



CHAPTER III

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CHAPTER III

PERFORMANCE AUDIT

FOREST, ECOLOGY AND ENVIRONMENT DEPARTMENT, URBAN DEVELOPMENT DEPARTMENT & HEALTH AND FAMILY WELFARE DEPARTMENT

3.1 Waste Management in Karnataka

Highlights

The Government of India, under the Environment (Protection) Act, 1986 framed (1998-2000) rules to regulate management of municipal solid wastes and biomedical wastes to protect and improve the environment. Poor compliance to the rules by the implementing agencies viz., urban local bodies and the health care establishments coupled with ineffective monitoring by the State Pollution Control Board resulted in continued environmental pollution and health hazards.

Lack of sustained efforts to secure community participation and involvement of non-governmental organisations for segregation of municipal solid wastes at source rendered the processing of the wastes difficult.

(Paragraph: 3.1.7.3)

Due to delay in acquisition of landfill sites, their development and purchase of tools & equipment for solid waste management, Rs. 85.63 crore remained unspent with the urban local bodies.

(Paragraph: 3.1.6)

Lack of scientific processing facilities at land fill sites and non-compliance by the urban local bodies with the processing procedure prescribed by the Directorate of Municipal Administration resulted in open dumping of mixed wastes leading to environmental pollution.

(Paragraphs: 3.1.7.6 and 3.1.7.7)

Disposal of untreated and unsegregated solid wastes in eco-sensitive forest lands had endangered the wild life.

(Paragraph: 3.1.9.3)

Disposal of biomedical wastes by health care establishments situated in places with population less than five lakh was totally in disregard to the biomedical wastes management rules resulting in environmental pollution.

(Paragraph 3.1.8.3)

Biomedical wastes handed over to a Common Biomedical Waste Treatment and Disposal Facility at Bellary was not handled in accordance with rules resulting in environmental pollution.

(Paragraph: 3.1.8.4)

Lack of monitoring by the State Pollution Control Board resulted in unscientific disposal of municipal solid wastes and biomedical wastes endangering public health and water resources.

(Paragraphs: 3.1.10.1 and 3.1.10.2)

3.1.1 Introduction

The Government of India in exercise of the powers conferred under the Environment (Protection) Act, 1986 framed the following rules to regulate the management and handling of municipal solid wastes and biomedical wastes to protect and improve the environment and to prevent health hazards to human beings and other living creatures:

- The Municipal Solid Wastes (Management and Handling) Rules, 2000 (MSW Rules)
- The Biomedical Wastes (Management and Handling) Rules, 1998 (BMW Rules)

The MSW Rules apply to every municipal authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes and require that every municipal authority shall comply with the MSW Rules as per the implementation schedule laid down therein. The BMW Rules apply to all Health Care Establishments (HCEs) who generate, collect, receive, store, treat, transport and dispose or handle biomedical wastes in any form. It is the duty of the generator of the BMW to take all steps to ensure that the BMW is handled in accordance with the rules and without any adverse effect to human health and environment.

3.1.2 Organisational set-up

The Secretary, Urban Development Department and the Deputy Commissioner of each district were responsible to enforce and oversee the implementation of MSW Rules by the Bruhath Bengaluru Mahanagara Palike (BBMP) and the other Urban Local Bodies (ULBs) viz., City Municipal Council (CMC), Town Municipal Council (TMC) and the Town Panchayat (TP) within the State. The Member Secretary, Karnataka State Pollution Control Board (KSPCB) was the Prescribed Authority set up under the BMW rules to grant authorisation and oversee the implementation of BMW rules by all the HCEs in the State. The KSPCB was also responsible to monitor the effective implementation of MSW and the BMW rules.

3.1.3 Audit objectives

The objectives of performance audit were to assess whether:

- funding and infrastructure were adequate for the implementation of rules and whether funds were used economically, efficiently and effectively;
- compliance to laws regulating municipal solid wastes and biomedical wastes was taking place;
- the monitoring mechanism was effective to check the non-compliance by the implementing agencies/generators of BMW; and
- an impact assessment of the implementation of rules was made by the Government.

3.1.4 Scope and methodology of audit

The performance audit covering the period 2003-08 was conducted during February-June 2008. The audit test-checked records and obtained replies to the audit memos/questionnaires from the Urban Development Department, Forest, Ecology & Environment Department, Director of Municipal Administration (DMA), KSPCB, 50 ULBs¹ (**Appendix 3.1**), 220 HCEs and 14 Regional Offices (ROs) of KSPCB of 12 districts² based on multi stage stratified sampling method. Besides, the landfill sites of all the test-checked ULBs and the BMW treatment and disposal facilities of all the 220 test-checked HCEs were jointly inspected during audit. The audit objectives were explained to the Secretary, Urban Development Department and the Secretary, Ecology and Environment Department during the Entry Conference held (April 2008) with them separately. The audit findings were discussed with Principal Secretary, Forest, Ecology and Environment Department during the Exit Conference held on 14 November 2008. The findings and recommendations were accepted by them and are incorporated in the review.

3.1.5 Audit criteria

The audit criteria were:

- MSW Rules
- BMW Rules
- Circular instructions of Government and DMA
- Annual Reports and Budget Documents.

¹ One Metropolitan Corporation-BBMP, Seven City Corporations (CC), 15 City Municipal Councils (CMCs), 20 Town Municipal Councils (TMCs) and Seven Town Panchayats (TPs)

² Bagalkot, Bangalore, Belgaum, Bellary, Dakshina Kannada, Davanagere, Dharwar, Gulbarga, Hassan, Mysore, Udupi and Uttara Kannada

Audit findings

3.1.6 Fund utilisation for implementation of rules

Due to delay in development of landfill sites and procurement of tools and equipment, Rs. 85.63 crore released to the ULBs remained unspent

Funds were provided by Government of India for implementation of solid waste management (SWM) out of Eleventh Finance Commission and Twelfth Finance Commission grants during the period 2003-08. Besides, funds were also provided under KUDCEMP³ and KUIDP⁴ out of Asian Development Bank assistance to selected ULBs for SWM during the same period. No funds were however, provided for implementation of BMW Rules.

The details of funds released and utilised out of Finance Commission, KUDCEMP and KUIDP funds for SWM in the State during the period 2003-2008 were as follows:

Table 1: Utilisation of Finance Commission grants by the ULBs

(Rupees in crore)

	2003-04		2004-05		2005-06		2006-07		2007-08		Total		
	R	E	R	E	R	E	R	E	R	E	R	E	B
Purchase of land	14.38	3.74	0.43	3.15	1.03	2.13	0.20	1.25	1.11	1.52	17.15	11.79	5.36
Development of landfill site	0	0	0.13	0	24.41	8.17	8.43	6.15	16.92	5.95	49.89	20.27	29.62
Tools & Equipment	0.14	0	4.58	3.11	39.26	15.26	21.77	9.13	15.65	4.56	81.40	32.06	49.34
I.E.C.	0	0	0.33	0.25	0.56	0.45	1.01	0.23	0.60	0.26	2.50	1.19	1.31
Total	14.52	3.74	5.47	6.51	65.26	26.01	31.41	16.76	34.28	12.29	150.94	65.31	85.63

R – Releases; E – Expenditure; B – Unspent Balances

Funds of Rs. 31.21 crore released to 10 ULBs⁵ under KUDCEMP and Rs. 7.44 crore released to four ULBs⁶ under KUIDP were fully utilised by the ULBs for SWM (March 2008).

