting recoveries.

3.2.8 Other points

Avoidable payment of interest

For implementation of VAMBAY and SUDP, the Board received grants from the State Government and obtained loans from HUDCO. The loan agreement with HUDCO provided an option to the Board to seek deferment of drawal of loan instalment by paying a charge at 0.5 *per cent*.

Loan instalments drawn from HUDCO kept in term deposits resulted in avoidable payment of interest of Rs.3.42 crore

The Board, however, exercised the option of deferment only once in April 2003 for second instalment of loan in respect of SUDP due to slow progress of work. Records also revealed that the Board invested Rs.259.62 crore (VAMBAY: Rs.204.17 crore, SUDP: Rs.55.45 crore) in 283 term deposits during April 2002 to March 2006. These included term deposits for Rs.160.55 crore from HUDCO loan at interest rates ranging from 10 to 13.25 *per cent* (uniform rate of 7.91 *per cent* from January 2005). As against this, interest earned on the term deposits ranged from 4 to 8.5 *per cent*. Thus, while interest paid on the amount was Rs.8.07 crore, interest earned up to March 2006 was Rs.3.85 crore only, resulting in excess payment of interest of Rs.4.22 crore. The Board by exercising the option of deferment of drawal of loans by payment of deferment charges of Rs.80.28 lakh, could have saved interest of Rs.3.42 crore.

The Board stated (October 2006) that according to HUDCO loan terms and conditions, if loans were not drawn within the specified time, the funds would have lapsed. This is not tenable as the terms also provided for deferment of drawal and HUDCO had not refused to grant it.

3.2.9 Conclusion

Implementation of VAMBAY was deficient as transfer of title of houses to the beneficiaries was very slow, works were taken up in non-declared/private land and houses in model slum remained unallotted and hence failed to serve as a demonstration unit. Community toilets constructed were not being maintained exposing users to health hazards. A control register for watching recovery of the cost of the houses from the beneficiaries centrally had not been maintained. Under SUDP, improper selection of contractors led to delay in completion of works. The works were not taken up for want of title to land or similar works were already under execution by other agencies. Expenditure was incurred by the Board on maintenance of works even after their transfer to local bodies.

3.2.10 Recommendations

- Works should be taken up only after declaration of slums and acquisition of private slums to facilitate transfer of title in favour of beneficiaries.
- Transfer of title of VAMBAY houses to beneficiaries should be ensured at the time of handing over possession.
- Houses constructed in the model slum should be allotted to the beneficiaries without further delay.
- Arrangements for maintenance of toilet complexes should be made soon after their completion.
- A control register for monitoring recovery of cost of houses from the beneficiary should be maintained centrally.
- Board should not incur expenditure on maintenance works in areas transferred to local bodies.

3.2.11 The points mentioned above were referred to Government in September 2006; reply had not been received (October 2006).

PUBLIC WORKS DEPARTMENT

3.3 Development and Maintenance of Major District Roads

Highlights

The Karnataka State Public Works Department is responsible for the development and maintenance of the Major District Roads in the State whose length as of March 2006 was 31,626 kms. The development of the road network and its maintenance was constrained due to inadequate release of funds. The execution of works also suffered due to non-prioritisation of improvement and widening works. The Department executed the works in contravention of Indian Road Congress norms which led to several cases of avoidable and wasteful expenditure.

There were savings due to short release of budget provision which ranged from Rs.46.06 crore to Rs.103.36 crore during the period 2002-05. Execution of works in excess of funds released led to accumulation of liabilities to Rs.203.98 crore at the end of March 2006.

(Paragraph: 3.3.6.1)

Ribbon development and encroachments were not regulated by implementing the provisions of the Karnataka Highways Act, 1964. Non-prioritisation of road widening works resulted in avoidable expenditure of Rs.4.02 crore as the traffic intensity of these roads did not warrant such widening.

(Paragraphs: 3.3.7.3 & 3.3.7.5)

Incorrect values for various design parameters were adopted in the case of 26 roads costing Rs.27.73 crore which resulted in construction of their pavements with less thickness and thus prone to premature failure. In 11 cases, the pavement thickness was in excess resulting in avoidable extra expenditure of Rs.10.60 crore.

(Paragraphs: 3.3.8.2 & 3.3.8.3)

Execution of 9.59 lakh sqm of unnecessary Surface Dressing works in contravention of Indian Road Congress norms resulted in wasteful expenditure of Rs.2.22 crore on 42 road improvement works in Bellary and Raichur divisions.

(Paragraph: 3.3.8.5)

Execution of maintenance and repair works under piecework system was irregular and resulted in non-enforcement of quality control checks.

(Paragraph: 3.3.9.2)

The quality control tests for ensuring execution of works according to prescribed standards for different stages of pavement works to the extent of 31 to 98 per cent were not carried out. No test for moisture content before and after compaction of earth was conducted.

(Paragraph: 3.3.10.1)

3.3.1 Introduction

Major District Roads (MDR) are the arterial roads within a district connecting them with each other or with State Highways (SH) and National Highways (NH). They also act as links between rural and urban areas. The total length of MDRs in the State was 31,626 kms[5] (March 2006). Public Works Department (PWD) is responsible for the development and maintenance of these MDRs.

3.3.2 Organisational set-up

The Department of Public Works is headed by Principal Secretary who is assisted by the Secretary and two Chief Engineers *viz,* the Chief Engineer, Communication and Buildings (South Zone), Bangalore and the Chief Engineer, Communication and Buildings (North Zone), Dharwad at the zonal level. The Chief Engineers are assisted by 10 Superintending Engineers (SEs) at circle level and 35 Executive Engineers (EEs) at the divisional level.

3.3.3 Audit objectives

The main audit objectives were to ascertain whether:

- the funds were utilised for intended objectives;
- the programme implementation was planned and prioritised;
- execution of works was undertaken ensuring economy and efficiency; and
- quality check norms were complied with.

3.3.4 Audit criteria

The audit criteria were based on:

- Compendium of Notifications issued by Government;
- Relevant publications of Indian Road Congress (IRC);
- Report of Committee of Ministry of Road Transport and Highways (MORTH) on ‘Norms for Maintenance of Roads in India’;
- Road Traffic Census data and
- Management Information System (MIS), Departmental Medium Term Fiscal Plan (DMTFP), Annual Reports, *etc*.

[5] Single-lane – 29,741 kms; Intermediate-lane – 1,743 kms and Double-lane – 142 kms

3.3.5 Scope and methodology of audit

The review covering the period 2002-06 was conducted during April-June 2006 by test-checking the records of PWD Secretariat, two CEs, six SEs[6], eight EEs[7] and two Quality Control divisions. Of the total expenditure of Rs.1,167.04 crore[8] incurred on MDR works during the period 2002-06, an expenditure of Rs.505.33 crore (43 *per cent*) was test-checked in audit.

The audit objectives were discussed in an entry conference with the CE, C&B (South) on 15 March 2006. The audit methodology involved examination of documents including estimates, tenders, agreements, vouchers, *etc.*, and discussions with the departmental officers and issue of audit enquiries. The works were selected according to category of the work and magnitude of expenditure. The audit findings were communicated to the Government (September 2006) for their remarks and also discussed with the Principal Secretary, Public Works Department during the exit conference held on 21 October 2006.

Audit findings

3.3.6 Financial Management

3.3.6.1 Budget allotment and expenditure

The funds allotted in the budget and the expenditure incurred on the development and maintenance of MDRs[9] during the period 2002-06 was as under:

Table 1: Budget Provision and Expenditure

(Rupees in crore)

Year	Budget proposals	Budget provision	LoC released	Expenditure incurred	Excess (+)/Savings (-) in expenditure *vis-à-vis* budget provision	Pending bills as at the end of the year
2002-03	258.92	244.06	173.27	185.30	(-) 58.76	198.42
2003-04	305.79	241.18	185.05	195.12	(-) 46.06	255.76
2004-05	546.87	438.52	316.06	335.16	(-) 103.36	251.10
2005-06	906.52	405.30	429.36	451.46	(+) 46.16	203.98[Ψ]
Total	-	**1,329.06**	**1,103.74**	**1,167.04**	-	-

Although the budget provisions were less than the budget proposals which did not incorporate the liabilities of the previous years, the funds actually released

[6] Bangalore, Bellary, Dharwad, Gulbarga, Hassan, and Mysore
[7] Bangalore, Bellary, Bidar, Dharwad, Hassan, Kolar, Mandya and Tumkur
[8] Including Central Road Fund Works
[9] Including Central Road Fund Works
[Ψ] Year-wise break up: 2000-01-Rs.0.40 crore (18 bills); 2001-02 – Rs.0.17 crore (150 bills); 2002-03 – Rs.1.39 crore (37 bills); 2003-04 – Rs.16.48 crore (1,924 bills); 2004-05 – Rs.34.70 crore (1,986 bills) and 2005-06 – Rs.150.84 crore (4,714 bills)

fell short of the budget provisions during the years 2002-05. This resulted in savings against budget provisions which ranged from Rs.46.06 crore to Rs.103.36 crore during the period 2002-05. As the Department carried out its works programme on the basis of budget provisions, the liabilities by way of unpaid bills accumulated to Rs.203.98 crore at the end of March 2006.

3.3.6.2 Mukhya Mantri Grameena Raste Abhivrudhi Nidhi (MMGRAN)

MMGRAN funds were not administered in accordance with its guidelines and Rs.86.79 crore was not utilised

Government established (May 2004) Mukhya Mantri Grameena Raste Abhivrudhi Nidhi (MMGRAN) to regulate and supplement resources for maintenance and upgradation of district and rural roads. The resources of the fund constituted proceeds of Rural Road Development Cess (RRDC) and 15 *per cent* of the Infrastructure Development Cess (IDC) levied on sales tax, motor vehicle tax, toll on roads and bridges, agriculture produce marketing fee, *etc*. The fund was administered through a State Level Committee chaired by the Chief Minister at Apex level. Programme formulation and implementation monitored at district level through District Level Committees. Though the committees were constituted at State level and in all the districts of test-checked divisions, they were not functional. The Secretary, PWD stated (July 2006) that the procedure laid down were not being followed. No specific reasons were furnished.

The cess collected for MMGRAN fund is initially credited to the Consolidated Fund of the State and subsequently transferred to Public Account under the Head of Account '8229–Development and Welfare Fund'. Seventy *per cent* of the MMGRAN funds is required to be allocated for maintenance and upgradation of PWD roads including MDRs and the balance for rural roads maintained by Zilla Panchayats. The expenditure initially booked under the Major Head '3054 – Roads and Bridges' is relieved at the end of the financial year, as reduction in expenditure, to the extent of funds available under the Major Head 8229.

Review of records revealed that against Rs.120.07 crore collected (2004-06) as RRDC and IDC, only Rs.86.79 crore were transferred to MMGRAN fund. Reasons for not transferring the balance amount (Rs.33.28 crore) to MMGRAN were not on record. The amount of Rs.86.79 crore lying in the fund was also not transferred to service head for road works.

Thus, MMGRAN funds were not administered according to the guidelines and the objective of setting up the fund for supplementing the resources for road works was not met.

3.3.7 Programme implementation

3.3.7.1 Project planning

The existing Village Roads (VRs) and Other District Roads (ODRs) in the district are generally upgraded to Major District Roads having regard to the traffic intensity on these roads and their connectivity with the places of production and marketing as well as the highways. The MDRs are later improved and/or widened to cater to the growing traffic needs.

3.3.7.2 Upgradation of roads

Village Roads and Other District Roads were declared for upgradation to MDRs in violation of the prescribed norms

As per the Government directives (November 2003) up-gradation of VRs and ODRs as MDRs can be taken up only if the traffic intensity on these roads exceeds 1,000 Passenger Car Units (PCUs) and the roads connect villages having a population of one thousand and above.

During the period 2002-06, 12,872 kms of VRs and ODRs were declared for up-gradation. Of these, 2,872 kms were declared during 2004-06 without obtaining concurrence of the Finance Department for ensuring financial commitment.

Contrary to the norms, 46 kms of five ODRs/VRs in Hassan Division were classified (January 2006) as MDRs despite low traffic intensity of only 42 to 68 PCUs and population of the connected villages ranged from 44 to 888. In Bidar Division, 34 kms of 3 ODRs/VRs were classified (September 2003) as MDRs where traffic intensity was only 312 to 833 PCUs. Similarly in Kolar Division, 147 kms of 11 VRs/ODRs were classified (January 2006) as MDRs in 78 villages without fulfilling the population criteria which ranged from 166 to 997 only. Thus, 227 km roads were classified as MDRs for upgradation in violation of the guidelines.

The unnecessary up-gradation of 34 kms of three roads in Bidar Division resulted in unjustified expenditure of Rs.21.94 lakh towards their widening.

3.3.7.3 Regulation of right of way of Major District Roads

Ribbon development and encroachments were not prevented by implementing Karnataka Highways Act, 1964

The right of way[10] of MDRs and fixing of their 'boundary lines' and 'control lines' for preventing ribbon development[11] and encroachments enabling future widening is regulated under the provisions of Karnataka Highways Act, 1964 (Act).

Review of records disclosed that various provisions of the Act which came in to force from 7 August 1969 had not been made applicable as of July 2006. This included declaration of MDRs as highways and appointment of 'Highway Authorities' for the implementation of the Act. Consequently, 'boundary lines' and the 'control lines' of these MDRs were not fixed for preventing ribbon development and encroachments and regulating the 'right of way'. Against the IRC norm of minimum width of 25 metres 'right of way' in respect of MDRs in rural areas, the actual width ranged from five to 17.5 metres for a length of 765 kms[12] road.

[10] The land secured and reserved for future development of the road and structures pertaining to it

[11] Ribbon Development constitutes development on either side of carriageway within the prescribed control lines

[12] In respect of four divisions *viz.* Bangalore, Hassan, Kolar and Mandya

Thus, the ribbon development and encroachments were not prevented by implementing the provisions of the Act by the Government.

3.3.7.4 Non-maintenance of an updated Road Information System (RIS)

Improvement and widening works were not prioritised for execution in the absence of an updated Road Information System

Development of MDRs included improvement and strengthening of existing roads and their widening to intermediate and double-lane carriageways according to growing traffic needs. The road works are to be prioritised according to availability of funds and executed as per IRC norms. For this, the Department is to maintain a road inventory and update it regularly with information relating to category of roads *viz.*, single-lane, intermediate-lane and double-lane, their existing condition, the intensity of traffic, growth rate of traffic, improvements/widening needs along with details of the ordinary/special repairs carried out from time to time. Besides, details of maintenance works carried out or to be carried out at different chainages, the cost of maintenance per kilometre of road are also required to be maintained.

An Information Technology Cell was also set up (2000) by the Department for development and maintenance of an Integrated Road Information System (RIS). It was to provide data on physical features like boundaries, road network and water resources and the existing road conditions (spatial data) necessary in prioritising the development works. It would also provide information on geometrics of roads and design parameters.

Review of records in test-checked divisions revealed that the Department had not maintained and updated data either in manual or in electronic form. Consequently, the prioritisation of works for improvement/strengthening/widening was not done on the basis of road inventory/RIS information.