Utilisation of funds in the test-checked ULBs was also poor

In the ULBs of test-checked districts the position of funds released and their utilisation during 2003-08 was as follows:

Table 2: Utilisation of Finance Commission funds by the test-checked ULBs

(Rupees in crore)

	Released	Utilised	Unspent balance
Purchase of land	5.96	4.33	1.63
Landfill site development	16.02	6.45	9.57
Tools and Equipment	28.94	10.63	18.31
IEC activities	0.80	0.42	0.38
Total	51.72	21.83	29.89

³ Karnataka Urban Development and Coastal Environment Management Project

⁴ Karnataka Urban Infrastructure Development Project

⁵ Bhatkal, Dandeli and Ankola in Dakshina Kannada, Karwar, Kundapur, Mangalore, Puttur, Sirsi, Udupi, Ullal and Uttara Kannada districts.

⁶ Channapatna, Ramanagaram, Mysore and Tumkur

The reasons for heavy unspent balances were delay in obtaining authorisation by KSPCB, procurement of tools and equipment, fixing agencies for landfill site development works and slow pace of civil works at landfill site.

3.1.7 Municipal Solid Wastes Management

3.1.7.1 *Inordinate delay in setting up waste processing and disposal facilities*

Out of 219 ULBs, only 189 ULBs had acquired landfill sites and 87 of them were yet to develop the landfill site

The MSW Rules stipulated that the waste processing and disposal facilities should be set up by all the ULBs latest by 31 December 2003. Out of 219 ULBs in the State, 189 ULBs (86 *per cent*) had acquired the landfill sites for the purpose as of 31 March 2008. Of these, landfill sites in respect of 87 ULBs were yet to be developed and put to use. Consequently, unprocessed wastes were being dumped either at the landfill site or in the open ground adversely affecting the ground/surface water and ambient air quality. DMA stated (May 2008) that land disputes and litigations, delay in fixing agencies for landfill site development and delay in completion of those works by these agencies were the reasons for delay in setting up the waste processing and disposal facilities.

The BBMP had the processing and disposal facilities for only 600 tonnes (20 *per cent*) out of 3,000 tones per day (tpd) of MSW generated in the city and the remaining 2,400 tpd of MSW were being dumped in the open and abandoned quarries without any processing thereby polluting the environment.

3.1.7.2 *Non-declaration of a buffer zone around the landfill site*

Under the MSW Rules, the ULBs were required to declare a ‘no development’ (buffer) zone around the landfill sites in order to ensure that no adverse consequences such as contamination of water bodies (open wells, tube wells, sump tanks, *etc.*), pollution of soil, *etc.*, take place. However, no action was taken by any test-checked ULB to get the buffer zone declared through the town planning authority. The ULBs replied (February-June 2008) that action would be taken henceforth.

3.1.7.3 *Non-segregation of MSW at source*

The ULBs did not involve the resident welfare associations and the non-governmental organisations for segregation of MSW at source

The rules provided that the MSW should be segregated at source into biodegradable (organic) and non-biodegradable wastes as also to recover recyclable wastes such as plastics, paper, glass, metal, *etc.* While the biodegradable wastes could be processed and stabilised through composting and vermin-composting methods, the inert wastes could be disposed of in landfills and the recyclables can be retrieved for manufacturing recycled plastics, glass, paper, *etc.* The rules further provide that in order to ensure total segregation of MSW at source and promote recycling or reuse of segregated material, the ULBs should organise citizen awareness programmes and enlist community participation in waste segregation. Regular periodical meetings with the representatives of local resident welfare associations (RWAs) and non-governmental organisations (NGOs) were also required to be

conducted by the ULBs to achieve waste segregation. In this connection, the committee appointed by the Supreme Court of India to study and report on the various aspects of scientific management of MSW also recommended (2001) involvement of (through RWAs and NGOs) rag pickers as waste collectors at the door step of households and commercial establishments so that segregation of wastes and recycling of segregated material are achieved at source.

Records of test-checked ULBs revealed that only 35 ULBs had conducted the awareness programmes. The remaining 15 ULBs did not conduct the awareness programmes despite availability of funds (**Appendix 3.2**). Due to lack of sustained efforts by the 35 ULBs which conducted the awareness programmes to secure community participation, the objective of segregation of wastes could not be achieved in any of these ULBs. None of the ULBs involved rag pickers for waste collection. Consequently, mixed waste was being collected and transported to the landfill sites in all the ULBs test-checked in audit.

3.1.7.4 Delay in door-to-door collection of wastes

Door-to-door collection of MSW was not possible due to non-mobilisation of self-help groups by the ULBs.

The rules provided that in order to stop littering of MSW in urban areas, the ULBs should, *inter alia*, organise and achieve door-to-door collection of wastes by involving either self-help groups (SHGs) or private operators or through their own staff (Poura Karmikas). For this purpose, the ULBs were also authorised to levy and collect user charges at nominal rates from house holds and commercial establishments including hotels, *choultries* and community halls. The SHGs involved in door-to-door collection of wastes were also entitled to a subsidy equal to 50 *per cent* of the cost of the vehicles *viz.*, push carts, tri-cycles, auto-tippers, *etc.*, required for the purpose which were provided by the Government out of Twelfth Finance Commission (TFC) grants.

Records of test-checked ULBs revealed:

- While the door-to-door collection of wastes by four⁷ ULBs had been fully achieved, it was only partially achieved (ranging from 4 to 80 *per cent* of the total households) in respect of 25 ULBs (2005-08).
- In respect of 21 ULBs, the door-to-door collection of wastes was yet to begin and the households themselves were depositing the MSW at the secondary storage points (community bins) directly in these towns.
- Though Rs. 50.07 lakh had been released to 12 out of 21 ULBs (**Appendix 3.3**) to distribute subsidy to the SHGs to buy door-to-door collection vehicles, no action had been taken by the ULBs in the matter.

The ULBs attributed (February-June 2008) the delay to lack of response from the SHGs to take up door-to-door collection in view of poor collection of user charges and also to delay in finalisation of contract with the agencies to supply these vehicles. The ULBs should have tried other alternatives (private operators or through their own staff) as instructed (May 2007) by DMA if the

⁷ BBMP, CC-Mysore, CC-Mangalore and Hubli-Dharwar Municipal Corporation

response from SHGs was not encouraging. Due to failure of the ULBs to organise and achieve the door-to-door collection of wastes, littering of wastes in public places could not be stopped.

3.1.7.5 Delay in procurement of tools and equipment for SWM

Inability of test-checked ULBs to manage contracts with suppliers for tools and equipment resulted in non-utilisation of Rs. 18.31 crore

The DMA released (2003-08) Rs. 81.40 crore to all the ULBs (except BBMP) out of the Finance Commission grants, exclusively for purchase of tools and equipment required for solid waste management. The tools and equipment comprised primary collection vehicles such as auto-tippers, tricycles and pushcarts for door-to-door collection of wastes, secondary storage containers, secondary transport vehicles such as dumper placers and tractor placers as well as equipment for street sweeping and waste collection from slums.