3.3.7.5 Non-prioritisation of widening works

Non-prioritisation of road widening works resulted in avoidable expenditure of Rs.4.02 crore

The widening works of single-lane roads to intermediate-lane/double-lane carriageways are required to be taken up as per IRC norms given below:

Table 2: Carriageway with reference to traffic intensity

Sl No.	Traffic intensity (in Passenger Car Units)	Lane width (in metres)	Type of carriageway
1	Up to 2,000	3.75	Single-lane
2	2,000 to 6,000	5.50	Intermediate-lane
3	6,000 to 15,000	7.00	Double-lane
4	Above 15,000	15.00	Four-lane divided carriageway

Of the total length of 3,376 km single/intermediate-lane carriageway (comprising 205 MDRs) in the jurisdiction of eight test-checked divisions, only 381 km length was as per above norms. The remaining 2,995 km had not been upgraded to intermediate-lane (2,144 km), double-lane (788 km) and four-lane (63 km) though the traffic intensity on these roads (February 2003) required such up-gradation. On the contrary, 135.40 km roads of 10 MDRs in four divisions[13] were widened (expenditure: Rs.4.02 crore) to intermediate/ double-lane carriageways although the traffic intensity norms did not warrant it. This resulted in avoidable expenditure of Rs.4.02 crore on these widening works (**Appendix 3.3**).

3.3.8 Execution of road works

3.3.8.1 Design of pavement

The pavement of a road is designed taking into account several factors such as the initial traffic[14], the traffic growth rate, the design life, the distribution of commercial traffic over the carriageway, the Vehicle Damage Factor (VDF)[15] and strength of sub-grade. Based on these factors, the cumulative number of standard axles that can be borne by the pavement up to the end of designed life, known as design traffic, is computed in terms of Million Standard Axles (MSA). Normally, a design life of 10-15 years is adopted for MDRs. Pavement thickness and its composition is to be adopted as prescribed by IRC for a given design traffic (MSA) on a sub-grade of a particular soil strength[16].

Review of records in the test-checked divisions, however, disclosed that values for various parameters were not adopted correctly while working out the design traffic as discussed below:

- The latest available traffic census data applicable at the beginning of the construction of improvement/widening works was not adopted.
- A uniform traffic growth rate of 7.5 *per cent* or nine *per cent* was adopted to arrive at the design traffic instead of actual traffic growth rate figures available with the Department as required under IRC norms.
- Instead of actual VDF values available with the Department, indicative values were adopted for working out the 'design traffic'.

Reckoning of incorrect values resulted in working out pavement thickness less than that required as per IRC specifications affecting adversely the structural stability of the pavements for their designed life as discussed in the following paragraph.

[13] Bellary, Hassan, Kolar and Mandya

[14] Initial traffic is the sum total of the existing traffic at the beginning of the construction of the road and the estimated increase in traffic during the period of construction

[15] VDF is a multiplier to convert the number of commercial vehicles of different axle loads to the number of standard axle load repetitions. It is the equivalent number of standard axles per commercial vehicle

[16] The soil strength is its capacity to resist the direct penetration of traffic load which is expressed as a percentage of load carrying capacity of a standard crushed rock specimen. This is also called California Bearing Ratio value

3.3.8.2 Structural instability of roads

Adoption of incorrect values for various design parameters resulted in construction of 26 roads costing Rs.27.73 crore with less pavement thickness making them liable to premature failure

Scrutiny of estimates of 38 improvement works (43 chainages of 455 kms) executed (2000-05) in eight divisions at a cost of Rs.35.13 crore for a design life of 10 years revealed that their pavement thickness was not designed correctly due to adoption of traffic growth rate of 7.5 or nine *per cent* against the actual growth rates ranging from (**-**) 2.76 to 249 *per cent* as per the traffic census (traffic growth as of 2002-03 over 1997-98). This resulted in execution of road works with pavement thickness which was either more or less than that required for a design life of 10 years as indicated in 38 cases in **Appendix 3.4.**

Out of 43 chainages in respect of 38 MDRs, shortfall in crust thickness ranged from 440 mm to 20 mm in 26 roads (348 kms) involving an expenditure of Rs.27.73 crore leading to reduced life of 0.56 to 9.81 years. In respect of 10 chainages (88 kms), crust thickness was excess which ranged from 225 mm to 10 mm. Only in two chainages (19 kms), crust thickness conformed to norms.

The roads with shortfall in their crust thickness were prone to premature failure. The excess crust thickness in 10 chainages resulted in execution of excess quantities than that required for the design life and the expenditure (Rs.6.75 crore) thereon was avoidable and the funds if saved, could have been used on other priority works.

3.3.8.3 Avoidable extra cost on improvements to roads

Designing excessive pavement thickness for the designed life of 10 years and execution of work with higher specifications resulted in an avoidable extra expenditure of Rs.3.85 crore

Improvements to Chandapur-Dommasandra Road (km 0 to 11) and Bangalore-Dommasandra Road (km 21.30 to 23) were taken up (October 2005) by Bangalore Division, as a part of the works to divert the heavy traffic on NH 7 from km 9 to 18.50 km (Central Silk Board to Electronics City) temporarily for a period of two years for facilitating construction of an elevated expressway on this stretch of the National Highway. The work entrusted to a contractor at a tendered cost of Rs.9.79 crore was still in progress (May 2006) though it was due to be completed by April 2006. An amount of Rs.2.17 crore was paid to the contactor as of March 2006.

The heavy traffic of NH 7 was also proposed to be simultaneously diverted to two other adjoining State Highways. In the estimates for the improvement works on these three State roads[17], the Division had uniformly reckoned 60 *per cent* of the commercial vehicles plying on NH 7 in addition to the normal traffic on the respective State road (for designing crust thickness) against one third of the total traffic on the NH 7 for arriving at the designed traffic. Besides, the designed traffic for the diversion roads was only for a period of two years. However, the pavement thickness was worked by adopting the designed traffic of both normal and diverted traffic together over a period of 10 years. As a result, the Department adopted a crust thickness of

[17] 1) Road from Anekal-Attibele-Sarjapur-Dommasandra to Varthur (SH 35)
2) Road from Anekal-Bannerghatta to Meenakshi Temple (SH 86-A)
3) Road from Chandapura-Dommasandra / Bangalore-Dommasandra to join HKA Road (MDR)

815 mm for the MDR as against 630 mm required for design life of 10 years. The estimates for the improvement works were also prepared adopting higher specifications such as providing 'Wet Mix Macadam', 'Dense Bituminous Macadam' and 'Bituminous concrete' on the basis of the Schedule of Rates (SR) of NH Zone instead of 'Bituminous Macadam', 'Water Bound Macadam' and 'Semi-Dense Bituminous Concrete' as per State PWD specifications.

The Divisional Officer in reply contended (May 2006) that reckoning higher traffic was necessary in view of the traffic intensity in the surrounding industrial areas and the MDR under improvements being one of the economically important roads in and around Bangalore. The reply is not tenable as the pavement thickness of a road has to be determined only by reckoning the factual values for various parameters prescribed by IRC. Thus, estimation and entrustment of work with higher specifications with extra crust thickness of 185 mm resulted in estimated avoidable extra cost of Rs.3.85 crore.

3.3.8.4 Avoidable outlay on improvements to Bellary-Rupanagudi Road

Unjustified improvement work to a road resulted in an avoidable expenditure of Rs.30.92 lakh

In Bellary Division, improvements to Bellary-Rupanagudi Road (km 16 to 22) were carried out (March 2004) at a total cost of Rs.54.70 lakh which included items of maintenance work and profile correction. The Division adopted a traffic growth rate of 7.5 *per cent* against the existing negative growth rate of 1.89 *per cent* based on the latest traffic census data of 2002-03. The Divisional Officer justified (July 2006) the expenditure of Rs.30.92 lakh[18] incurred on providing additional pavement contending possible increase in traffic after the improvement of the road. The reply is not tenable as the existing crust thickness of the road was sufficient to bear the traffic load and improvement work was not justified in view of negative growth rate of traffic.

3.3.8.5 Wasteful expenditure on execution of 'Single Coat Surface Dressing' works

Execution of Single Coat Surface Dressing works on roads where improvement works were completed without any time lag resulted in wasteful expenditure of Rs.2.22 crore

'Single Coat Surface Dressing' work comprises application of a layer of bituminous binder sprayed on a previously prepared base followed by a cover of stone chippings properly rolled to form a wearing course. According to IRC norms this item of work is executed in specific circumstances where the completion of improvement work is likely to get delayed by more than six months but it is inevitable to allow the traffic on the freshly laid metal surface during the intervening period. This provides temporary protection to the newly laid metal from coming out due to flow of traffic.

Review of records in respect of 42 road improvement works in Bellary and Raichur divisions revealed that 9.59 lakh sqm of 'Single Coat Surface Dressing' was provided (2002-06) at a cost of Rs.2.22 crore. The dressing coat was unnecessary as the work was completed in all respects without interruption before the traffic was allowed on the road. This resulted in wasteful expenditure of Rs.2.22 crore. The SE, PWD Circle, Bellary and

[18] Excluding expenditure incurred on maintenance items like profile correction

EE, Bellary Division in reply contended (July 2006) that this item of work was necessary for consolidating the pavement before it was laid with wearing course. The reply is not tenable as the 'base' and 'sub-base' layers of pavement are, as per IRC specifications, thoroughly consolidated by power rollers before laying wearing course.

3.3.8.6 Avoidable expenditure on widening of road

Irregular diversion of savings for widening a single-lane road beyond 8.50 metres of width resulted in avoidable expenditure of Rs.36.11 lakh

The work of improvement to the roads from Bevinakoppe to Shambhuvanahally and from Melkote to Shravanabelagola in Mandya was completed (February 2006) at a cost of Rs.4.14 crore as against the tendered cost of Rs.4.58 crore. The saving of Rs.44 lakh was due to reduction in scope of work during execution.

Review of records of Mandya Division revealed that Rs.36.11 lakh out of these savings was diverted (February 2004) on the widening of these roads from the existing width of 8.50 metres to 17 metres which was beyond the IRC requirement of nine metres for single-lane roads. The widening works were executed as per the instructions of the SE, PW Circle, Mysore and approved by CE. The Department has not replied to the avoidable expenditure of Rs.36.11 lakh.

3.3.8.7 Non-utilisation of excavated earth for embankment/shoulders

Earth for use in embankment/ shoulders was obtained from burrow areas incurring an expenditure of Rs.4.14 crore without ascertaining the suitability of the excavated earth available at the site

MORTH specification stipulates that material is to be obtained from approved sources, with preference given to available earth. The contractors are required to segregate the soil based on suitability. Earth is to be brought from borrow areas only if the available material is found unsuitable and not conforming to standards after undertaking Quality Control (QC) tests.

Out of 64 works (2002-06) test-checked in four divisions[19], 1.89 lakh cum of available/excavated earth in respect of 24 works only was utilised for formation of embankment/ shoulders. In the remaining 40 works, no part of 4.56 lakh cum of earth available was utilised for formation of embankments and shoulders. Instead, earth (2.67 lakh cum) was obtained from burrow areas by incurring an expenditure of Rs.4.14 crore on its excavation and transportation. In none of these cases, QC tests were conducted to assess the suitability of available earth. In reply (June/July 2006), the SE, PW Circle, Bangalore and EEs contended that the earth excavated at the work sites was not suitable for embankment. The reply was not substantiated by any QC test reports proving unsuitability of the excavated/available earth.

[19] Bellary, Mandya, Raichur and Tumkur

3.3.8.8 Payment at higher rates due to adoption of NH Schedule of Rates

Comment [a1]: AE No 25,39,85,120 of RP I, AI 12 of Tumkur, AE 19 of Bangalore, AE 25 of Dharwad, AE 35 of Bellary, AE 7 of SE, Bellary

Adoption of the Schedule of Rates of NH in the execution of CRF works resulted in an avoidable extra expenditure of Rs.3.17 crore

Improvement works of MDRs funded from Central Road Fund (CRF) are executed after obtaining administrative approval from MORTH who reimburse the expenditure incurred on such works. The execution of MDR works is generally done on the basis of PWD sanctioned Schedule of Rates (SR). MORTH have not specified any condition that the CRF works be executed on the basis of SR applicable for National Highways funded by MORTH.

Test-check of 39 CRF works executed in eight divisions during the period from 2002-03 to 2005-06 revealed that estimates of these works had been based on rates of SR of National Highways though the rates for similar items of work were available in PWD SR. This resulted in execution of MDR works at higher rates of National Highway specifications instead of at lower rates of PWD specifications. The improvement and strengthening works of MDRs in other contiguous stretches funded from State budget are executed according to State PWD specifications. Adoption of NH SR instead of PWD SR in CRF works resulted in extra expenditure of Rs.3.17 crore.

3.3.9 Maintenance of MDRs

3.3.9.1 Inadequate funding for maintenance works

Unrealistic budget proposals for maintenance grants coupled with inadequate provision of funds resulted in inadequate maintenance

As per norms fixed (2001) by MORTH the cost of maintenance and repair of MDRs per kilometre is Rs.1,40,275 for single-lane roads, Rs.1,68,330 for intermediate-lane roads and Rs.2,24,441 for two-lane roads. Details of requirement of funds as per MORTH norms, budget proposals made and grants actually provided during the period from 2002-03 to 2005-06 are as follows:

Table 3: Requirement of funds and grants actually provided

(Rupees in crore)

Year	Total length in km[20]	Requirement as per norms	Budget proposal	Budget allocation	Expenditure incurred	Shortfall in allocation to requirement as per norms
2002-03	28,247	404.40	95.67	106.88	98.15	297.52
2003-04	28,247	407.33	122.05	152.95	103.17	254.38
2004-05	38,247	542.59	404.28	347.18	229.77	195.41
2005-06	30,975	440.59	690.10	267.14	314.46	173.45
Total	-	**1,794.91**	**1,312.10**	**874.15**	**745.55**	**920.76**

Records revealed that the budget proposals were not in conformity with the norms for maintenance and repairs and the shortfall in proposals *vis-à-vis* norms ranged from Rs.308.73 crore in 2002-03 to Rs.138.31 crore in 2004-05.

[20] Position as at the beginning of each year

Further, the shortfall in allocation compared to the norms ranged between 36 and 73.6 *per cent* and funds released were even lesser than the budgetary allocations, except during 2005-06, adversely affecting the maintenance and repair works of MDRs. The reasons for unrealistic budgetary proposal, allocations and releases were not on record.

Rs.9.13 crore were diverted from MDR funds for execution of ineligible works

It was further observed in two divisions (Mandya and Hassan) that Maintenance and Repair funds were diverted for roads within town/ municipal limits and execution of ineligible works *viz.*, construction of Size Stone Masonry Box Drains (Rs.6.23 crore), improvements to roads (Rs.1.42 crore), erection of high-mast street lights (Rs.0.88 crore), formation of circles and statues (Rs.0.40 crore), improvements to bus stand/helipads/temples and payment of land compensation (Rs.0.20 crore).

3.3.9.2 Execution of maintenance and repair works under piecework system

Execution of maintenance works under piecework system was not only irregular but also resulted in non-enforcement of quality control checks and defect liability clauses for effective maintenance

The directions of Government for execution of maintenance and repair works stipulated that works of emergent nature only shall be entrusted on piecework system and not more than two works shall be entrusted to the same agency at a time.