Records of 50 test-checked ULBs revealed that 27 ULBs (**Appendix 3.4**) did not utilise any amount out of Rs. 11.68 crore given for the purpose. The remaining 23 ULBs spent only Rs. 10.63 crore out of Rs. 17.26 crore up to March 2008. The unspent balance was Rs. 18.31 crore as on 31 March 2008. DMA attributed (May 2008) the delay in purchase of tools and equipment by the remaining ULBs to their inability to manage the tender process leading to cancellation of tenders, re-tendering, belated processing of tenders, *etc.*

In view of the delay in the procurement of tools and equipment by the ULBs on their own, Government decided (February 2008) to procure the tools and equipment for the ULBs through a centralised system of purchase at the district level. The Deputy Commissioners of the districts were therefore, directed (February 2008) to procure them by inviting tenders. The process had not been completed as at the end of July 2008 leading to delay in implementation of the SWM. This also resulted in continuation of the manual handling of MSW by the 'Poura Karmikas'⁸. But 16 (**Appendix 3.5**) out of the 50 test-checked ULBs did not supply safety gears such as aprons, masks, gumboots, hand gloves, *etc.*, to their Poura Karmikas.

3.1.7.6 Processing and disposal of MSW

Records of the test-checked ULBs and joint inspection of their landfill sites along with the ULB staff, revealed that none of the ULBs except BBMP, CC-Mysore and CC-Mangalore was processing the MSW as per the specifications of MSW Rules. As the landfill sites of most of the ULBs did not have compost plants to process the MSW, the DMA prescribed (May 2007) an alternate procedure to ensure scientific processing of solid wastes and to prevent contamination of ground water by the leachate⁹ generated from the solid waste. The procedure in brief was as follows:

- The ULBs were to ensure segregation of wastes at source, into at least two categories *viz.*, wet waste or biodegradable waste and dry waste or non-biodegradable waste. While the wet waste was to be land filled in the pits specially excavated for this purpose at the landfill site (compost pits), the

⁸ Sanitary workers

⁹ Leachate is the liquid that seeps through the solid waste and contains dissolved substances including chemicals

non-biodegradable or inert waste was required to be land filled in separate pits called engineering landfill pits.

- In order to arrest seepage of leachate into ground water and the adjoining soil, the compost pits were required to be excavated up to a depth which was above the ground water level by a minimum of two metres and the base of the pit was to be covered by a compacted layer of soil of 30 cms thickness.
- The biodegradable wastes were to be spread in the compost pits and compacted mechanically after covering the MSW with a layer of soil of 10 cms thickness on a day-to-day basis to prevent pollution of air and germination of pathogen due to composting activity. When the pit was full to a height of 45 cms below the ground level, it was to be covered by soil and compacted properly to prevent infiltration and soil erosion due to rains. The pit was to be allowed in this condition for 45 days to achieve total composting and then opened. The composted waste was to be sieved to get fine granules of compost and to recover the recyclable inert wastes, if any, mixed in the composted waste.

None of the test-checked ULBs complied with the norms prescribed by DMA for scientific processing of wastes

3.1.7.7 During the joint inspection of the landfill site of the test-checked ULBs it was observed that none of the 40 ULBs owning the landfill sites processed the MSW as per the specifications issued by DMA. Infact, it was noticed that 18 (**Appendix 3.6**) of them were not using the landfill sites, instead were dumping the MSW in open areas which was not authorised by the KSPCB. While the excavation of compost/engineering landfill pits was in progress in 19 ULBs, the remaining three test-checked ULBs were yet to take up these works resulting in non-processing of the wastes. As the wastes were not segregated in any of these ULBs, it was doubtful as to whether the scientific processing of wastes was possible even by complying with the procedure prescribed by DMA.

3.1.7.8 Unscientific processing of MSW

In ULBs, viz., BBMP and CMC-Karwar where processing of MSW was taking place, the following deficiencies were noticed.

CMC-Karwar was disposing of mixed wastes at sanitary landfill site creating unhygienic conditions

The action plan approved for SWM by CMC-Karwar envisaged setting up of a compost plant to process biodegradable wastes and a sanitary landfill for disposing of inert wastes. Both the compost plant and the sanitary landfill were contemplated in the same landfill site. Joint inspection of the landfill site revealed that the compost plant was not set up and mixed wastes were disposed of at sanitary landfill site by covering the MSW with a layer of soil and compaction with provision to collect and treat the leachate in separate leachate and oxidation ponds. The sanitary landfill site was close to habitation clusters and power transmission lines. Due to inadequate covering and compaction of wastes together with movement of vehicles at the site, the wastes were exposed to the open air emitting foul smell all around the area due to decomposition of organic wastes. The stray animals, birds and flies were also found active at the site rendering the entire operation unscientific. The CMC replied (June 2008) that the land for the compost plant was being released by the Forest Department shortly and thereafter action would be taken

to requisition funds from Government to commission the compost plant. The CMC should have ensured segregation of wastes and their processing as per the procedure prescribed by DMA till the compost plant was set up.

The compost plant at Haralakunte in Bangalore had no facility for leachate collection and treatment

BBMP had two compost plants one at Haralakunte on Hosur Road and the other at Mavallipura. The Haralakunte compost plant was managed by the Karnataka Compost Development Corporation (KCDC) and had an installed capacity to process 300 tpd whereas Mavallipura plant had an installed capacity to process 600 tpd of MSW. The Mavallipura plant was processing only 300 tpd of MSW and disposing of inert wastes/post process rejects in landfills separately as only 45 out of 100 acres of land was available to the plant due to ongoing litigations. Thus, BBMP could process only 20 per cent of the total wastes (3,000 tpd) generated in Bangalore city. It was also noticed that only Mavallipura plant was processing the MSW and treating the leachate as per the MSW Rules, whereas in respect of Haralakunte plant, the underground pipeline for flow of untreated leachate from the compost plant to the Agara leachate treatment plant had not been completed resulting in discharge of untreated leachate polluting the nearby water bodies.

The quantity of MSW received at Haralakunte compost plant was too much for the plant to process resulting in accumulation of garbage

The Haralakunte compost plant was processing only 150 tpd as against the installed capacity of 300 tpd whereas the average MSW received for processing was 450 tpd. The KCDC in fact, had written (September 2007) to the BBMP that the plant was working beyond its capacity and unless additional funds and machinery were made available to them the ever increasing load of MSW could not be processed. The accumulated garbage at the premises was reported (August 2007) at 3.47 lakh tonnes. The required funds and the machinery were yet to be provided by the BBMP. During the joint inspection of the dumping yard, it was noticed that the wastes were unsegregated and uncovered. The leachate was flowing freely without any facility for its collection and treatment. In view of lack of adequate processing facilities and exposure of the MSW to open air, there was pollution of ambient air and likely contamination of ground water.

3.1.7.9 Mixing up of BMW with MSW and burning of MSW

During the joint inspection of the landfill sites of the test-checked ULBs, it was observed that in respect of eight¹⁰ ULBs, BMW was mixed with MSW and in respect of seven¹¹ ULBs the MSW were burnt openly. The ULBs stated that the rag pickers of the town were burning the MSW to recover recyclables such as glass, metal, etc. The reply was not tenable as the ULBs failed to dispose of the MSW as per rules and to prevent the unauthorised entry of people to the landfill sites.

¹⁰ CMC-Harihara, TMC-Sankeshwar, CMC-Gokak, CMC-Nippani, CMC-Iikal, TMC-Mudhol, CMC-Hospet and CMC-Jamakhandi

¹¹ CC-Davanagere, CMC-Gokak, CMC-Bagalokot, CMC-Jamakhandi, CMC-Hospet, CMC-Gulbarga and CMC-Nippani

3.1.8 Biomedical Wastes Management

Joint inspection of 220 HCEs and review of records of the ROs of the KSPCB in the test-checked districts revealed the following deficiencies in the implementation of BMW Rules.

3.1.8.1 Lack of treatment and disposal facilities for BMW

Most of the HCEs located in rural areas did not have any treatment and disposal facility

Of the 220 HCEs, 56 HCEs of Bangalore, Belgaum, Davanagere, Gulbarga, Hassan, Mysore, Mangalore, Dharwar and Udupi were availing the Common BMW treatment and disposal facilities set up by private operators and the remaining 164 HCEs did not have either their own treatment and disposal facility or were subscribing to any authorised common facility.

3.1.8.2 Grant of authorisation by KSPCB

There were 52 HCEs in the test-checked districts working without a valid authorisation by the KSPCB

The BMW Rules provided that the authority granting authorisation or renewal thereof shall make necessary enquiry to satisfy itself that the applicant possesses the necessary capacity to handle BMW in accordance with the rules before granting such authorisation or renewal. Inspection of the HCEs in the test-checked districts which were not subscribing to any common facility revealed that authorisations and their renewal to these HCEs were granted by the respective ROs without ensuring their capacity to handle the BMW as per rules. This accentuated the pollution of environment besides endangering the public health due to unhygienic conditions.

Records revealed that 52 (**Appendix 3.7**) out of the 164 HCEs inspected had been functioning without a valid authorisation issued by the KSPCB. On being pointed out in audit, action was taken by the ROs to get these registered for granting authorisation under the rules.

3.1.8.3 Deficiencies in deep burial facilities

The HCEs located in places with population below five lakh were permitted under the BMW Rules to dispose of BMW in deep burial pits as per the specifications prescribed in the rules. The standards of deep burial required that the location of the pit should be authorised by the prescribed authority and that it should be dug about two metres deep and half filled with waste. Thereafter, it is to be covered with lime within 50 cm of the surface before filling the rest with soil. The pits should be away from dwelling places and water sources so that no contamination occurs. The pit should be covered by a layer of 10 cms of soil on each occasion when wastes are added to the pit. Covers of galvanised iron/wire meshes should be used so that animals should not have any access to these pits.

Government hospitals in the test-checked districts did not process the BMW as per the rules

A joint inspection of the deep burial facilities of 164 HCEs revealed that none of the HCEs had maintained the pits as per specifications in the rules. While 21 Government hospitals of the test-checked districts viz., Bagalkot, Gulbarga, Bellary, Davanagere, Belgaum, Mysore, Karwar, Hassan and Udupi had dug pits in their own premises and were disposing of all categories of BMW in these pits, five private HCEs in these districts were handing over the MSW to

the municipal staff for disposal. Besides this, different types of BMW such as waste sharps, solid wastes contaminated with blood and body fluids (*viz.*, cotton, dressings, soiled plaster casts, linen, beddings *etc.*) were found scattered in the premises of 15 Government hospitals (**Appendix 3.8**) endangering public health. Open burning of these wastes was also observed during the joint inspection of these hospitals which polluted the atmosphere. The pits in which BMW was disposed of were not covered with soil as required under rules. Consequently, stray animals had free access to these pits and flies were active around rendering the entire area unhygienic.



Stray dogs at the BMW pits located within the premises of Government Hospital, Channarayapatna (10 June 2008)

The hospital authorities attributed (February-June 2008) the failure to lack of funds and necessary staff. Forty eight private hospitals were not disinfecting and mutilating the waste sharps such as needles, syringes, scalpels, blades, glass, *etc.*, before discarding them in the pits or other public places. Similarly, the discarded disposable items such as saline bottles, tubings, intravenous sets, catheters, *etc.*, were sold to the scrap dealers/local vendors/rag pickers by these HCEs instead of disinfecting, disfiguring (puncturing) and deep burying as specified in the rules to prevent their reuse. The liquid wastes generated by a private HCE in Gokak town of Belgaum district were discharged into a septic tank excavated adjacent to the main road and in front of the hospital. The municipal authorities and the Pollution Control Board were yet to take remedial action in the matter.



Open discharge of liquid waste by Navjeevan Hospital, Gokak (17 April 2008)

3.1.8.4 Deficiencies in common BMW treatment and disposal facilities

There were deficiencies in treatment and disposal of BMW even by operators of common BMW treatment and disposal facilities

Common facilities to treat and dispose of BMW set up by private operators were working at Bangalore, Belgaum, Davanagere, Gulbarga, Hubli, Mangalore and Mysore. Fifty six HCEs subscribing to these common facilities were jointly inspected and following deficiencies were noticed;

- Segregation of wastes at source, colour coding and labelling of the containers/bags were not practiced by 11 HCEs which was contrary to the rules.
- Six¹² HCEs were found storing the untreated BMW for more than 48 hours and up to seven days of their generation without being authorised to do so. This was not only contrary to BMW rules but also had potential risk of spreading infections.
- The different categories of BMW in St.Martha's Hospital, Bangalore, although segregated at source, were mixed in a common container before their transport to the common facility.
- SSM Hospital, Hassan although subscribing to a common facility was disposing of all the BMW in municipal dust bins. The liquid wastes generated in the hospital were let out into the municipal drain without treatment.
- The Vijayanagar Institute of Medical Sciences (VIMS), Bellary was the common facility authorised (up to 31 December 2007) by the KSPCB to accept BMW from all Bellary based HCEs. The common facility had only one incinerator without air pollution control equipment. VIMS had no other facilities such as an autoclave, a microwave and a shredder to treat different categories of BMW. The only incinerator in VIMS did not have the operating standards as specified in the rules. In spite of all these deficiencies, the VIMS was collecting all categories of BMW from the HCEs and was not treating/disposing of these as per the rules. During the joint inspection of the common facility, it was observed that different categories of BMW were burnt in the open air and the half burnt wastes were strewn all around the premises. Stray animals had free access to the site and solid wastes contaminated with blood and body fluids were abandoned without any treatment with potential risk of infection.