The works were split to avoid obtaining sanctions from higher authorities and got executed through piecework contractors without inviting tenders thereby depriving the benefit of competitive rates. The works executed through piecework contractors were not subjected to quality control checks and defect liability clauses unlike tendered contracts. In the eight test-checked divisions, all the 13,104 works sanctioned for Rs.203.20 crore were executed on piecework basis, of which 505 works (expenditure: Rs.47.48 crore) were executed by splitting them into 3,630 works and entrusted to contractors allotting 3 to 15 works at a time.

In absence of road-wise inventory and execution of repair and maintenance works in different chainages by splitting them, the Department had no control mechanism to ensure that execution of works are planned according to availability of funds and quality control checks exercised.

3.3.10 Quality control

3.3.10.1 Non-compliance with norms in conducting Quality Control tests

Quality of works executed was not ensured as the quality control tests were either not carried out or were short than that prescribed

MORTH Specification (IV Revision) prescribed the following tests for embankment works:

- One test of ‘moisture content prior to Compaction’ for every 250 cum of quantity of work executed.
- One test of ‘Degree of Compaction’ for every 1,000 sqm of area of each layer compacted.

Tests for moisture content prior to compaction were not conducted for 4.98 lakh cum of embankment work executed in PW Circle, Bellary {under CE, C&B (North Zone)}, against 1,993 tests required as per norms. Similarly, against 1,661 tests required as per norms for 16.60 lakh sqm of compacted quantity of earth, no tests were conducted. 'Stripping Value Tests' to assess the degree of adhesiveness of bitumen to metal were also not conducted. Consequently, quality in execution of embankment works was not ensured.

The position of quantities of works executed, the number of tests to be carried out and actually carried out in five divisions[21] of north zone is given in **Appendix 3.5.** The shortfall in conducting QC tests against norms in respect of gravel sub-base, Water Bound Macadam and bituminous layers ranged from 31 to 98 *per cent.* Thus, the required level of quality control tests for different stages of pavement works were not carried out to ensure execution of works according to prescribed standards.

3.3.10.2 Nugatory expenditure on MDR works

Expenditure of Rs.three crore incurred on improvement of MDRs proved largely ineffective

The Department put to use 'Road Measurement Data Acquisition System (ROMDAS)' for conducting Road Condition Survey (RCS), which *inter alia* included conducting Roughness measurements (RM)[22] computed on the basis of 'International Roughness Index (IRI)'[23] values.

As per directives of MORTH, the status/condition of roads based on RM/IRI was as follows:

Table 4 : Category of roads on IRI values

IRI values	Category
Less than six	Good – Fair
Greater than six but less than eight	Fair – Poor
Greater than eight but less than ten	Poor – Bad
Greater than 10	Bad – very poor

The IRI values obtained (2003) in respect of 100.30 km of MDRs in Bellary and Bidar Divisions after carrying out improvement works between May 2001 and May 2002 at a cost of Rs.3 crore ranged from 6.14 to 12.33 for a length of 65.60 kms (**Appendix 3.6**). Thus, these stretches could be categorised as being in poor condition. Of these, eight roads (46.60 km) recorded very high IRI values within one year from the date of completion when the defect liability period of their contracts were in force. Occurrence of high IRI values within a short period of completion of improvement works indicated poor quality of execution which could not be detected and got rectified by contractors as QC tests were not done. Consequently, expenditure of Rs.three crore (worked on proportionate basis) incurred on improvement works over the stretch of 65.60 kms of MDRs was largely nugatory.

[21] Bellary Division of Bellary Circle and Belgaum, Bijapur, Chikkodi and Bagalkot divisions of Belgaum Circle
[22] It is the level of resistance offered by the riding surface to the smooth flow of traffic
[23] IRI is an indicator of the degree of the roughness of the riding surface

3.3.11 Conclusion

The development and maintenance of Major District Roads suffered due to inadequate release of funds, insufficient planning and non-prioritisation of works programme. Adoption of incorrect values while working out design parameters for executing individual works and slackness in carrying out quality control checks led to deficiencies resulting in wasteful, avoidable and unjustified expenditure. Maintenance works were executed under piecework system by splitting them thereby depriving the benefit of competitive rates and prevented application of quality control checks.

3.3.12 Recommendations

- Action should be taken to ensure that budget provisions are made according to availability of resources and works are carried out as per actual availability of funds to ensure that liabilities are not created at the end of a financial year.
- It needs to be ensured that RRDC and IDC collected under various revenue heads of account are transferred to MMGRAN in time and utilised.
- The works programme including that of maintenance works is planned and prioritised using the Road Information System which should be updated regularly.
- It should be ensured that estimates of individual works are prepared in accordance with IRC specifications using correct design parameters including traffic census data.
- Execution of maintenance works on piecework system basis needs to be stopped to avail the benefit of competitive bidding and for ensuring quality.
- Quality Control checks need to be carried out as per MORTH specifications and regularly monitored to ensure that works are executed in conformity with the prescribed standards and specifications.

3.3.13 The above points were referred to Government in September 2006; reply had not been received (October 2006).

URBAN DEVELOPMENT DEPARTMENT

3.4 Urban Water Supply Schemes

Highlights

The Karnataka Urban Water Supply and Drainage Board executes water supply and drainage schemes on behalf of urban local bodies (ULB) except in Bangalore city. Funding is mainly through grants from Government and loans from Government/financial institutions. Out of the 40 schemes taken up for execution during 2001-06, only 25 had been completed. While four works had not been commenced, work on 11 more had not been completed due to land disputes, delay in execution, etc. There were deficiencies in the project management and contract management resulting in avoidable extra expenditure of Rs.5.20 crore. Water supply charges of Rs.145.04 crore due from ULBs and consumers had not been collected by the Board.

Out of 40 schemes taken up during 2001-06 for execution, work on four had not been commenced and on 11 more due for completion between November 2003 and March 2006 had not been completed. The schemes were not completed due to land disputes, delay in obtaining clearance from the Irrigation Department and in execution by the contractors.

(Paragraph: 3.4.6.1)

Project management and contract management were deficient resulting in avoidable extra expenditure/liability, unfruitful expenditure and excess payments aggregating Rs.5.20 crore.

(Paragraphs: 3.4.6.2 to 3.4.6.4 & 3.4.7)

As of March 2006, water supply charges of Rs.145.04 crore were due from local bodies and consumers to the Board. Of this, Rs.104.70 crore related to 2000-01 and earlier years.

(Paragraph: 3.4.8)

Quality of water supplied was not tested and monitored by the Board.

(Paragraph: 3.4.9)

Non-release of full component of State Finance Commission grants by the Government for debt servicing led to diversion of plan funds, avoidable payment of penal interest of Rs.1.83 crore and non-availment of rebate of Rs.22 lakh on a HUDCO loan.

(Paragraph: 3.4.10.1)

3.4.1 Introduction

Urban Water Supply Schemes (UWSS) are implemented in the State (except Bangalore city) by the Karnataka Urban Water Supply and Drainage Board

(Board) constituted in October 1974 under the Karnataka Urban Water Supply and Drainage Board Act, 1973 (Act). These schemes are financed through grants from Central/State Governments and loans from Government/financial institutions. The Board is also responsible for providing technical guidance to the local bodies in the matter of operation and maintenance of the schemes.

3.4.2 Organisational set-up

The overall control of the Board's activities vests in the Government in Urban Development Department headed by the Principal Secretary. The management of the Board is vested with the Board of Directors, comprising 11 nominated official members, four non-Government members and headed by the Chairman. The Managing Director is the Chief Executive Officer who is assisted by two Chief Engineers, South (at Bangalore) and North (at Dharwad), the Secretary and the Chief Accounts Officer. At the field level, the operations are undertaken by the 16 Divisions headed by Executive Engineers and 49 sub-divisions headed by Assistant Executive Engineers.

3.4.3 Audit objectives

Audit objectives were to assess whether:

- the planning and execution of works were adequate;
- the economic and efficient execution of works was ensured;
- the operation and maintenance of water supply schemes were adequate; and
- the quality of water supplied was monitored.

3.4.4 Audit criteria

For the purpose of the review, the following was considered as criteria:

- The Act, the scheme guidelines, the guidelines of Central Public Health Engineering and Environmental Organisation (CPHEEO).
- The Budget Manual and the Karnataka Public Works Departmental Code.
- Tender agreements.

3.4.5 Scope and methodology of audit

Audit of the Board was conducted under Section 19(3) of the Comptroller and Auditor General's (Duties, Powers & Conditions of Service) Act, 1971. During 2001-06, the Board undertook 40 UWSS costing Rs.257.73 crore. Audit reviewed (January to June 2006) 15 schemes costing Rs.163.92 crore (63.60 *per cent*) selected through simple random sampling method by test-check of records in six out of 16 divisions. Of the 15 schemes selected, 12 had been commissioned and three were on going. Besides, operation and maintenance of 17 schemes maintained by the Board were also reviewed.

The audit methodology involved examination of documents relating to finances, estimation, design and drawings, agreements, memoranda of understanding (MoU) and work bills at the Board office as well as at the divisional and sub-divisional offices, site visits, discussion with the functionaries and issue of audit enquiries. Entry conference was held with the Government/Board in March 2006 represented by the Secretary to Urban Development Department, Managing Director of the Board and its other subordinate officers during which audit objectives, criteria and methodology were discussed. The audit findings were communicated to the Board and the Government and also discussed with the Head of the Department/Board in the exit conference held in September 2006.

Audit findings

3.4.6 Project management

Project management in respect of UWSS comprised identification of assured and potable sources (both surface and sub-surface sources) of drinking water, drawing up of schemes, execution and completion by the targeted dates.

3.4.6.1 Status of works

The Board took up 40 new works under UWSS for execution at a cost of Rs.257.73 crore during 2001-06, of which as of March 2006, 25 were commissioned, 11 were ongoing and the remaining four were not commenced as detailed in the table below:

Table 1 : Status of works

Year	Opening balance	Schemes taken up during the year	Total	Completed during the year	Balance of works ongoing/yet to be commenced
2001-02	-	20	20	-Nil-	20
2002-03	20	05	25	10	15
2003-04	15	02	17	06	11
2004-05	11	09	20	06	14
2005-06	14	04	18	03	15

Though, the 11 ongoing works were scheduled for completion between November 2003 and March 2006, these were held up due to land disputes, delay in clearance from Irrigation Department and delay in execution by the contractors.

3.4.6.2 Works undertaken without ensuring availability of funds

Failure of the Board to include a work in the budget estimates for 2002-03 resulted in avoidable extra liability of Rs.1.82 crore

The work of augmentation of water supply scheme to Doddaballapur (estimated cost: Rs.22.50 crore) was approved by the Government in June 2002. The Board did not include this work in the budget estimates for 2002-03 though there was scope for including the same under category "works awaiting Government's approval". However, the Board tendered Package-I of the scheme costing Rs.9.58 crore on the ground of immediate necessity to provide drinking water to the town. Tenders were called for in July 2002 and the lowest tender of a contractor for Rs.9.93 crore was accepted. But, letter of acceptance was issued only in August 2003 after including this work in the budget estimates for 2003-04. Due to delayed issue of acceptance, the contractor demanded 15 *per cent* increase over tendered rates. The Board rejected the tender and awarded (January 2004) the work to another contractor through fresh tender process for Rs.11.75 crore. This resulted in an avoidable extra liability of Rs.1.82 crore to the Board.

3.4.6.3 Unfruitful expenditure on a work due to injudicious decision

Injudicious decision of the Board resulted in unfruitful expenditure of Rs.92.74 lakh and avoidable commited liability of Rs.74.64 lakh

With a view to increase the water supply to Gulbarga city, Government approved (October 2000) the work of remodelling the existing water supply to the city under the UWSS. This remodelling work included replacement of 900 mm dia pre-stressed concrete (PSC) pipes by 914 mm mild steel (MS) pipes for a length of three kilometers (km) from Saradgi headworks at a cost of Rs.1.94 crore as frequent leakages and bursts of PSC pipes were observed. The Board, however, did not take up this work for immediate execution. Notice inviting bids was issued only in April 2003. The work was awarded in September 2003 to contractor 'A' at the tendered cost of Rs.2.05 crore and the site handed over in November 2003. Meanwhile, in April/May 2003, a World Bank team identified Gulbarga city for providing assistance for improving its bulk water supply. Based on its suggestion, in July 2003, the Board furnished to Government a project report for this work (estimated cost: Rs.45.45 crore). This work included laying of 1,118 mm dia MS pipes even in the three km stretch to be covered by the former remodelling work. This World Bank aided project was approved by Government (July 2004), tenders called for in July 2004 and the work commenced in June 2005.

The contractor 'A' who was required to complete the remodelling work by March 2004 completed only supply of pipes by the end of April 2004. Against the measured quantity of 2,972.48 metres (cost: Rs.104.53 lakh), a part payment of Rs.92.74 lakh was made in July 2004 under the terms of contract. The Board, though fully aware of the impending World Bank Aided Project persisted with the remodelling work till November 2004 by which time the contractor had carried out earthwork excavation and laid 914 mm MS pipes for 1.55 km. In June 2006, the Board decided to remove these pipes and use them on another water supply scheme[Φ] under execution by the Board through contractor 'B'.

[Φ] Water supply scheme to Humnabad-Chittaguppa towns and enroute villages

Thus, the Board injudiciously commenced the work of laying of 914 mm MS pipes under the remodelling of water supply scheme ahead of the World Bank aided project and continued it till November 2004. This rendered the expenditure of Rs.92.74 lakh unfruitful for over two years. Had the Board stopped execution of the remodelling work at the right time in July 2003 itself, the Board could have avoided the liability incurred towards laying of pipes for a length of 1.55 km (tendered cost: Rs.39.82 lakh[Θ]) and expenditure to be incurred for removal of the same (negotiated cost: Rs.34.82 lakh[◈]).

3.4.6.4 Allotment of work without obtaining forest clearance

Work taken up without obtaining clearance of land from Forest Department

The work of Comprehensive Water Supply Scheme to Humnabad – Chitaguppa town estimated to cost Rs.19.04 crore was approved by Government in February 2004 stipulating that the work be completed by February 2006. The Board received Government grant of Rs.9.60 crore and bank loan of Rs.7.12 crore for the work during June 2005 and entrusted a portion of work (estimated cost: Rs.5.95 crore) to a contractor in July 2005 for completion by February 2007. The contractor had not commenced the work so far (June 2006), *i.e.* even one year after entrustment. The delay was mainly due to the Board taking up the work without clearance of Forest Department. Besides the delay, the Board had incurred interest outgo of Rs.41.65 lakh (June 2005 to March 2006) apart from locking up of Government grant of Rs.9.60 crore.

3.4.6.5 Works executed without sanction to the revised estimates

Government's revised sanction was not obtained

Of the 15 test-checked schemes, in respect of three schemes, the expenditure had exceeded the sanctioned estimates by 10 to 306 *per cent* as detailed below:

Table 2: Revised estimates not sanctioned

(Rupees in crore)

Sl. No	Name of work	Original estimated cost sanctioned/ date	Revised estimated cost submitted to Government/date	Actual expenditure/ date	Percentage of excess expenditure	Remarks
1.	UWSS to Hubli-Dharwad	44.48 August 2000	63.84 November 2002	60.10 March 2006	35	The work is not yet complete
2.	UWSS to Ranebennur and Byadgi	4.50 March 1990	19.42 November 2004	18.28 October 2005	306	The work was completed in February 2006
3.	Augmented Water Supply Scheme to Talikot	9.42 May 1999	11.08 August 2005	10.40 February 2006	10	The work was completed in December 2005

[Θ] Earthwork excavation, lowering, laying, joining, murrum bedding, *etc.* of 914 mm MS pipes – Rs.39.82 lakh

[◈] Earthwork excavation, removal, lifting, *etc.* of 914 mm MS pipes – Rs.34.82 lakh

As per Codal provisions, when the expenditure exceeded five *per cent*, revised sanction of Government had to be obtained. The same was yet to be received though the Board had sent the revised estimates to Government between November 2002 and August 2005. In the absence of sanction to revised estimates in the above cases, the excess expenditure of Rs.30.38 crore incurred remained unauthorised.