The Vijayanagar Institute of Medical Sciences, Bellary which collected BMW of all HCEs in the city did not treat them as per the rules



Biomedical waste being burnt in the premises of Vijayanagara Institute of Medical Sciences, Bellary (29 March 2008)

¹² General Hospital-Holenarasipura, Rajiv Hospital-Hassan, SSM Hospital-Hassan, Taluk General Hospital-KR Nagar, Taluk General Hospital-Hunsur and Bahusar Nursing Home-Hunsur

3.1.9 Other points

3.1.9.1 Irregular mining operations in landfill site

The landfill site of CMC-Hospet was used for mining purpose instead of solid waste management

CMC, Hospet was allotted (May 2006) 35 acres of land by the Deputy Commissioner (DC), Bellary for landfill site development and Rs. 80.64 lakh was released (2003-06) for solid waste management. Tenders were invited (November 2006) for construction of compound wall and other landfill site development works but were cancelled (January 2007) as there were lapses in the observance of tender procedure. Records revealed that the CMC after cancelling the tenders, passed (February 2007) a resolution to take up the levelling of the landfill site and dispose of the excavated soil by auction sale through Mines and Geology Department as the soil was found to be rich in iron ore. The receipts were proposed to be appropriated by the CMC. When the mining operations were in progress (January 2008), the Mines and Geology Department stopped the CMC from continuing further excavation at the landfill site as there were litigations over mining rights. The CMC, in reply to audit, contended that the resolution to dispose of the excavated soil through auction sale was passed with the approval of the then Administrator (Deputy Commissioner) only to prevent illegal mining activities in the landfill site. But the fact remained that the CMC did not take expeditious action to develop the landfill site even after two years of the allotment of land and instead, resolved to carryout mining operations. The CMC had also not prepared an estimate (taking the prevailing ground levels) for the levelling work required at the landfill site. Thus, the injudicious decision of the Administrator, CMC to take up mining operations at the landfill site delayed the scientific disposal of MSW despite availability of land and the required funds. The remarks of the Administrator (DC, Bellary) were not received (August 2008).

3.1.9.2 Delay in landfill site development due to injudicious abandoning of the site

City Corporation, Gulbarga lost more than two years in developing the landfill site

The City Corporation, Gulbarga was allotted (February 2004) 28.5 acres of Government land in Udnoor village of Gulbarga taluk for MSW management and the KSPCB granted (September 2004) authorisation to set up the landfill site and carryout the processing of MSW at this site. However, no action was taken by the City Corporation on the ground that laying an approach road to the landfill site was too expensive (Rs. One crore). The DMA therefore, directed (November 2006) the Corporation to acquire any other suitable land for the purpose and another land (32.25 acres) at Khandal village was identified for purchase at a cost of Rs. 65.25 lakh. The land owners were also paid 75 per cent of the cost of the site and the balance amount was deposited (June 2007) with the Assistant Commissioner, Gulbarga. The possession of the land could not be taken due to an ongoing litigation. Meanwhile, the KSPCB insisted (August 2007) on obtaining an environmental clearance from the State Environment Impact Assessment Authority before granting authorisation to commission the landfill site at Khandal. The Corporation therefore, decided (December 2007) to revert to the land at Udnoor village as the approach road to this land was taken up by the State Public Works Department.

Thus, failure of the City Corporation to initiate any action to develop the landfill site at Udnoor village for over two years after its allotment and their injudicious action to pay the land owners of Khandal village without ascertaining the position of pending litigations and the necessity to obtain environmental clearance resulted in not only an inordinate delay in commissioning the landfill site but also locking up of Government funds of Rs. 65.25 lakh.

3.1.9.3 Disposal of MSW in eco-sensitive forest lands

The Forest Department released forest land to five¹³ ULBs of Uttara Kannada district for disposal of MSW with the approval of Government of India under the provisions of the Forest (Conservation) Act, 1980.

Untreated and unsegregated MSW was being dumped by ULBs in eco-sensitive forest lands

Records revealed that all these ULBs were disposing of the unsegregated wastes containing bio-degradable, recyclable and hazardous wastes at the landfill site. The scientific processing of MSW as per rules was not ensured by these ULBs. The location of landfill sites in the forests was prohibited in the MSW Rules. No specific conditions as required under the Forest (Conservation) Act, 1980 had been imposed by the Government of India/State Government for strict observance by the ULBs before granting the forest land for SWM purpose in any of these cases. The Conservator of Forests, Sirsi in reply to an audit query stated (October 2008) that supplementary agreements would be executed with these ULBs stipulating conditions to dispose of the wastes strictly in accordance with MSW rules.



Disposal of untreated and mixed MSW by CMC-Karwar (3 June 2008)

3.1.10 Monitoring of Waste Management

3.1.10.1 Municipal Solid Waste Rules

Monitoring of ground water, ambient air and leachate quality by KSPCB was not effective

The compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality was not monitored by any of the ROs of the KSPCB in the test-checked districts. Authorisations and their renewal were being issued to the ULBs in a routine manner without ensuring the operation of treatment and disposal facilities and monitoring the compliance standards.

¹³ CMC-Karwar, TMC-Bhatkal, TMC-Kumta, TP-Ankola and TP-Honnar

Besides, the ground water quality around the dumping areas of MSW had gone unchecked for its potability, thereby endangering the public health.

3.1.10.2 Water quality monitoring

The MSW Rules provided that before establishing any landfill site, baseline data of ground water quality in the area shall be collected and kept on record and the ground water quality within 50 metres of the periphery of landfill site shall be periodically monitored (every season) to ensure that the ground water is not contaminated beyond acceptable limit. The usage of ground water in and around the landfill site for any purpose including drinking and irrigation was to be considered only after ensuring its quality.

The ground water at Haralakunte compost plant and Khasbagh in Belgaum was not potable

Contrary to these provisions, it was observed that none of the test-checked ULBs except BBMP, CC-Gulbarga, CC-Belgaum and CMC-Udupi had maintained the baseline data on ground water quality. The periodical monitoring of water quality was also not monitored by these ULBs. Consequently, the fitness of ground water around the landfill sites for drinking and irrigation purposes could not be verified. The ground water samples were got tested at the instance of audit in BBMP and Belgaum. It was revealed that the ground water quality of BBMP (near Haralakunte KCDC Plant) and Belgaum (near Khasbagh) did not conform to the norms specified in MSW Rules and was therefore, not fit for consumption. The ULBs concerned were yet to take remedial action in the matter.

3.1.10.3 Biomedical Waste Rules

Periodical inspection of the HCEs was also not ensured by the ROs. Out of the 220 HCEs inspected in audit, 98 HCEs had not been inspected by the respective RO even once after their inception and 15 of these HCEs were inspected once only. The remaining 107 HCEs were inspected by the ROs periodically but no inspection report was forthcoming.

3.1.11 Impact assessment

Government did not make any impact assessment of the implementation of waste management rules

The Government was yet to make an impact assessment of the implementation of waste management rules in the State although non-compliance with the rules by the implementing agencies/generators of wastes and lack of monitoring by the KSPCB were apparent.

3.1.12 Conclusion

Utilisation of funds for SWM was not efficient due to non-availability of suitable landfill sites, avoidable delays in their development and inability of the ULBs to manage contracts for supplies. Compliance to the laws regulating MSW and BMW by the ULBs and the HCEs continued to be poor even after eight years of the framing of the MSW and BMW rules. Monitoring by the KSPCB was also ineffective leading to non-realisation of the objectives of protecting and improving the environment through a scientific management of MSW and BMW.