3.4.7 Contract management

A review of contracts and the related works records pertaining to test-checked UWS schemes revealed the following:

3.4.7.1 Excess payment and non-utilisation of excavated soil

Incorrect regulation of claim for embankment work resulted in excess payment of Rs.28.63 lakh to contractor. Board did not ascertain suitability of excavated earth for embankment before incurring expenditure of Rs.6.40 crore

Technical specifications stipulated that material for embankment were to be obtained from approved sources, preference being given to available earth. The contractors were required to seggregate the excavated soil based on its suitability. Borrow areas were required to be resorted to only if the available earth was found unsuitable, *i.e.* not conforming to standards as per Quality Control (QC) tests. Out of 15 works test-checked, in three works of two[◈] divisions it was noticed from the bills paid that no part of 5.64 lakh cubic metres of excavated earth was utilised for formation of embankments. In the measurement books (MB), earth was shown as having been obtained from borrow areas incurring expenditure of Rs.6.40 crore. No quality control tests were conducted to ascertain the suitability of excavated/available earth. In another work executed in Bijapur division, 72,000 cubic metres (45 *per cent*) of excavated earth was recorded in the MB as used on the work. Even so, the claim of the contractor of having used material from borrow areas (August 2001) was accepted and the bill passed for payment. This resulted in excess payment of Rs.28.63 lakh.

3.4.7.2 Excess payment on account of additional lead charges

Excess payment of Rs.31 lakh to a contractor

In respect of augmented water supply scheme to Talikot, for items of earth work, additional lead charges of Rs.16.60 per cum was provided in the data rate for carrying the excavated earth up to the dumping point to be specified by the Board at a distance of one kilometre from the site of the work. However, as no dumping point was identified for disposing of the excavated earth, the contractor dumped it near the work spot itself. The contractor was, however, paid (August 2001) additional lead charges of Rs.31 lakh[♣] which were not due to him.

[◈] Bellary and Raichur

[♣] 1,69,863 cum x Rs.16.60 + 10 *per cent* tender premium thereon = Rs.31 lakh

3.4.7.3 Avoidable extra expenditure due to defective tender document

Defective Bill of Quantities prepared by the Board led to avoidable extra expenditure of Rs.68.31 lakh

The work of "Emergency improvements in water supply scheme to Hubli-Dharwad" was approved by Government in August 2000. In the estimate prepared for this work, for the item relating to "manufacturing, providing, laying, jointing, *etc.*, of 965 mm dia and 7.92 mm thickness Mild Steel pipes", as the Board's Schedule of Rates (SR) - 2002-03 had not provided the rate, the Board worked out a data rate of Rs.5,806.35 per metre and adopted this rate for the entire quantity of 26,590 metre required for the work as was prescribed in the Board's SR for similar items. However, while calling for tenders, in the Bill of Quantities (BOQ), the Board exhibited this item as two different items splitting up the total quantity into 16,000 metre and 10,590 metre respectively thereby providing an undue opportunity to the tenderers to quote two different rates for this item. Accordingly, the lowest tenderer quoted two rates *i.e.* Rs.6,425 per metre and Rs.7,070 per metre respectively for this item and the Board accepted the same without negotiating the rate discrepancy with the contractor. Hence, defective BOQ prepared by the Board led to an avoidable extra expenditure of Rs.68.31 lakh[α].

3.4.8 Operation and maintenance of water supply schemes

As the Board executes water supply schemes on behalf of local bodies, the Board after completion and commissioning of these schemes transfers the assets to the concerned local body for operation and maintenance in terms of the Act and instructions issued (November 1996) by Government. The following points were noticed.

Five water supply schemes handed over to ULBs were not maintained/ inadequately maintained

3.4.8.1 The local bodies to whom five[∂] schemes were handed over during 2001-05 expressed their inability to maintain them owing to lack of technical staff and resources. Though provision existed in the Act for the Government to entrust the operation and maintenance of such schemes to the Board itself, no action had been taken so far to entrust the schemes to the Board. Non-maintenance/inadequate maintenance would expose these to the risk of being rendered non-functional and wasteful.

3.4.8.2 The Board has been vested with the responsibility of operation and maintenance of 12[ψ] water supply schemes up to bulk supply point and five[ω] schemes up to consumer point. Government directed (November 1996) the ULBs and the Board to conclude a MoU regarding the issues relating to installation of water meters at bulk supply points and remittance of water charges to the Board before the 15 of each month and to enable the Board to disconnect the water supply in case of default in remittance of water charges

[α] Rs.7,070 – Rs.6,425 = Rs.645 x 10,590 metre = Rs.68.31 lakh

[∂] Chitradurga, Chamarajnagar, Gundlupet, Gadag-Betageri and Shiggaon-Savanur

[ψ] Arasikere, Belgaum, Bhalki, Bidar, Bellary, Gadag-Betageri, Gulbarga, Humnabad, Karwar, Mundargi, Tumkur and Tiptur

[ω] Bethamangala, Hubli-Dharwad, Kushalnagar, Mandya, Ramanagaram-Channapatna by the ULBs within the specified date. However, MoU had not been entered into by the Board with the concerned ULBs (June 2006).

Bulk water supply charges of Rs.117.08 crore remained un-recovered from the ULBs

The Demand, Collection and Balance Register maintained by the Board for bulk water supply revealed that water supply charges of Rs.117.08 crore including interest were due from ULBs in respect of 10 out of 12 water supply schemes as of March 2006 as detailed below:

Table 3: Bulk water supply charges

(Rupees in crore)

Year	Opening balance	Demand	Interest	Total	Collection	Closing balance
2001-02	84.15	12.04	9.80	105.99	2.73	103.26
2002-03	103.26	16.98	14.24	134.48	68.06	66.42
2003-04	66.42	16.87	9.38	92.67	18.81	73.86
2004-05	73.86	22.60	10.93	107.39	22.03	85.36
2005-06	85.36	28.94	14.75	129.05	11.97	117.08

Besides, the Board had not raised demand in respect of Tumkur and Tiptur schemes, which were commissioned in 1998; reasons for the same were not on record.

Water supply charges of Rs.27.96 crore were yet to be recovered from the consumers

3.4.8.3 Even in respect of five water supply schemes maintained upto consumer point by the Board for which the Board collects revenue directly from the consumers, the collection was poor and an amount of Rs.27.96 crore was outstanding as of March 2006, as indicated below:

Table 4: Water supply charges of consumers

(Rupees in crore)

Year	Opening balance	Demand	Interest	Total	Collection	Closing balance
2001-02	20.55	0.91	2.62	24.08	0.67	23.41
2002-03	23.41	1.14	2.98	27.53	7.76	19.77
2003-04	19.77	1.92	2.53	24.22	2.75	21.47
2004-05	21.47	2.18	2.86	26.51	1.53	24.98
2005-06	24.98	2.63	1.68	29.29	1.33	27.96

Further, it was noticed that in two[Ψ] out of these five water supply schemes the maintenance of which was transferred to the Board by Government in 2003-04, no revenue had been collected by the Board (March 2006) though expenditure of Rs.25.36 crore had been incurred on their maintenance during the same period.

[Ψ] Hubli-Dharwad and Ramanagaram-Channapatna water supply schemes

3.4.9 Quality control and monitoring

The Board failed to monitor water supply schemes handed over to ULBs to ensure supply of required quality of water to the public

The CPHEEO manual prescribes that laboratories with adequate facilities and manned by qualified personnel are to be established for conducting inspection and evaluation of the suitability of water supplied from the scheme for public use and also for controlling the water treatment processes accordingly. Complete records of bacteriological and chemical analysis of water from source to the consumer point were to be maintained and reviewed. While in respect of schemes covering population up to one lakh, one sample per month was to be taken per population of 5,000, in respect of other schemes, one sample per month was to be taken per population of 10,000.

Out of 12 commissioned water supply schemes test-checked, laboratories established in respect of three[ϕ] schemes were non-functional since their inception. Of the remaining nine schemes, only in one scheme (UWSS to Hubli-Dharwad) the laboratory was functioning. In the other eight schemes, though the laboratories were functional, no records were kept indicating periodical collection of samples and their test results. The water supplied to Gajendragad town from a borewell commissioned in 2002 at a cost of Rs.80.48 lakh, was not found (November 2003) potable by the town municipal council (TMC). Though the TMC had taken up the matter with the Board, action taken in the matter was not made known.

Though, the operation and maintenance of these schemes had been transferred to the concerned ULBs, the Board which was responsible for providing technical guidance and ensuring supply of safe potable water to the public, had not ensured conduct of proper quality control tests.

3.4.10 Other points

3.4.10.1 Avoidable payment of penal interest

Non-release of SFC grants in full led to diversion of plan funds and avoidable payment of penal interest of Rs.1.83 crore

The State Government releases State Finance Commission (SFC) grants annually to the Board for debt servicing of loans borrowed from financial institutions. During 2001-06, the Government short released budgeted SFC grant by Rs.51.51 crore. Consequently, the Board diverted Rs.41.94 crore from plan funds for debt servicing leaving a balance of Rs.9.57 crore unserviced. Also, non-servicing of balance debt according to prescribed schedule led to avoidable payment (between January 2001 and March 2005) of penal interest of Rs.1.83 crore to LIC/Banks and non-availment of rebate of Rs.22 lakh on loan borrowed from HUDCO.

[ϕ] Water supply scheme to Gadag – Betageri commissioned in 2000-01
Water supply scheme to KR Nagar commissioned in February 2003
Water supply scheme to Talikot commissioned in October 2003

3.4.10.2 Non-recovery of interest on deposit works

Interest dues on deposit contribution works was not computed and claimed from ULBs

During the period 2001-06, the Board also executed Deposit Contribution works on behalf of ULBs. Under the Codal provisions, the estimated cost of such works were to be deposited in advance with the Board by the concerned ULBs. For any excess expenditure incurred over such deposits, the Board was to charge interest at 12 *per cent* per annum. It was noticed from the records of the Board that in nine divisions[∝] involving 25 works, excess expenditure of Rs.3.13 crore had been incurred up to 2004-05. The Board, however, did not obtain full details such as period during which excess expenditure was incurred and principal amount recovered from time to time and also did not compute accrued interest on such excess expenditure for claiming it from ULBs. Interest recoverable on this amount for one year alone worked out to Rs.37.58 lakh.

3.4.11 Conclusion

Project management was deficient as there were instances of works being started without availability of funds and without forest clearance. Contract management was also not satisfactory as there were lapses in preparation of tender documents and regulating payments to contractors strictly according to the terms of contract. Operation and maintenance of schemes was not satisfactory as the Board left substantial amounts of water charges unrecovered from ULBs/consumers in respect of schemes maintained by it. Board did not ensure quality of water supplied to the consumers.

3.4.12 Recommendations

- Tendering process should be started only after ensuring availability of funds and sites for the schemes.
- The tender documents should be prepared carefully so as to ensure that the rate adopted for items of work are accurate and strictly conforming to the norms specified in the Board’s schedule of rates.
- Strict compliance by the contractors with the terms of contract should be ensured by duly recording measurements in the MB and contractors’ bills admitted for payment only after referring to the MB.
- The Board needs to conclude MoU with ULBs concerned to ensure prompt recoveries of water supply charges.
- Board should regularly monitor quality of water supplied to consumers and place suitable controls to ensure the same.

3.4.13 The above points were referred to Government in September 2006; reply had not been received (October 2006).

[∝] Bangalore, Belgaum, Bellary, Bijapur, Gulbarga, Hubli-Dharwad, Mandya, Raichur and Shimoga

EDUCATION DEPARTMENT

3.5 Sarva Shiksha Abhiyan

Highlights

Sarva Shiksha Abhiyan aims at providing universal elementary education in a mission mode, by providing useful and relevant education for all children in the age group of 6 to 14 years by 2010. The primary objective was to have all children in schools/alternative schools, by 2005. The main objective of the scheme was not achieved due to non-absorption by implementing agencies of even the reduced level of funding by Central and State Governments. Interventions by project authorities were not effective resulting in non-realisation of the norms set.

Implementation of the scheme was faulty, as the implementing agencies could not absorb even the reduced level of funds released with delays ranging from three to seven months.

(Paragraph: 3.5.6)

Planning was deficient as there were delays in submission of Annual Plans by the State Government. District Elementary Education Plans did not contain important components of the programme, detailed strategy and action plans to fill up gaps identified.

(Paragraph: 3.5.7)

The project aim of having all children in schools by 2005 was not accomplished as 1.60 lakh children were still out of schools, as of March 2005. Trends in dropout rate indicated that the objective of universal retention by 2010 was unlikely to be achieved.

(Paragraphs: 3.5.8.1 & 3.5.8.2)

Children in 2,347 habitations out of 85,543 did not have access to primary schools; similarly, children in 2,275 habitations did not have access to upper primary schools according to the norms. As against 2,087 new schools sanctioned during 2001-05, only 1,541 schools were opened. Basic infrastructure needs were available only in 41 *per cent* of the 43,333 Government schools.

(Paragraphs: 3.5.8.3 & 3.5.8.5)

About four lakh focus group children in aided schools were denied the facility of free textbooks and there were delays in distribution of textbooks to children in Government schools.

(Paragraph: 3.5.8.7)

Only 13 *per cent* of the children with special needs received assistance under Sarva Shiksha Abhiyan during 2004-05 and less than one *per cent* of upper primary schools had access to computer education, as of March 2005.

(Paragraphs: 3.5.8.9 & 3.5.8.10)

The extent of involvement of Non-Governmental Organisations was not as envisaged while monitoring was inadequate.

(Paragraphs: 3.5.8.11 & 3.5.9)

3.5.1 Introduction

The Government of India (GOI) launched (January 2001) Sarva Shiksha Abhiyan (SSA) in all the 27 districts of the State, mainly to provide relevant and quality elementary education to all children in the age group of 6 to 14 years, by 2010. The SSA was a partnership among the Central, State and Local Governments, with the involvement of the community. The objectives of SSA are to:

- have all children in schools/Education Guarantee Scheme (EGS) Centres/ Alternative Schools/Back-to-School Camps by 2003 (modified to 2005 in August 2005);
- ensure that all children complete five years of primary schooling by 2007 (modified to 2010 in August 2005);
- ensure that all children complete eight years of elementary schooling by 2010 (deleted in August 2005);
- bridge gender and social category gaps at primary stage by 2007 and at elementary education level by 2010; and
- achieve universal retention by 2010.

To achieve these objectives, SSA contemplated norms for 21 areas of interventions like teacher, school, classrooms, textbooks, training, research, *etc*.

3.5.2 Organisational set-up

SSA in the State is implemented through "Sarva Shiksha Abhiyan Samithi-Karnataka" (SSASK), a Society established in January 2001. The programme is administered by an Executive Committee (EC) chaired by the Principal Secretary (Primary and Secondary Education) and Secretaries of Departments as members. The State Project Director (SPD) is the Member Secretary of the Committee and is also responsible for operationalising and implementing the scheme in the State. At district level, the Deputy Director of Public Instruction (Administration) implements the scheme as the District Project Officer (DPO) along with the district level samithi, district implementation committee and district resource group. At block level, the Block Education Officer {Block Resource Centre (BRC)} implements the scheme. At village/school level, the School Development and Monitoring Committee is responsible for implementation.

3.5.3 Audit objectives

The main objectives of audit were to examine:

- the efficacy of planning of various components of the programme;
- the adequacy of funds given for implementation and whether the utilisation of funds was according to the approved plan;
- whether major interventions were carried out in accordance with the norms prescribed such as the Teacher-Student Ratio (TSR), coverage of out-of-school children and dropout rate;
- the adequacy of infrastructural facilities;
- involvement of Non-Governmental Organisations (NGOs); and
- the efficacy of the mechanism for periodic review and monitoring.

3.5.4 Audit criteria

For the purpose of examination, Audit considered the following as audit criteria, besides attempting to match the commitment of SSA to provide relevant and quality education to target group of children, with the ultimate goal:

- norms set in Manual of Planning and Appraisal of SSA;
- framework for implementation; and
- instructions issued from time to time.

3.5.5 Scope and methodology of audit

Budgeted funds were not released and even the reduced releases were not absorbed. Besides, there were instances of excess expenditure/non-utilisation/diversion of funds

Audit reviewed (June to August 2005) the implementation of SSA by undertaking a test-check of records relating to the period 2001-05 in the offices of the SPD, the DPO of six✱ districts/18* blocks and 94 schools and Gram Panchayats associated with such selected schools. Samples for test-check were selected through a multi-stage stratified sampling method. Out of total expenditure of Rs.590.59 crore in the State, expenditure of Rs.110.47 crore has been test-checked in six selected districts.

Assessment of SSA was also undertaken by Social and Rural Research Institute (SRI), a unit of IMRB International during December 2005 – February 2006. A summary of its findings is given as **Appendix 3.7.**

Audit communicated (June 2005) the scope of audit, objective, methodology, criteria, *etc*., in an entry conference with the SPD. An exit conference was also held (October 2005) to discuss the findings. The findings detailed in succeeding paragraphs take into account the response of programme implementing agencies, whose cooperation during the review is

✱ Bangalore (Urban), Belgaum, Bellary, Chitradurga, Hassan and Kolar

* Alur, Bangalore (South) Range 3, Belgaum City, Bellary (East), Bellary (West), Chintamani, Chitradurga, Hassan, Hiriyur, Holenarsipura, Hosadurga, Kolar, K.R.Puram, Malur, Raibag, Sandur, Savadatti and Yelahanka

acknowledged. The Government furnished replies to the review in November 2005 and these were duly taken into account.

Audit findings

3.5.6 Finance and expenditure

The funding pattern of SSA was aligned with the Five-Year Plans. The funding was to be shared between the Central and State Governments in the ratio of 85:15 during Ninth Five Year Plan (1997-2002), 75:25 during Tenth Five Year Plan (2002-07) and 50:50 thereafter.

The details of budget approved by the Project Approval Board (PAB), actual releases to the SSASK, expenditure on SSA and the closing balances available with the SPD and the district level agencies during 2001-05 were as follows:

Table 1: Details of financial outlay

(Rupees in crore)

Year	Budget approved			Actual releases			Expen-diture	Closing balance
	Central Government	State Government	Total	Central Government	State Government	Total		
2001-02	55.32	9.76	65.08	50.23	10.50	60.73	46.88	13.85
2002-03	78.49	26.16	104.65	78.49	15.12	93.61	57.17	50.29
2003-04	236.01	78.67	314.68	84.74	12.59	97.33	141.98	5.64
2004-05	326.49	108.83	435.32	262.80	106.50	369.30	344.56	30.38
Total	**696.31**	**223.42**	**919.73**	**476.26**	**144.71**	**620.97**	**590.59**	

Source: Reports of State Project Director to GOI

It would, thus, be seen that there was short release of funds of Rs.298.76 crore by the Governments (Central Government: Rs.220.05 crore, State Government: Rs.78.71 crore) for programme implementation.

The shortfall in releases worked out to 32 *per cent* compared to the budget approved. The Government replied (November 2005) that there were short releases in order to regulate funds for all schemes and also depending on ways and means. The details of unspent balances of wound up schemes in the elementary education sector, which were to be carried over to SSA, were not available with the SPD.

The reduced releases were also marked by delays ranging from three to seven months at the Central Government level as indicated below:

Table 2: Delay in releases

Year	Amount of release (Rupees in crore)	Due for release	Actual release	Delay
2001-02	25.59	April 2001	December 2001	Seven months
2002-03	39.24	April 2002	November 2002	Six months
2003-04	84.39	April 2003	August 2003	Three months
2004-05	124.56	April 2004	September 2004	Four months

The Central Government released funds in two lumpsum instalments based on the allocation without specifying component-wise details. The allocations for key components like establishment of EGS Centres, provision for disabled children, *etc*., were not fully utilised and the shortfall in utilisation ranged from 50 to 100 *per cent* during 2001-04 **(Appendix 3.8).** The GOI adjusted during 2003-05, Rs.70.98 crore[β] remaining unutilised with implementing agencies from the funds earmarked for subsequent years, resulting in loss of Central assistance.

Test-check disclosed the following instances of significant non-utilisation and diversion of funds and excess expenditure.

Table 3: Details of non-utilisation/diversion of funds and excess expenditure

Sl. No.	Components/ Activities	Particulars of diversion/ Under utilisation/Non-utilisation	Reply of the State Government	Audit observations
1.	Pre-project activities	Rupees 1.28 crore allotted during 2000-02 by GOI was returned unutilised.	The balance amount was returned to SPD after undertaking all activities and without compromising on the required activities.	Pre-project activities were not undertaken fully in the six test-checked districts.
2.	Establishment of EGS Centre and supply of learning aids, *etc*.	Rupees 1.11 crore released during 2003-04 to Kolar district was unutilised and returned to SPD.	The children were mainstreamed through other programmes and there was no necessity for opening EGS centres.	The SPD had sought allocation under EGS Centres for 2003-04 and 2005-06 also.
3.	Teachers and community training	Rupees 2.34 crore released during 2003-04 to Director of State Education Research and Training was diverted for educational radio broadcast under 'Research and Evaluation'.	Second instalment of grant during 2003-04 was not released for Annual Working Plan and Budget (AWP&B) activities.	Even though there were sufficient funds under 'Research and Evaluation' remaining unutilised, funds from this component were diverted.
4.	Payment to leave reserve teachers	Rupees one crore was released during 2003-04 to leave reserve teachers of Government who were not actually deployed on SSA.	Funds were utilised for payment to teachers of standard VIII in higher primary schools.	PAB had categorically rejected the proposal for payment to leave reserve teachers under SSA.
5.	Salary to Government teachers	One hundred and eighteen regular Government teachers in Bangalore (Urban) district were paid salary of Rs.43.66 lakh from SSA funds during 2001-03.	Fifty nine new schools were opened and 118 excess teachers were deployed for SSA.	Existing teachers were already drawing salary from Government funds and no teachers were appointed for SSA scheme.
6.	Reimbursement of sports fees, sports fund, *etc*.	Rupees 4.30 crore were released during 2003-04 towards reimbursement of sports fees, sports fund, library fees, *etc*., in violation of norms.	Government admitted having utilised the money for these activities during 2003-04 but discontinued from 2004-05.	Reasons for violation of norms were not communicated.
7.	Free textbooks for special focus group children	The SPD projected requirement at the maximum permissible limit during 2003-05 to the PAB for procurement of free textbooks for special focus group children.	The higher projection in the proposal to distribute free text books was to cover the children in the aided schools.	Absence of need-based assessment resulted in release of Rs.10.61 crore in excess of actual requirement to SPD. The proposal was not implemented during the period of review.

[β] 2002-03: Rs.41.62 crore and 2003-04: Rs.29.36 crore. The excess adjustment by GOI over the levels of closing balance indicated in Table-1 was under correspondence with the GOI

3.5.7 Planning process

The planning process suffered from a number of deficiencies

The SSA envisaged well-planned preparatory phase for a number of interventions for developing the project delivery and monitoring system. These included household surveys, community-based micro planning and school mapping, manpower assessment, training of community leaders, school level activities, setting up of Education Management Information System (EMIS), *etc.* GOI released an amount of Rs.3.95 crore for preparatory activities during 2000-02. Though the authorities conducted household surveys for identifying out-of-school children each year, the baseline study was taken up only during 2002-03, the report of which was not made available to Audit. Community leaders were not trained in the pre-project phase and the training started only during 2002-03. There was no evidence of man-power assessment having been carried out in the pre-project phase. The requirements of Director of State Education Research and Training and District Institutes of Education and Training were not assessed and incorporated in the plan documents. These deficiencies impacted timely preparation of annual accounts, absorption of funds, *etc.*, adversely.

Test-check disclosed the following further deficiencies in the planning process:

The State Government submitted District Elementary Education Plans (DEEPs) for 2002-05 to the GOI, after a delay of one to seven months from the due date in March. These were also not got approved by the EC during 2001-02 to 2003-04. Rupees 1.65 crore released by SPD to Women and Child Welfare Department during 2002-03 without a detailed action plan were utilised only during 2004-05. While formulating the financial plans, funds available for similar components under various developmental programmes⊗ were not considered and specified in the State Plans or District Action Plans of the SSA. Research projects were not covered in the DEEPs. There were no strategies laid for appointment/re-deployment of teachers to meet the TSR in two◈ test-checked districts.

Out of six test-checked districts, in four✹ districts, the cost for activities under research and evaluation had not been assessed and projected in the Annual Plan for the year 2004-05.

The Government stated (November 2005) that detailed strategies were worked out in the Plan for 2005-06 for proper utilisation of funds and timely implementation of activities.

⊗ Prime Minster's Gramodaya Yojana, Prime Minster's Rozgar Yojana, Member of Parliament Local Area Development, Member of Legislature Local Area Development, *etc*.

◈ Bellary and Chitradurga

✹ Bangalore (Urban), Bellary, Chitradurga and Kolar

3.5.8 Project implementation

Deficiencies in key interventions are mentioned below:

3.5.8.1 Coverage of children under SSA

The project aim of having all children in schools by 2005 was not achieved

The SSA aimed at having all children in school/EGS Centre/alternative school/'back to school' camp, by 2005. At the commencement of SSA (2001), the State had 94.79 lakh children of the age group 6-14 of which, 10.53 lakh children were out of school and as of March 2005, 1.60 lakh children comprising girls and boys equally were still out of school. The Government without assigning reasons for not achieving the objectives, replied (November 2005) that 1.49 lakh children had since joined schools. Thus, 11,000 children were still out of school and the project aim was not accomplished as at the end of 2005. Further, the reported figure of 11,000 children remaining out of school did not take into account the dropout factor and no year-wise targets were fixed for adequate coverage.

3.5.8.2 High dropout rate

The possibility of achieving the objective of universal retention by 2010 was remote

One of the objectives of SSA was universal retention by 2010. The dropout rate at the primary level at the end of March 2005 for the State as a whole was 7.89 *per cent* for both boys and girls. It was marginally higher at 7.98 *per cent* among boys and it was 7.78 *per cent* among girls. While the highest dropout rate of 20.94 *per cent* was in Gulbarga, it was more than the State average in nearly 50 *per cent* of the districts (13) in the State. In four out of six test-checked districts, the dropout rate was higher than that of the State average **(Appendix 3.9).**

At the upper primary level, the dropout rate at the end of March 2005, for the State as a whole was 24.68 *per cent*. The dropout rate of boys was slightly higher at 24.78 *per cent* than the dropout rate for girls at 24.59 *per cent*. Gulbarga district had the highest dropout rate of 44.85 *per cent* and 12 districts had higher dropout rates than the State average (**Appendix 3.9**). Of the six test-checked districts, five districts had higher dropout rate than the State average. The trends in dropout rate during 2001-05 when SSA was being implemented were as indicated below:

Table 4: Trends in dropout rate

Year	Primary	Upper Primary
	(In *per cent*)	
2001-02	11.18	32.93
2002-03	9.10	28.38
2003-04	9.10	Not available
2004-05	7.89	24.68
Decline in dropout rate from 2001-02 to 2004-05	3.29	8.25

The high percentage of dropouts in the upper primary level and the past trends pointed to the possibility of the objective of universal retention by 2010 remaining unachieved.

3.5.8.3 Schools/education centres

Habitations numbering 2,347/ 2,275 did not have primary/upper primary schools within the distances prescribed

The SSA norms specified that every child should have access to a primary school within one kilometre and an upper primary school for every two primary schools. The State Government adopted the norm of having an upper primary school within a radius of three kilometres. As of March 2005, children in 2,347 out of 85,543 habitations did not have easy access to primary schools and 2,275 habitations to upper primary schools, as the schools were outside the distance prescribed. Test-check disclosed that in two[⊠] out of six districts as against the requirement of 389 schools/EGS Centres based on norms, only 41 schools were proposed.

The number of schools and EGS Centres sanctioned and opened during 2001-05 in the State were as detailed below:

Table 5: Details of schools/EGS Centres

Year	Schools		EGS Centres	
	Sanctioned	Opened	Sanctioned	Opened
2001-02	540	242	Nil	Nil
2002-03	Nil	Nil	Nil	Nil
2003-04	920	327	545	260
2004-05	627	972	603	338
Total	**2,087**	**1,541**	**1,148**	**598**

The Government replied (November 2005) that the progress was slow due to short release of funds. The reply is not tenable as the short release by GOI was mainly on account of non-absorption of funds provided.

3.5.8.4 Teacher-student ratio

There was shortage of teachers and shortfall in utilisation of funds provided

The SSA norms provided for two teachers in every primary school and one teacher for every class in every upper primary school. Information furnished by the SPD, disclosed that there were 4,605 single-teacher primary schools (out of 23,923 schools) and 5,014 upper primary schools (out of 19,410 schools) did not have one teacher for every class in the State, as of March 2005.

During 2001-05, as against the allocation of Rs.144.08 crore for recruitment of teachers, the utilisation was only Rs.42.97 crore, the shortfall being 70 *per cent*. The SPD attributed the shortfall to delayed approval accorded by PAB for recruitment. The Government replied (November 2005) that in the primary schools having less than 20 students, one teacher was appointed and in the schools where number of students exceeded 20, proposals were being made for providing additional teachers. The norms adopted by the State Government were at variance with SSA norms.

The SSA norms provided for TSR of 1:40 in the elementary level. At the State level, even though the overall TSR was 1:34, out of 43,333 schools,

⊠ Hassan and Kolar

8,536 schools did not have the prescribed ratio. In the test-checked districts[ϒ] 13 to 67 *per cent* of test-checked primary and upper primary schools did not have the required TSR.