3.1.13 Recommendations

- Procurement of tools and equipment should be expedited to achieve total ban on manual handling of wastes and to ensure storage and transportation of MSW under hygienic conditions.
- DMA should ensure acquisition of landfill sites and their development by the ULBs in a time bound manner.
- Door-to-door collection of wastes should be achieved *cent per cent* in a time bound manner by mobilising the self help groups and if necessary by compensating the loss due to non-payment of user charges by the citizens.
- Immediate action should be taken to involve the resident welfare associations, non-governmental organisations and the rag pickers to secure segregation of wastes at source.
- Processing of wastes by the ULBs in accordance with the procedure prescribed by the DMA should be strictly enforced to prevent air pollution and ground water contamination till composting plants and sanitary landfills are commissioned in all the towns.
- The KSPCB should monitor the quality of ground water, ambient air and leachate around the landfill sites regularly and grant authorisation/renewal only after ensuring compliance to the laws.
- Authorisation/Renewal to HCEs in places with population less than five lakh should be granted only after satisfying that at least the standards of deep burial are complied with by the HCEs as per BMW Rules.

The matter was referred to Government in September 2008; reply had not been received (October 2008).

HOME DEPARTMENT

3.2 Computerisation in Police Department

Highlights

The department implemented several initiatives to use information and communication technologies to build up a database of crime and criminal information and computerise various activities in order to facilitate early detection of crimes as also to improve its services. However, the initiatives were undertaken without adequate planning and a comprehensive IT strategy leading to delay in realisation of the objectives.

The computerisation initiatives were undertaken individually on piecemeal basis without adopting a coordinated approach and documented IT strategy resulting in duplication of efforts and delay in implementation.

(Paragraph: 3.2.5)

Discrepancies in design, connectivity problems, inadequate input/output controls and deficiencies in database maintenance rendered the Crime Criminal Information System database incomplete and unreliable.

(Paragraph: 3.2.6)

The Police IT-2000 software package initiated in March 2001 to be completed in three years could not be rolled out so far even after investing an amount of Rs. 1.33 crore due to non-completion of User Acceptance Tests.

(Paragraph: 3.2.7)

Due to delay in development, the G-CARE application developed at a cost of Rs. 47 lakh in 2003 could be implemented only in ten locations so far against the target of implementing in all districts of the State by October 2004.

(Paragraph: 3.2.8)

3.2.1 Introduction

The Police Department of the Government of Karnataka has undertaken and implemented various computerisation projects with the aim of harnessing information and communication technology for improving its functioning. This review covers the following major IT initiatives carried out/completed by the Police Computer Wing of the Department during the last five years.

- The Crime and Criminal Information System (CCIS) financed by the Government of India for building up a database of crime information of uniform structure at District/State/National levels. CCIS was planned to be replaced by a new software package “Common Integrated Police Application” (CIPA) for implementation at the police station level in 2004-05.

- Police IT-2000 Project covered major activities of the Department like Administration, Finance, Corps of Detectives, Forensic Science Laboratory, Training, *etc.*, apart from crime and criminal information.
- Geographical Information System based Crime Analysis and Reporting Engine (G-CARE) to store and retrieve crime data with an analysis of their area-wise occurrence along with a facility of spatial representation.

3.2.2 Organisational set-up

The Police Department of the Government of Karnataka functions under the administrative control of the Principal Secretary, Home Department and is headed by the Director General and Inspector General of Police. The computerisation work undertaken by the Police Computer Wing was implemented by the Additional Director General of Police/Inspector General of Police, in charge of the Wing who was assisted by a Deputy Inspector General of Police.

3.2.3 Audit objectives

The objective of the IT Audit Review was the evaluation of implementation of IT initiatives with reference to their timely completion, economy and efficiency in procurement, effectiveness of controls, utilisation of IT assets and overall realisation of objectives of various projects.

3.2.4 Scope and methodology of audit

The review was confined to the evaluation of the major computerisation activities which were commenced from the year 2000 by the Police Computer Wing and completed during the last five years (2003-08). A test-check of records of the Police Computer Wing of the department at Bangalore, Finger Print Bureau, Finger Print and G-CARE units at Bangalore, two District Police Offices¹⁴ and five Police Stations¹⁵ was conducted between January 2008 and April 2008. Entry and Exit conferences were held in January 2008 and June 2008.

Audit Findings

The deficiencies noticed in planning and implementation of selected IT initiatives relating to development of software, procurement of hardware, timely completion, maintenance of databases, utilisation of the IT assets *etc.*, are discussed in the succeeding paragraphs:

¹⁴ Commissioner of Police, Bangalore and Superintendent of Police, Uttara Kannada

¹⁵ Anekal, Basavanagudi, Kalasipalyam, Karwar and Udupi

3.2.5 IT Policy and strategy

Lack of strategic IT Plan resulted in sub-optimal benefits of computerisation

The computerisation of the Department was taken up on piecemeal basis without any co-ordination. Instead of executing various projects in line with the predetermined IT strategy for the entire Department, different wings of the Department undertook various projects in different areas of activity separately and independently. Government of India had suggested in March 2004 that computerisation being one of the priority areas of police modernisation, a plan was to be drawn up and got vetted by the National Crime Records Bureau (NCRB), Government of India before including them in annual plans. However, no such plans were drawn up and submitted.

Further, the Department did not adopt any structured approach for development and implementation of various computer applications. There was no documentation laying down critical information such as the nature and scope of each system development project. There was no procedure for defining the user requirements and making a formal technical feasibility study before development of software. Absence of a coordinated approach to computerisation resulted in duplication of effort and under-utilisation of IT assets and facilities.

The Department stated (August 2008) that a comprehensive plan could not be drawn up and hence different projects were initiated which were capable of being integrated into one another and application integration was the last step in the roll out of IT strategy. While replying to the observation, the Department also stated that the software supplied by NCRB and other software packages were on different platforms and integration would be separately taken up in phase II of the project. The reply of the Department confirmed that the IT initiatives were undertaken without an IT strategy.

3.2.6 Crime Criminal Information System

The Police Department in Karnataka started implementation of the CCIS software supplied by the NCRB in 1994-95. The finance required for the hardware and infrastructure was made available by Government of India. The implementation of the package was aimed at building up a database of crime information of uniform structure at District/State/National levels. The NCRB modified the package in 2000-01, with the object of assisting the investigating police officers with relevant information on crime and criminals facilitating detection of criminals and reducing paper work. The implementation of the modified software package was commenced in 2001 and completed during the last five years in all districts of the State.

Audit observed that many deficiencies in design and development, inadequate efforts in maintenance of the system and connectivity problems led to incomplete and unreliable database not fulfilling the objective, as detailed in the following paragraphs.

3.2.6.1 Discrepancies in design

- (i) The data entry was carried out at the police station level. In the absence of provision for data entry in Kannada, errors in translation from Kannada to English resulted in omissions/mistakes in filling all the fields in various forms.
- (ii) In a test-checked district-level office, it was observed that data received from police stations could not be integrated directly into consolidated database due to data entry errors. In such cases, queries were run to rectify the errors before integration.
- (iii) Transfer of cases to other police stations could not be made through the system due to non-provision of functionality in the package; therefore, such transfers were made manually with a note to that effect in the remarks column.
- (iv) Creation of masters was not systematically documented in the offices test-checked and data entry could not be made due to lack of codes to be created by modifying the masters. According to the Department, this was due to the limitations in the software supplied by NCRB, which was not amenable for local customisation.