The Government stated (November 2005) that action was being taken for rationalisation by shifting of teachers to the needy upper primary schools. The fact, however, remained that the SSA norms for this intervention were not fulfilled, as only 6,786 teachers were recruited during 2001-05 as against requirement of 7,967 teachers based on SSA norms.

3.5.8.5 Infrastructure facilities

Many schools lacked basic facilities

The SSA norms provided for civil works like new buildings, toilets, drinking water facilities, electrification, *etc.*, to improve facilities in the schools. A total sum of Rs.264.56 crore was allocated for this purpose during 2001-05 and utilisation thereagainst was Rs.221.99 crore. Basic infrastructure facilities were, however, lacking in many of the 43,333 Government schools in the State, as of March 2005, as detailed below:

- Seven hundred and sixty eight schools (two *per cent*) did not have buildings.
- Six thousand two hundred and thirty six schools (14 *per cent*) had only single rooms.
- Nine thousand three hundred and eighty seven schools (22 *per cent*) did not have drinking water facility.
- Nineteen thousand nine hundred and fifty four schools (46 *per cent*) did not have toilet facilities.
- Twenty five thousand seven hundred and forty five schools (59 *per cent*) did not have electricity.

The Government replied (November 2005) that the gaps in infrastructure could not be filled in a short period due to restriction on ceiling of 33 *per cent* of allocations imposed on civil works and that convergences with other agencies were established and new proposals launched to provide certain facilities in Government schools. In view of the significant gaps in drinking water, toilet and electricity facilities, additional steps should be taken for providing them expeditiously by utilising the allocation in full.

ϒ

District	Total schools test-checked	Schools with teacher shortage	Ratio range	Percentage
Bangalore (Urban)	18	9	1:41 to 1:60	50
Belgaum	16	8	1:42 to 1:60	50
Bellary	12	8	1:44 to 1:123	67
Chitradurga	15	3	1:46 to 1:63	20
Hassan	15	2	1:44 to 1:69	13
Kolar	18	3	1:53 to 1:70	17

3.5.8.6 Capacity building

Capacity building in teachers/ community leaders was grossly inadequate

The norms of SSA envisaged in-service course for 20 days for a teacher every year and training for community leaders for a maximum of eight persons in a village for two days. Analysis of information made available disclosed that training up to 12 days was provided to teachers. Test-check in selected schools also disclosed that the teachers received training for six days. For the in-service teachers' training during 2001-05, as against the total allocation of Rs.73.74 crore, utilisation was only Rs.21.70 crore, constituting 29 *per cent* of the allocation. The Government replied (November 2005) that in-service training could not be held during the entire year, as it would dislocate the normal functioning of schools. In view of availability of funds for in-service training, Government should find ways to provide in-service training to the envisaged level, without affecting the normal functioning of the schools.

Percentage of community leaders trained declined from 82 to 7 during 2002-03 to 2004-05. Under this component, as against the allocation of Rs.5.32 crore during 2001-05, only Rs.1.63 crore constituting 31 *per cent* of allocations were utilised. The Government stated (November 2005) that the community leaders trained showed a declining trend as the School Development and Monitoring Committees were being reconstituted. In view of favourable resource position for the component, Government should ensure that community leaders were trained as required.

Under SSA, a State Institute of Education, Management and Training (SIEMAT) meant for educational planning and capacity building was to be set up, with a grant up to Rs. three crore from GOI. The State Government did not even identify (July 2005) a site for the SIEMAT. The funds of Rs. one crore released by GOI during 2003-04 for the purpose were not utilised in that year, with the result, the allocation was reduced to Rs.50 lakh (September 2004). The Government replied (November 2005) that the proposal was still under consideration by the Ministry of Human Resources Development. The fact, however, remained that SIEMAT which was to provide inputs for planning and capacity building was yet to be set up, even five years after the launch of SSA.

3.5.8.7 Supply of textbooks

Supply of free textbooks was denied to four lakh focus group children in Government aided schools. There was also delay in supply of free textbooks

According to norms of SSA, free textbooks were to be supplied to all special focus group children[∂], in case such a facility is not made available by the State Government. The SPD provided funds to the Director of Textbooks (DTB) who printed and supplied free textbooks for special focus group children in Government schools. Textbooks were not supplied free either under SSA or under any other scheme of Government, to about four lakh children in Government aided schools. Such a supply was not even planned by the SPD. There was a shortfall of 43 *per cent* in utilisation of funds allocated for supply of free textbooks in Government schools during 2001-05. This was mainly

[∂] Scheduled caste/tribe boys and all girls attributable to excess release of funds for supply of textbooks as mentioned in Table 3 (Paragraph 3.5.6). The Government agreed (November 2005) to consider supply of free textbooks to these children in 2006-07.

In 30 out of 77 test-checked Government schools, textbooks were supplied by the DTB after a delay of one to six months during 2004-05. Without furnishing reasons, the Government stated (November 2005) that books would be supplied on time in 2005-06.

3.5.8.8 Research activity

While there was no research activity during 2001-03, the limited activity in 2003-05 was not beneficially utilised

The research and evaluation component under SSA aimed at qualitative and quantitative inputs for planning, programme implementation and evaluation of programme interventions. Information provided by the SPD disclosed that no research activities were undertaken during 2001-03. The findings of 100 research projects for improving quality of teaching and completed (2003-05) at a cost of Rs.3.65 lakh, were not disseminated through publications to those involved in teaching. There was shortfall of 54 *per cent* in utilisation of funds during 2001-05, which was attributable to absence of research activities during 2001-03. The Government replied (November 2005) that while limited dissemination was made according to relevance, wider dissemination was planned. Thus, there was a need to increase research activity and its dissemination.

3.5.8.9 Coverage of children with special needs

Only 13 *per cent* of the children identified as having special needs received assistance during 2004-05

Under the component of providing education to the children with special needs, the SSA envisaged assessment camps, development of training material, provision of aids and appliances, creation of community awareness, *etc*., to be consistent with the provisions of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. During 2001-05, 48 *per cent* of funds (Rs.18.99 crore) provided for disabled children only were utilised.

The number of children with special needs identified in the State and receiving assistance declined from 33 *per cent* during 2002-03 to 13 *per cent* during 2004-05. Even though funds were available under this component, assistance was not provided during 2003-04.

Test-check of records in 94 schools disclosed that out of 144 children identified with special needs, only 46 (32 *per cent*) received assistance during 2001-05. The SPD did not furnish the details of aids and appliances supplied (August 2005). The Government stated (November 2005) that only those in need were given aids and appliances and the rest were provided academic support.

During 2003-04, 89 medical camps and during 2004-05, 146 medical camps were conducted in the State at block levels to identify children with special needs, as against 176 blocks in the State. Test-check disclosed that in 30 out of 94 schools test-checked, no medical camps were conducted during 2002-05. Without furnishing details and specific reasons for low coverage, Government stated (November 2005) that number of children identified had since been increased.

3.5.8.10 Access to computer education

Access to computer education was not available to majority of upper primary schools

The SSA provided Rs.15 lakh per district per annum for imparting computer education at the upper primary level under the component of innovative activities. Computer education was to be planned in such a manner that one or two schools in every cluster were covered so that the other schools in the cluster could avail the benefit. Out of 21.54 lakh children in 1,762 clusters having 19,410 upper primary schools in the State, only 0.55 lakh children in 190 schools constituting less than one *per cent* had access to computer education as at the end of 2004-05. The Government replied (November 2005) that the allocation of funds under this component of innovative activities was low and efforts were being made to cover more schools with available funds. Audit noticed that as against the total fund allocation of Rs.11.62 crore during 2001-05, Rs.8.44 crore only were utilised.

3.5.8.11 Involvement of Non-Governmental Organisations

Involvement of NGOs was not to the level envisaged

The NGOs were not involved in the programme implementation in two[∅] of the six districts test-checked. In the other four districts, the involvement of NGOs was limited to running EGS centres and supply of aids and appliances to children with special needs, even though the SSA envisaged partnership with NGOs in capacity building, pedagogy[*], planning, research, *etc*.

At the State level, the SPD did not release any funds to NGOs during 2001-04. During 2004-05, Rs.1.25 crore was released to NGOs. Government, however, replied (November 2005) that NGOs were being involved in approved activities. The reply is not tenable in view of the position obtaining in the two test-checked districts.

3.5.9 Monitoring

Monitoring was insufficient

Monitoring of implementation of SSA in the State was inadequate as the State level monitoring mechanism headed by the Chief Minister reviewed the progress of implementation only once (January 2002) in the last four years. Monitoring was limited to the area of utilisation of funds only. The internal audit wing set up in August 2004 had covered only 3 out of 27 districts in the State and the Internal Audit Reports were not placed before the EC, though required. Mechanism to ensure accountability was not functioning properly as

[∅] Chitradurga and Hassan
[*] The science of teaching/instruction/training

11 out of 94 schools test-checked did not maintain cash books and vouchers for expenditure, which were essential for financial monitoring. There was no provision for monitoring the academic achievements of children in the EMIS and planning process was not monitored at State level. Supervisory visits to the districts, though required, were not carried out. The block implementation committees in all three selected blocks in Kolar district did not review the implementation.

3.5.10 Conclusion

The implementing agencies could not absorb even the reduced level of funding. Planning for implementation of SSA was deficient as there were delays in initial basic surveys, which include household surveys, manpower assessment, training of community leaders, *etc*. One of the main objectives of SSA which was to have all children in schools/alternative schools by 2005 was not yet achieved even though the number of children out of school came down from 10.53 lakh out of 94.79 lakh children at the commencement of SSA to 1.60 lakh as of March 2005. Trends in drop out rate indicated possibility of universal retention by 2010 remaining unachieved. Capacity building among teachers and participating community leaders was inadequate. Coverage of special focus group children was not to the level envisaged. The existing monitoring mechanism was ineffective.

3.5.11 Recommendations

- There is an immediate need for better fund management to ensure optimum utilisation of funds released.

- The entire planning process needs to be strengthened to ensure timely submission of annual action plans.

- Annual targets should be fixed for vital areas like number of new schools and teachers, infrastructure facilities and assistance to focus group children so that the overall target is achieved in time.

- Special efforts should be made to enhance community participation and involvement of NGOs in programme implementation.

- The existing monitoring mechanism needs to be strengthened to ensure effective implementation of the scheme.

FINANCE DEPARTMENT

3.6 Computerisation of Treasuries in Karnataka-'Khajane'

Highlights

The project 'Khajane' was implemented with the aim of providing Drawing and Disbursing Officers, Controlling Officers and Chief Controlling Officers the details of expenditure for the purpose of reconciliation, restricting payments at the treasuries to budget allocations, ascertaining the Ways and Means position of Government, etc. The Project was implemented without the preparation of a comprehensive user requirement specification leading to deficiencies in Information Technology operations and controls. Codal provisions for awarding the contracts for establishing network connectivity were also not followed.

Codal provisions were ignored while awarding the contract for establishing network connectivity.

(Paragraphs: 3.6.4.1 & 3.6.4.2)

The System was not able to take care of the relevant rules for adjustments of NDC bills against AC bills.

(Paragraph: 3.6.6.1)

The System was ineffective in ensuring correctness of payments made to the Housing Development Finance Corporation.

(Paragraph: 3.6.6.3)

The System either did not have proper input validations or these validations were bypassed resulting in violation of various financial and service rules.

(Paragraph: 3.6.7.2)

The System did not facilitate uploading of budget related data from the Finance Department Package.

(Paragraph: 3.6.8.3)

Inadequate security arrangement exposed the IT assets and data to risk of damage/misuse, while change control procedures were inadequate.

(Paragraphs: 3.6.9.1 & 3.6.9.2)

The back up data was not stored off-site which may lead to avoidable loss of data in case of crashes.

(Paragraph: 3.6.9.4)

3.6.1 Introduction

The Department of Treasuries headed by the Director handles all cash transactions of the Government. The receipt and payment transactions are carried out through 31 District Treasuries and 184 Sub-treasuries spread over the State. On the recommendations of an Official Committee appointed in August 1997, the Government ordered (July 1999) implementation of the project 'Khajane' with the main objective of providing details of expenditure to Drawing and Disbursing Officers (DDOs)/Controlling Officers (COs)/Chief Controlling Officers (CCOs) for the purpose of reconciliation, facilitating Treasury Officers to restrict the payments to the budget allocations of DDOs/COs/CCOs, making available Treasury Transfer Receipts reports required by various Government departments, assisting dynamic reallocation of budget allotments and to ascertain the Ways and Means position of the Government on any day. The implementation of project commenced (January 2001) after a tripartite agreement was signed between the Director of Treasuries (DoT), Software Technology Parks of India (STPI) (Network Provider) and CMC Ltd (CMC) (System Provider). A Wide Area Network (WAN) was set up by STPI, at a cost of Rs.14.23 crore, using VSAT terminals at all the 216 locations to a central database server at Bangalore and recurring maintenance cost of Rs.2.90 crore per annum. CMC developed the application package at a cost of Rs.17.11 crore which included supply/installation of hardware, software and facilities required for running the application package at each location and maintenance of the systems for five years at a cost of Rs.6.28 crore. Rs.46.53 crore has so far been spent (September 2006) on acquisition, implementation and maintenance of the system.

3.6.2 Organisational set-up

The Department of Treasuries is headed by the Director of Treasuries. The Treasury Network Management Centre (TNMC) at Bangalore which controls the central server "KUBERA" and the hub of the KHAJANE-net is headed by a Deputy Director of Treasuries and 23 support staff. All District Treasuries, headed by District Treasury Officers (DTO), are provided with high-end server with UNIXWARE operating system and client systems ranging between 5 and 25. The sub-treasuries, headed by Sub-Treasury Officers (STO) render monthly accounts online to respective DTOs following up with vouchers and other documents.

3.6.3 Scope and methodology of audit

The audit was conducted to evaluate the efficiency and effectiveness of the system in achieving the stated objectives and to assess the adequacy of good practices of Information Technology (IT) governance along with controls built in to ensure data integrity, security of data, systems and other IT assets. A test-check of records maintained electronically and manually was conducted in the office of the DoT, TNMC, six[24] District Treasuries and three[25] Sub-treasuries. The records relating to treasury transactions in some of the offices of CCOs, COs, DDOs were also test-checked between October 2005 and February 2006. The sample data of the information contained in data tables received from TNMC in the form of an Export Dump was scrutinised using the generalised audit software – IDEA[26] and SQL[27]. The audit findings are detailed in the succeeding paragraphs:

3.6.4 Project Management

3.6.4.1 Award of contracts for establishing network connectivity on limited tender basis

Discrepancies in payments and award of contracts led to avoidable expenditure and deprived the department the advantage of competitive rates

According to Karnataka Public Works Department (KPWD) Code, where the value of contract exceeded Rs.two crore, tenders were to be called for through advertisements in news papers. While the development and maintenance of the application package (cost: Rs.23 crore) was made after calling for bids from a limited number of firms, the work of establishing the WAN costing Rs.15 crore was entrusted to STPI on an on-cost basis without calling for tenders. Similarly, the work of cabling, electrification (Rs.1.22 crore) and providing services of security personnel was entrusted to STPI without availing the benefit of competitive rates.

The Department stated that STPI was a Government of India concern and that all the procurements had been done with the approval of the Committee formed for the purpose.

The fact remained that the Department did not avail the benefit of competitive rates by giving wide publicity in the news papers for larger participation of the intending bidders in the tendering process. The reply was also not tenable as STPI in turn hired the services of HCL-Comnet for setting up the network at a cost of Rs.12 crore and list of bidders for the work included companies which had participated in the tendering process for development of the application package.

3.6.4.2 Evaluation of bids

It was noticed that limited tenders were invited for development of the application package (including hardware and networking) out of the list of Total Solution Providers maintained by the Government. In view of the size and significance of the project, the Department could have obtained more competitive rates with wider publicity and by negotiating with the first two lowest bidders (HCL Info Systems and NIIT), instead of entrusting the work to CMC which was the third lowest bidder. Moreover, KPWD Code stipulated that in cases where recourse to invitation for fresh tenders could not be taken

[24] Bangalore (Rural), Bangalore (Urban), State Huzur Treasury-Bangalore, Pension Payment Treasury- Bangalore, Mandya & Tumkur
[25], Doddaballapura, Hoskote and Magadi
[26] Interactive Data Extraction and Analysis
[27] Structured Query Language

due to there being no prospects of getting lower favourable rates, negotiations had to be conducted by the competent authority, only with the lowest bidder. However, the rate of CMC was accepted without terms and conditions being agreed to. The offer was made at Rs.17.11 crore for the system development which included supply and installation of hardware (including local networking in each location), and training of 600 personnel in the usage of application software. No break up for various components of the system development was specified.

The Department stated that the financial evaluation of the bids was against one value quoted for all items to be supplied and hence break up was not incorporated. It further stated that as the original rate quoted by CMC and the rate at which signed by them were entirely different, they were given an opportunity to rework their break up which was approved by Government and payments were made as proposed by CMC.

It was noticed that while cost of uninterrupted power supply system (UPS) offered by HCL Info Systems (Lowest) was negotiated and brought down by Rupees one crore, after comparing with offers of NIIT and CMC, no negotiations were held with CMC. Consequently, payments were made at higher rates than those of HCL Info Systems (L1) resulting in extra payment of Rs.2.03 crore, as detailed below:

Table 1: Comparison of offers

(In rupees)

Component	Rate quoted by HCL(L1)	Rate at which payment made to CMC	Difference	Quantity	Total payment
District Server	2,39,972	2,89,720	49,748	30	14,92,440
SHT Server	3,85,997	4,63,561	77,564	1	77,564
Desktops	49,737	51,257	1,520	447	6,79,440
Dot-matrix printer	10,536	10,700	164	262	42,968
Application S/W	81,17,500	2,41,61,093	1,60,43,593	1	1,60,43,593
Networking	14,72,051	33,98,502	19,26,451	1	19,26,451
Grand total					**2,02,62,456**

It was also seen that under the tripartite agreement, 10 *per cent* of the contract value was to be paid only after successful pilot testing. Contrary to this, CMC was paid an advance of Rs.1.80 crore for purchase of hardware for pilot sites. The Department stated that the advance payment was in view of the good progress achieved.

It was further noticed that technical specifications as listed out in the tripartite agreement were at variance with those as per invitation to bid as specifications for UPS were not clear in the invitation to bid. Both HCL Info Systems and CMC had quoted the costlier Sealed Maintenance Free (SMF) batteries but in the tripartite agreement, it was changed to cheaper tubular batteries. Further, the bid document required supply of anti-virus software but it was not included in the agreement for which Rs.11 lakh were paid subsequently. The type of cabling for local networks was also not clearly spelt out in the invitation to bid and was changed to five times costlier rate subsequently.

Thus, there was an avoidable payment of Rs.2.14 crore and also unintended benefits to the vendor due to award of contract without negotiating on the rates for individual items; not insisting upon SMF batteries or obtaining discounts for supply of cheaper batteries; advance payment in contravention of the terms of the agreement; and change of specifications while executing the agreement.

3.6.4.3 Avoidable expenditure on additional functionalities

In 2003, CMC submitted a proposal for 25 additional activities and quoted Rs.39.09 lakh for their study, design and development. It was noticed that many of these activities were either already contemplated in the procedure manual issued to vendors or were discussed in the Software Requirement Specification (SRS) document which was proposed by CMC and approved as final before the pilot study. Had the SRS been finalised after pilot study, extra payment could have been avoided.

3.6.4.4 System maintenance

Delayed response time in clearing the faults indicated that the faults needed to be studied and appropriate action to be taken to address the root cause of the problems

The contract value for Facility Management Services (FMS) payable to CMC was fixed at Rs.6.28 crore payable in 20 equal instalments of Rs.31.40 lakh at the end of each quarter. The maximum response and restoration time for the FMS was one day after the faults were reported. Penalty was to be calculated based on delay in response beyond the maximum limits mentioned and deducted from maintenance bills. As the quantum of delays was very high, the percentage deduction to be made worked out to almost 100 *per cent*. However, agreement restricted the penalty to five *per cent* only.

It was noticed that some of the problems relating to maintenance of software and hardware which kept recurring month after month were end of day problems, cheque printing problems, difficulties in the generation of reports and problems in closing of monthly accounts. The department stated that only unique problems have to be considered out of the total number of problems reported; problem reporting was not the major component of FMS; the vendor had been penalised wherever there were inordinate delays; and the help desk activity was badly affected due to high attrition rate during 2004-05.

The reply is not relevant since the problems reported affected the functioning of the system resulting in problems in closing of monthly accounts.

3.6.5 System Development

It was noticed that a structured system development approach was not adopted in executing the project as no project initiation document was prepared and no feasibility study was carried out by drawing up of a report indicating the alternative solutions. A User Requirement Specification (URS) document was not brought out clearly defining the scope of the system, key features that should be included and reports to be generated. This resulted in a number of design deficiencies which adversely affected the functioning of the system (Paragraph 3.6.6).

The Department stated that when the project was conceived, use of IT in government departments was not much, and further that no standards were prescribed, no road maps were available and there were no precedents to follow. It added that 'Khajane' being a path-breaking project, not many of the standard practices were strictly followed and hence status documents like resources used, milestones achieved and road map, feasibility study, cost-benefit analysis were not done exactly according to the norms.

The reply is not acceptable, as the services of the experts were already available with the Department and moreover best practices for IT system acquisition and implementation were available and should have been referred to.

3.6.6 System Design

3.6.6.1 Improper development of the system for monitoring receipt of detailed contingent bills against abstract contingent bills

Non-inclusion of appropriate controls in the application system and lack of circular instructions to DDOs rendered huge sums drawn on AC bills without details of expenditure

Test-check of the database of district treasuries for AC Bills drawn/NDC Bills submitted revealed that in three Treasuries NDC Bills were not submitted or the fact of submission not noted against AC Bills drawn by various DDOs during the period 2002-03 to 2005-06 (up to January 2006) in 3,128 cases involving Rs.517.50 crore.

Under the Manual of Contingent Expenditure, a DDO was permitted to draw only up to Rs.500 without special sanction of the controlling officer. An analysis of the database indicated that in 516 cases, the maximum amount was recorded as more than Rs.500, ranged from Rs.600 to Rs.25 lakh. This exposed the system to the risk of misuse and avoidable irregularities. The Department stated that data would be verified and necessary corrections carried out.

The NDC bills submitted to treasuries were not noted in many cases against the corresponding AC Bills drawn. Though objection was raised by the system for the previous bill irrespective of the fact whether submission of NDC bill was due or not, objections were being overruled and further AC bills passed. There was no provision for stoppage of further AC bills whenever NDC bill due was not submitted.

Thus, the system developed could not take care of the requirements of the Rules and Government Orders for effective monitoring of the submission of details of expenditure for amounts drawn on AC bills leading to non-accounting of moneys drawn from treasuries.

The Department stated that the software to cater to the needs of accepting NDC bills was under development and would be implemented from 2006-07.

3.6.6.2 Classification of transactions

Audit noticed a number of misclassifications which indicated the deficiencies in design and development of the package leading to inaccurate accounts and overstatement/understatement of receipts/expenditure.

A few examples are given below:

Absence of key controls in the application package resulted in many misclassifications that made the system less dependable as also affected the true and fair nature of accounts

- Though the data entry was made as ‘building expenses’, and ‘general expenses’, the reports printed for the period between July 2005 to November 2005, involving an amount of Rs.57.94 lakh in 25 cases, depicted the same as ‘other charges’ and ‘other office expenditure’. It was stated that the system discrepancy had since been rectified.
- The commercial tax receipts remitted in banks other than State Bank of Mysore (SBM) were accounted for by a treasury on a single challan furnished by SBM to the treasury.
- In nine cases involving Rs.215.82 crores, transactions under deposit accounts were classified under incorrect heads of account.
- The data table of the classified accounts of a treasury showed that object head field was blank in 25,610 cases for the period from April 2004 to December 2005 involving an expenditure of Rs.254.72 crores. The absence of the detailed head to which these payments related, rendered the accounts already booked, inaccurate. The Department stated that in case of deposit transactions there would be no detailed heads. The reply is not tenable since all the cases cited were not deposit transactions but also included heads of account like land revenue, interest payments, pensions.

3.6.6.3 Non-generation of details required for Housing Development Finance Corporation (HDFC) payments

Absence of provision to support and determine dues of HDFC resulted in huge sums of money being paid unverified

Payments made to HDFC relating to house building loans to Government servants during 2003-04, 2004-05 and 2005-06 were Rs.28.75 crore, Rs.22.26 crore and Rs.15.04 crore (up to November 2005) respectively. It was noticed that the system did not support generating a report for the total amount payable to HDFC every month detailing amounts due towards principal and interest, subsidy *etc*. As such, the demand raised by HDFC was paid without ensuring the correctness of the claim considering the rate of interest, type of loan, *etc.*, that varied from year to year. The Department replied that, as all this exercise would not have resulted in complete elimination of manual incorporation in the ledgers, it was decided to get comprehensive software developed for the purpose of accounting HDFC deductions. The reply is not acceptable as the package did not support verification of the monthly demands of HDFC by correlating them with recoveries from salaries which were available in the system.

3.6.6.4 Pension related module

Audit noticed multiple design deficiencies in the pension related module which are detailed as follows:

In the "Pension Module" pension field accepted entry of amounts without minimum and maximum limits. Negative figures were found in some cases for basic pension. Total pension amount did not match the break up details in a few cases. The commuted value could not be restricted to the prescribed limit of one-third of the pension. Many essential fields like sanction order number could be skipped as they were not mandatory. Gross service could be entered as 'nil' or 50 years. Net service values could not be separately entered. There was no provision for watching receipt of life certificate of social security pensioners.

The forwarding letter to the bank was not generated correctly by the system, as for example, the name of the Bank and branch did not appear; instead of the total commutation amount, the basic pension amount was shown; the symbol "<" appeared in place of reduced pension amount and the amount of family pension was not displayed.

Lacunae in the system that may lead to risk of misuse

Once a Pension Payment Order (PPO) was generated, changes to verify the mistakes in data entry in the pension module could not be carried out. Corrections were, therefore, made in manual records. In the alternative, the IDs were suspended/closed and fresh IDs created. As the suspended IDs could be revived, this exposed the system to the risk of misuse/irregularities. It was noticed that in one case, payments were made to the same person in two new PPO IDs. Although two Old Age Pension (OAP)-PPO IDs were suspended in a treasury, payments continued to be made. The Department stated that all such cases would be reviewed and excess amount, if any, would be recovered.

In a few cases enhanced family pension was continued to be paid even after due dates for restoration. In a few cases gross amounts did not tally with the break up values of payments, net amount and pay order amount did not tally, which indicated lack of appropriate controls which may lead to incorrect reports. The Department stated that the discrepancies would be looked into.

3.6.6.5 Other deficiencies

Specimen signatures of DDOs did not pop-up for compulsory check for authenticating bills presented for payment. It could be viewed only if the user chose to do so. Bills could be passed without such verification. An analysis of the table containing DDO details for each treasury revealed that a system-generated number was given to the signature of each DDO captured by scanning his specimen signature. It was found that instead of a unique number assigned for each DDO, there were 1,821 active records, which had the same GDDO code (00001). This indicated that there was a lacuna in the generation of GDDO codes. Similarly, there were 14,830 cases with a GDDO code of '99999'.

3.6.7 Application control

Application controls are case specific and have a direct impact on the processing of individual transactions. These controls are used to provide assurance that all transactions are valid, authorised, complete and recorded. Audit noticed the following deficiencies in application controls.

3.6.7.1 Input control

To ensure that correct and relevant data is entered into the system to generate reliable output, a combination of controls over the input of data facilitated by proper validation checks in the system is essential. However, due to deficient input controls and insufficient validation checks, there were numerous instances of incorrect data being stored and processed by the system.

3.6.7.2 Ineffective validations provided

Lack of appropriate input controls rendered the system incomplete due to errors in data capture

Validations that are provided to ensure compliance with financial and service rules, were not mandatory. Even if the user opened validation screen, options were to be ticked by exception and the user was not required to confirm each validation. Frequently occurring deficiencies in the bills could not be added by the user. As there was no compulsory sequence for various menus/screens to be navigated, various validations provided were ineffective.

The fields to record the dates of Government Order or the date of authorisation by the Accountant General (AG) for creating a DDO, accepted any future date as well. There were 1304 and 970 records of dates for Government orders and authorisation of the AG respectively that contained dates beyond the year 2050. Similarly, it was found that different designation descriptions were entered for the same DDO.

In one department, the head of the department addressed the Treasury Officers pointing out that the expenditure in district offices was wrongly shown as incurred by their Directorate at Bangalore. The treasury department replied to an audit query that misclassifications could be due to incorrect data provided by the DDOs. The reply is not tenable as the system should not have accepted bills against the head of account of the directorate from a district level officer.

There were instances where the detailed head-wise compiled accounts displayed zero in the amount column even though the related Abstract of Schedule of Payments indicated substantial sums as paid.

The inaccurate entries indicated lack of proper input validation controls or that controls in place could be bypassed. It also indicated that suitable monitoring mechanism was not in place to the review entries.

3.6.7.3 Data entry

Lack of data capture controls led to many avoidable misclassifications and also affected the true and fair nature of accounts and MIS reports

It was noticed that during September 2003, receipts pertaining to Defence Department were booked twice by the State Bank of Mysore, Shivajinagar Branch, Bangalore, went undetected during the data capture at the treasury level resulting in an excess accounting of Rs.48,00,263. This was yet to be rectified in accounts and also necessary corrections to the database effected.

Modifications to mode of payment of pensions were not put through screens meant for the purpose but were being managed by suspending or closing the old IDs and opening new ones in their place. As the suspended IDs could also be revived, the procedure followed exposed the system to risk of irregularities as also the extent of modifications made could not be monitored.

The system did not support prompting incorrect entries made as deductions towards House Building Advances though it related the payments towards HDFC loans and *vice versa*. Similarly, incorrect entries of Motor Cycle Advances **-** principal and interest were not prompted by the system. Misclassification due to ineffective prompt by the system or lack of second level checks resulted in adverse balances under various loan heads of account, as in nine cases, misclassifications were observed involving Rs.8.78 lakh. The Department stated that the system could prevent misclassification into HDFC only and not the other way. The reply is not tenable as the system needed controls eliminating misclassifications of HDFC recoveries into HBA which resulted in adverse balances.