3.2.6.2 Connectivity problems

Due to connectivity problems /slow data transfer, data from police stations were brought to District offices in CDs/External hard disks. As a result, it was not possible to transfer latest data to District/ State servers for making it available from one police station to others for comparison.

Copy of every FIR was being sent to the district police offices for generation of reports to the senior officers. Though all required data was available, the CCIS package could not support the generation of the report due to connectivity and data transfer problems.

The crime details once keyed in could not be compared with similar cases in the database due to the absence of real-time connectivity with other police stations.

3.2.6.3 Inadequate input /output controls

- (i) Police stations were directed that before data capture they had to fill up the Integrated Investigation Forms (IIFs), that covered all crime and criminal information. However, this was seldom followed in practice as seen in test-checked offices. This resulted in data entry being carried out in piece meal manner and some data being left out, un-captured.
- (ii) It was further observed that some of the source documents on which input information was based did not contain information for all the fields as the source documents were not designed under CCIS but was designed under different acts and rules. The operators in test-checked police stations were not aware as to the source of certain data inputs.
- (iii) In one of the data entry screen, due to lack of validation controls, when certain fields like FIR numbers and major head of crime details were

- skipped, the system exhibited an error message, which when ignored, allowed the data keyed-in to be saved leading to incomplete data capture.
- (iv) According to existing instructions, FIRs should invariably be printed from the computers for submission to courts, except when computers are out of order. It was, however, observed that in some of the police stations manually written FIRs were being filed as the CCIS was not configured to support Kannada language.
 - (v) It was observed that “Reports” menu containing 45 reports was not working in two police stations visited. This indicated that the database was not made use of largely in day-to-day work.
 - (vi) It was observed that no user manuals or operation manuals were readily available for user’s reference in any of the test-checked offices. Making available such manuals could improve the quality of data capture.

3.2.6.4 Maintenance of the CCIS Database

Audit observed many shortcomings in maintenance of the database, which resulted in incomplete and unreliable database, which would not be useful for any meaningful management decision making, as illustrated below.

- (i) Provision is made in several menus/sub-menus for capture of text/input data by scanning the same. However, it was observed that no scanning could be made since scanners were not installed or were non-functional in all police stations test-checked. Databases were incomplete, as it did not contain all such images/text data.
- (ii) An analysis of the data furnished revealed that the database was incomplete in many forms/fields. No data entry was made by some police stations in tables meant for storing key information of FIRs and arrest details, making the data less useful to the investigating officers. The incompleteness was more than 90 *per cent* in 15 other fields of four tables meant for storage of information on details of persons arrested in test-checked police stations.
- (iii) Data entry for old periods was in arrears in test-checked police stations.

Thus, due to deficiencies in implementation, lack of proper connectivity and problems in maintenance of database, the full utilisation of the CCIS application could not be achieved to realise the objective of the project.

The Department stated (August 2008) that the CCIS software was developed and supplied by the NCRB mainly as a MIS software for higher level Officers and admitted that it suffered from many design defects and lack of flexibility. It was also stated that many functions could not be utilised due to lack of connectivity and added that the Department had tried to customise it to the extent possible. The reply confirms the fact that the Department was not able to make optimum utilisation of the CCIS even after seven years of implementation to achieve the objectives of this project.

3.2.6.5 Lack of trained manpower

It was observed that the availability of trained persons in police stations was very low. Even those who were trained were often assigned other duties. Consequently data entry work got delayed and arrears of data entry of old periods could not be easily overtaken. Some of the operators using the software package were not trained formally. In one of the district police office test-checked, though four personnel were trained as Administrators, none of them was designated to function as Administrator. The following table shows the shortage of trained personnel.

Table 1: Shortage of trained staff

Police Station	No. of personnel working	No. of personnel trained
Kalasipalyam	128	Nil
Basavanagudi	91	02
Anekal	53	03

There was no policy to fix any frequency/deadline within which every employee is trained and his knowledge updated with refresher courses. Further, there was no procedure to document difficulties being faced by individuals while working in their routine jobs, to enable the trainers to address the same. Some of the menus were not being used as the police stations were not aware of the utility, procedure and source documents from where the data could be captured.

3.2.6.6 Introduction of CIPA

In 2004-05, Government of India proposed to introduce a new package “Common Integrated Police Application” (CIPA) for implementation at police station level. Accordingly, purchase of computers was also sanctioned by State Government for setting up networks in police station. The project was to be implemented in phases with 10 *per cent* coverage in 2004-05, 30 *per cent* in 2006-07 and rest in 2007-08. However, the Department procured hardware required for 10 *per cent* of police station in 2004-05, 30 *per cent* in 2005-06 and balance in 2006-08. In all, a sum of Rs. 10.92 crore was incurred so far. The development of the software was to be carried out by NIC, Delhi. It was however, observed that the software was yet to be delivered (August 2008).

In some of the police stations, the operating system-LINUX supplied for implementation of the new application package, was removed and windows operation system were loaded for day-to-day use.

Computer systems purchased in advance of development of the CIPA had resulted in blocking up of funds to the tune of Rs. 10.92 crore and led to under utilisation.

3.2.7 Police IT 2000 Project

The State Government approved (November 1999) the “Police IT-2000” Project for computerisation of all activities of the Police Department in Karnataka at an estimated cost of Rs. 16.35 crore to be completed in three years. In March 2001, M/s. CMC was entrusted with preparation of the

System Requirement Specification (SRS), which was delivered by the company in September 2001. The tenders for development of the software were called for in September 2002 and Wipro Limited was entrusted with the work at a cost of Rs. 1.90 crore in February 2004. Though an amount of Rs. 1.33 crore has been paid to them so far, the application package developed was yet to be rolled out (August 2008) due to non-completion of User Acceptance Tests.

Though the Technical Advisory Panel of the Department felt (August 2000), that preparation of the road map and milestones for the project, all inputs like hardware, software and connectivity for computerisation of the Department as a whole was desirable before purchase of hardware, no project initiation documents spelling out nature and scope of the project were drawn up.

The Department stated (August 2008) that the vendor committed to deliver the package without proper appreciation of its scope resulting in several mismatches and the project delivery dates were set before requirement definition and project estimation, which turned out to be unrealistic. The reply confirmed that the project implementation was done without proper planning.

3.2.8 GIS based Crime Analysis and Reporting Engine

In response to a request of the Department, the Karnataka State Remote Sensing Application Centre (KSRSAC) submitted a project proposal to State Crime Record Bureau for Geographic Information System based Crime Analysis and Reporting Engine (G-CARE), a customised application. The project intended to facilitate the decision makers to store, analyse and retrieve the crime data with reference to their spatial locations. The total cost of the project was estimated at Rs. 47.39 lakh and full payment was made in June 2003. Subsequently, a Memorandum of Understanding (MOU) was entered into with KSRSAC (October 2003), for implementation of the project within 12 months.

The following deficiencies were noticed in the implementation of the project leading to delays and defective implementation.