The above mentioned discrepancies indicated lack of proper input validations in the package and ineffective second level check of data entry with regard to the classification/capture of essential data. Action is to be taken to increase the awareness among the data entry operators and DDOs to facilitate capture of essential data and also to classify the transactions correctly to make the system more effective.

3.6.8 IT Operations

3.6.8.1 Generation of department-wise recovery particulars

Absence of important feature to generate department-wise recovery particulars

Except SHT, Bangalore, none of the treasuries furnished department-wise abstract of provident fund recoveries duly tallying with overall totals of all sub-treasuries along with the figures of the district treasury. Further, in many cases, key information like full name, designation, relevant account number were either not captured in the system or ensured that they were available in the schedules at the time of passing the bills, indicating insufficient input controls and non-provision of an essential feature in the package.

3.6.8.2 Deposit accounts module

Lack of appropriate output controls rendered certain reports unreliable

Article 286A of Karnataka Financial Code requires that a Personal Deposit account created by debit to the Consolidated Fund should be closed at the end of each year and a fresh account opened with a nil balance in the succeeding year. The system did not have any provision for such closure of accounts.

In one treasury, the savings bank account sub-module did not work. Consequently, transactions of all such savings bank accounts were being manually processed and cheques written by hand. The lacuna in the system needs to be addressed to bring all transactions online.

Summary of transactions of a set of deposit accounts were reported to AG (A&E) through a plus and minus memorandum. The system could not, however, generate reports in respect of revenue deposits and lapsed deposits. The totals of the various columns therein were not depicted in the reports so generated. The reports would not be completely useful without the totals of each column. The lacunae made the system less user-friendly.

3.6.8.3 Inadequate controls in uploading budget allocations

Absence of certain controls in uploading the budget allocations exposed the system to risk of irregularities

Though the Finance Department (FD) had the connectivity to the network, the treasury package did not support data interchange with budget modules of FD package. A user-friendly procedure could have obviated manual intervention for conversion of data, which was currently not authenticated by any Officer from FD. The Department stated that the authentication would be obtained in future. Audit noticed that there were many cases of expenditure booked without budget provision indicating lack of key controls.

Other cases of discrepancies noticed are as follows:

- The specimen signatures of the CCOs were not properly recorded in the files/ system. The letters intimating allotments were not signed by CCOs. Corrections to the data were carried out by Officers in TNMC but not got confirmed by from CCOs. Cuts and redistributions in allocation were carried out on ‘Problem Reports’, without any written documentation from CCOs. Database contained details of 23 officers in the DDO list of a department though they did not belong to that department. As the budget allocations were made by the head of the department among his DDOs, the system was exposed to risk of misuse of budget allocation by DDOs outside their department.

- There was no second level check for this item of work that involved allocation of funds. The Department stated that the second level check would be introduced and action taken to avoid the discrepancy pointed out.

- In respect of uploading of allocations to DDOs in the treasuries, the allocations were brought in floppies by the COs and the same was uploaded by making corrections wherever found necessary. However, the package did not support keeping an audit trail of changes made by persons other than the competent authority. The uploading done in treasuries was also not being subjected to second check.

These discrepancies indicated lacunae in the procedures that exposed the system to risk of avoidable irregularities.

3.6.8.4 Maintenance of Local Masters

In the test-checked treasuries, the records from which the local masters were created were not made available. Database of pensioners existing prior to computerisation had not yet been completely created. Correctness and completeness of the data capture could not, therefore, be verified in audit. Non-availability of such records rendered rebuilding of masters difficult. It also affected the clarification of problems and settlement of claims.

3.6.9 General controls

General controls create the environment in which IT applications and related controls operate. If general controls are weak, they severely diminish the reliability of controls associated with individual IT applications *i.e.* application controls. Audit noticed a number of deficiencies in general controls which are detailed below:

3.6.9.1 Security of systems, data and other IT assets

Inadequate security arrangements exposed the system to risk of damage to IT assets and misuse of systems

Server room was not kept under lock and key in the test-checked treasuries. Line printers/ computer systems were installed in the server room and printing activities were carried on. No circular instructions regarding maintenance of server room were made available in the treasuries test-checked. A log book for monitoring the activities of server operations, its security, problems of facilities and speed of the network *etc*., was not maintained or was not up to date in the treasuries test-checked as required according to a circular from the Directorate.

There was no fire fighting equipment in/around the server room in many treasuries and the air conditioners were out of order in some locations. No systematic record was maintained regarding periodical maintenance/on call details in respect of hardware, V-SAT, UPS, Printers, *etc*. Protecting the server room and other IT assets against possible physical damage or unauthorised access needed to be considered and appropriate instructions issued.

No documents had been maintained at TNMC to indicate conducting of periodic and ongoing review of access profiles, unsuccessful log-ins *etc*.; fire, weather, electrical warning and alarm procedures; air conditioning, ventilation, humidity control procedures; security breach alarm process; security awareness and training programs for the TNMC as well as for the treasury organisation as a whole; need for periodical change in security service agencies; penetration test procedures and results; health, safety and environmental parameters for follow-up; staff facilities, rotates of shifts and appropriate holidays and vacation both for treasuries' staff and the vendors' staff; and environment aspects like procedure for disposal of e-waste. It could not be ascertained whether they were working at satisfactory levels. It was stated that these issues would be considered in consultation with the competent authorities.

In some of the treasuries test-checked, there was no mechanism to monitor the unsuccessful log-ins by unauthorised persons. Many users in various counters were leaving the system open and there was no mechanism for automatic log-off which rendered the system exposed to risk of unauthorised use. No written instructions were issued regarding change of passwords periodically and structure of passwords.

The System Administrator role was assigned to officials other than Treasury Officers in many cases. It was also observed that certain users were able to perform transactions in spite of their IDs being de-activated. There were instances where the same person worked as data entry operator, Assistant Treasury Officer, Treasury Officer and System Administrator while passing bills. Lack of clear segregation of duties and controls on user-IDs exposed the system to risk of irregularities. The Department stated that suitable instructions had been issued regarding assigning of role IDs and action was being taken to fix the bugs pointed out. No programmes to highlight the importance of security awareness had been arranged in any of the locations test-checked. Holding of such programmes to increase security awareness should be considered to avoid possible losses due to security lapses.

Improper maintenance of stock accounts could lead to pilferage/misuse of IT assets

The receipts of IT assets were not recorded in the stock accounts as and when they were received under proper attestation. Only a printed account in a bound volume of registers maintained at TNMC was made available to audit. No account of IT assets in stock was maintained at the treasuries. Assets relating to network (Rs.13 crore) were not found to have been taken to stock. 402 desktops only were taken to stock against 624 purchased. Similarly, against 218 servers (each costing Rs.2.90 lakh) purchased, 216 were recorded in stock. There was no record of movement of equipment for repair *etc.*, as no system of issue of gate passes was in practice. No record of annual verification of stock having been carried out in any of the years had been maintained. It was noticed that the line printers were out of order in some treasuries. Absence of proper mechanism to take the assets to stock and subjecting these to periodical physical verification exposed the assets to the risk of pilferage or misuse. It was stated that suitable instructions would be issued to all treasuries to carry out annual verification.

3.6.9.2 Change management controls

Lack of systematic change management controls could not bring out orderly documentation of changes to system

A number of changes to the 'Khajane' program had been carried out after it was installed in the year 2002. To minimise the likelihood of disruption, unauthorised alterations and errors getting into the application package, a management system which provided for the analysis, implementation and follow-up of all changes requested, was to be in place. However, no clear documents had been maintained in respect of request for change, specification of change, request to move source into test environment, completion of acceptance testing, request for compilation and move into production. Similarly, no documents were maintained to show that overall and specific security impact was determined and approved by a responsible designated officer of the Department.

The source code was not changed soon after the new tested program was replaced, even though copy of the source code was with the department. Regarding other issues, it was stated that suitable guidelines were issued (October 2006).

3.6.9.3 Inadequate training and supply of user manuals

Lack of ongoing training system affected the efficiency of operations

There was no policy for training of employees on an ongoing basis taking into account uneven distribution of trained personnel due to transfer, retirement, *etc*. Only one training programme was conducted since the package was implemented three years ago. No refresher courses had been conducted. It was noticed that sufficient copies of user manuals were not available. The manuals prepared in the beginning were yet to be revised though new version of the application package had been released as also many new forms and changes have been brought about in the application package. Though the vendor had to supply the system administrator manuals, it has not been made available. Action needs to be taken to provide sufficient number of user-friendly updated manuals for improving the efficiency of operations. The Department also stated that appropriate recruitment and training were being considered for smooth running of the project.

3.6.9.4 Off-site storage of back up data

Inadequate arrangements for back up could lead to avoidable loss of data and time in case of crashes

Back up of data was being taken at the end of each day in a weekly cycle and stored in the table-draw of a counter clerk in some of the test-checked treasuries. No instruction for storage of back up media, its location, off-site back up, *etc*., was available in the treasuries test-checked. Difficulties were faced as no back up was taken in one sub-treasury where there was a server crash. As per the back up policy furnished there was no off-site back up of TNMC data other than back up at Disaster Recovery Centre (DRC), Dharwad. In case of connectivity failures and crashes in TNMC, data would not be available for recovery.

The Department, however, stated that back up of TNMC data was kept at the Directorate. Further, even though back up was taken on DAT cartridges no mechanism was in place to record that the back up was actually taken and periodically tested independently for retrievability. Back up procedures needed to be reviewed for safe custody of the first copy in strong room/steel cupboards, considering storage of a second copy in off-site location as also a system for a regular check of the retrievability of the back up data.

3.6.9.5 No mechanism for internal audit of systems

No internal audit of IT Systems was being carried out periodically in any of the treasuries and TNMC. It was stated that this was being taken up. A continuous internal audit helps in proper maintenance of the systems, their efficiency and effectiveness and its security.

3.6.10 Conclusion

The process of acquisition of hardware and software for the 'Khajane' project was not done following the best practices which facilitate transparency and efficiency in such projects. The project was implemented without the preparation of a comprehensive URS document resulting in non-provision of some of the key features in the application software like a proper system for monitoring submission of NDC bills; adequate support for HDFC dues; and providing department-wise recovery particulars in respect of GPF, *etc*. The controls and validations provided could be skipped and hence were not fully effective. The environment in which the entire system was being run was not satisfactory as inadequate security of IT assets as also data was noticed.

3.6.11 Recommendations

- Appropriate controls and validations should be introduced to take care of accurate data inputs and outputs.
- System should support accounting of recoveries and repayments to HDFC.
- Appropriate change control procedures have to be adopted to make the changes to the system more orderly and with proper authority.
- The Government should come out with a comprehensive plan addressing the issue of security of IT assets which should be complemented by a proper disaster recovery plan to ensure continuity of operations in case of an adverse event.

3.6.12 The above points were referred to Government in September 2006; reply had not been received (October 2006).

HORTICULTURE DEPARTMENT

3.7 Working of Horticultural Farms

3.7.1 Introduction

Horticultural farms and nurseries were established in the State with the objective of demonstration of the cultivation of economically important horticultural crops, development of places for introduction/acclimatisation and centres of propagation of planting material suitable to the requirement of the geographical area. There were 244 farms/nurseries (total area: 5,282.74 ha) under the control of the Government at the end of 2005-06. The working of the farms/nurseries is looked after by the Department of Horticulture (Department) headed by the Director under the overall supervision of the Principal Secretary to Government, Horticulture Department. It has a staff strength of 1,587 including Additional Directors, Joint Directors, Deputy Directors, Senior Assistant Directors and Assistant Horticultural Officers/Horticultural Assistants. The total expenditure on these farms incurred during 2001-06 was Rs.79.80 crore of which only Rs.20.31 crore (25 *per cent*) was on development and maintenance. The revenue earned was Rs.21.60 crore.

A test-check of the activities of 115 farms/nurseries, records of the Directorate and 14 out of 20 districts offices for the years 2001-02 to 2005-06 by Audit during February-April 2006 disclosed the following:

3.7.2 Lack of planning and thin spreading of resources

Resources were spread thin across all the farms

There was no farm policy in the Department. The Department had not fixed any norms for staff deployment in the farms. The total area covered by the 115 farms test-checked was 3,336 ha, of which 2,281 was developed as of April 2006. The total expenditure incurred by the Department during the years 2001-02 to 2005-06 on these farms/nurseries was Rs.46.10 crore. Of this, Rs.36.30 crore was incurred on salary of establishment and wages. Thus, only Rs.9.80 crore (21 *per cent*) were spent on development and maintenance (including on propagation) working out to an average of Rs.0.29 lakh per ha over the five-year period. The revenue realised from these farms during the said period was Rs.13.43 crore. Ten farms did not yield any revenue and eight farms produced revenue of Rs.0.38 lakh only. There was, therefore, no prioritisation for development of revenue yielding farms with reference to the area identified as fit for development, geographical features and availability of water. Instead, resources were spread too thin across all the farms. The excess staff in the farms and nurseries assessed in June 2004 was transferred to other Departments/Zilla Panchayats only in December 2005.

The Department stated (October 2006) that it had taken up an evaluation study (July 2004) through an external agency to identify feasible horticultural farms and prepared (February 2005) a farm policy which was awaiting Government's approval.

3.7.3 Low yield of fruit crops

The rules for disposal of crops in farms/nurseries are prescribed from time to time in Government Orders. The disposal of crops is generally done through tenders. The rules prescribe the optimum (average) net yield of the fruits per plant per season in respect of chikku, guava, mango and coconut. The actual yield is to be assessed, 30-35 days before their disposal, on the basis of selection of rows and trees at random. The quantum assessed is to be kept confidential and taken into account while accepting the highest bid.

There was low yield of fruit crops even from trees in the economic bearing period. Remedial measures to overcome the effects of drought had not been taken by the Department

It was noticed that in respect of 71 farms where chikku, guava and mango were raised, according to norms (last prescribed in October 2003), total yield to be obtained during the period 2001-06 was 40,245 tonnes. Against this, actual yield obtained as per records was only 5,084 tonnes (13 *per cent*). This resulted in potential shortfall of revenue of Rs.17.21 crore calculated on the basis of minimum rate fixed for sale for each category of crop in the respective years. It was further noticed that of the total of 1.07 lakh trees in these farms, the age of 92,775 trees was within their economic bearing period; only 14,637 guava trees had crossed that period.

The Director attributed (June 2006) the low yield of crops to drought situation in the State during 2001-04. However, audit analysis revealed that 20 farms in respect of chikku, nine in respect of guava and 11 in respect of mango had produced yield exceeding 40 *per cent* of the prescribed yield during this period. Despite good rainfall during 2004-05 and 2005-06 throughout the State, the yields compared to prescribed norm had not improved substantially. Remedial measures for improving irrigation facilities, replacement of unproductive plants by productive ones, keeping of bees to enhance production, *etc.*, were not initiated (June 2006).

3.7.4 Conclusion

The Department did not have a farm policy, resultantly, no prioritisation for development of revenue yielding farms was made and resources were spread thin across the farms in the State. There was low yield of fruit crops even from trees which were in the age of economic bearing but suitable remedial measures were not taken to improve the yield and revenue realisation.

3.7.5 Recommendations

- Government should ensure the adoption and implementation of the farm policy immediately.
- Package of practices should be adhered to in order to improve yield.
- Resources should be allocated to farms keeping in view their revenue yielding potential.

3.7.6 The above points were referred to Government in August 2006; reply had not been received (October 2006).