- (i) The user requirements were not spelt out to the agency before taking up the project. While the project was to be completed by October 2004 as per the MOU, the requirement specification was submitted to the agency only in May 2005.
- (ii) A fresh request was made to the agency in August 2006 for provision to make analysis based on additional parameters like polling booths and beat numbers, *etc.*, which indicated that the user requirements were not analysed and spelt out at the time of submission of specifications.
- (iii) No documents were available to indicate that unit testing, functional testing, end-to-end testing and finally a user acceptance test of the application package developed was carried out by the vendor/department before roll-out of the project.

- (iv) The software did not provide for category wise entries for theft cases, (like two-wheeler, four-wheeler) crimes (heinous or non-heinous) *etc.* Further, jurisdictional maps were not exhaustive with marking of all important roads/landmarks.

Notwithstanding, the application package was implemented in ten locations - six zones of Bangalore and districts of Bagalkot, Gadag, Udupi and Dakshina Kannada in May 2007. The package was yet to be implemented in the remaining districts of the State as of August 2008, resulting in non- realisation of the benefit of the investment of over Rs. 47 lakh, even after five years. The Department stated (August 2008) that the delays were due to 'scope creep' and even after implementation in over 10 locations, further modifications were being done based on feedbacks received. Further, it was stated that the implementation would be completed before March 2009. The reply confirmed lack of planning and project monitoring resulting in delay in achieving the objectives of G-CARE.

3.2.9 Conclusion

The initiative of the Police Department to use information and communications technology to improve the quality of services could not meet the objectives due to deficiencies in planning and absence of coordinated approach. Delays in implementation, technical deficiencies, lack of proper connectivity, *etc.*, resulted in sub-optimal utilisation of the IT assets and facilities created under various projects.

3.2.10 Recommendations

- The Department should evolve a comprehensive plan for implementation of CIPA package at the police station level along with timelines and assignment of responsibilities to key functionaries with a view to avoid the repetition of shortcomings in implementation of CCIS at the district level.
- The training aspect may be focused so as to ensure adequacy of trained manpower to run computer applications at various levels.
- Department may take stock of the situation regarding implementation of applications like Police IT-2000 and G-CARE and make a time-bound plan for state wide implementation.

WATER RESOURCES DEPARTMENT – MINOR IRRIGATION
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3.3 Lift Irrigation Schemes

Highlights

Lift Irrigation Schemes envisage pumping water for irrigation to higher terrain where flow irrigation is not possible due to topographical conditions. The programme suffered due to non-availability of water, inadequate supply of power, repairs to machineries and overlapping of irrigable area with other irrigation projects. Consequently, intended objective of irrigating the targeted area was not achieved.

There was shortfall in expenditure *vis-a-vis* budget allocation under plan and non-plan schemes ranging from 16 to 74 per cent and 21 to 47 per cent respectively during 2003-08.

(Paragraph: 3.3.6)

Against the designed irrigation potential which ranged from ninety thousand hectares to 1.06 lakh hectares during 2002-03 to 2006-07, the actual area irrigated ranged from eight thousand hectares to 27 thousand hectares only with percentage of shortfall ranging between 70 and 92.

(Paragraph: 3.3.7)

Two hundred and eleven Lift Irrigation Schemes with *atchkat* of 42,115 hectares were defunct due to non-availability of water/power supply and repairs, *etc.*

(Paragraph: 3.3.7.1)

There were cases of changes in scope of work, non-availability of water, power and overlapping of the *atchkat* of Lift Irrigation Schemes with other projects, *etc.*, resulting in projects remaining defunct which indicate that the survey and investigation taken up before commencement of works were unrealistic.

(Paragraph: 3.3.8)

The execution of the projects suffered due to delay in acquisition of land, defective execution of works, non-synchronisation of different components of work rendering the projects remaining incomplete. This resulted in non-achievement of the objective of the Lift Irrigation Schemes as envisaged.

(Paragraph: 3.3.9)

Sixteen Lift Irrigation Schemes coming under the command area of major/medium irrigation projects were rejuvenated at a cost of Rs. 2.30 crore though the *atchkat* was overlapping with the other irrigation projects.

(Paragraph: 3.3.9.4)

The Department failed to avail central excise duty exemption towards contracts for supply of machineries for Lift Irrigation Schemes costing

Rs. 43.85 crore of which the exemption certificates were issued to the contractors for Rs. 13.18 crore.

(Paragraph: 3.3.10.3)

An amount of Rs. 5.91 crore was incurred towards maintenance of 71 defunct Lift Irrigation Schemes during 2003-07.

(Paragraph: 3.3.12.2)

Out of 256 Lift Irrigation Schemes taken up for rejuvenation under Eleventh Finance Commission grants, 86 Lift Irrigation Schemes rejuvenated at a cost of Rs. 12.34 crore failed in restoring an *atchkat* of 19,581 hectares.

(Paragraph: 3.3.13)

The water rate demand raised during 2002-03 to 2006-07 constituted only six *per cent* of the maintenance cost during the period which was not in conformity with the National Water Policy.

(Paragraph: 3.3.14)

As against 370 Water Users Associations required to be formed, only 92 were formed as of March 2008 and none was registered.

(Paragraph: 3.3.15)

3.3.1 Introduction

The geographical area of the State is 190.4 lakh hectares (ha). The irrigation potential from the surface water sources is assessed at 45 lakh ha. Of this, 10 lakh ha can be irrigated through a network of various minor irrigation facilities like tanks, Lift Irrigation Schemes (LIS), barrages, pickups and anicuts using surface and rain water. Minor Irrigation (MI) Department provides irrigation for command areas between 40 ha and 2,000 ha. There were 435 LISs irrigating 92,570 ha (April 2007). LISs envisage pumping up water from a source to a certain height from where water is supplied through canals for irrigation. This facility is resorted to where topographical conditions are unsuitable for flow irrigation. A typical LIS comprises storage (intake channel and jack well), pump house, pumping machineries, rising main, distribution chamber and canal distribution network.

3.3.2 Organisational set-up

The overall administrative control of the Department vests with the Principal Secretary, Water Resources Department (Minor Irrigation). The LISs constructed and maintained by the Department through its eighteen MI Divisions¹⁶ each headed by an Executive Engineer (EE) who works under the supervision of their respective Superintending Engineer (SE). There are two Chief Engineers (CE) one each for North and South Zones. Besides, the Superintending Engineer, Monitoring and Evaluation (SE-M&E) is associated with formulation and coordination of projects executed with borrowed funds (NABARD¹⁷) and monitors their implementation.

¹⁶ Including two Quality Control Divisions

¹⁷ National Bank for Agriculture and Rural Development

3.3.3 Audit objectives

The performance review on the implementation of LISs by the Department was conducted to assess whether:

- funds provided were sufficient;
- the irrigation potential created was as envisaged and utilised to the extent created;
- the project survey and investigation were carried out before taking up a project; and
- works were executed as per plan and the schemes maintained economically, efficiently and effectively.

3.3.4 Audit criteria

The audit criteria adopted for assessing the achievement of audit objectives were:

- Karnataka Public Works Department Code
- Irrigation Manual and MI tank/Lift irrigation scheme guidelines
- Karnataka Irrigation Act, 1965
- Government Orders
- Detailed project reports and evaluation reports.

3.3.5 Scope and audit methodology

The review covering implementation of LISs during the period 2003-08 was conducted from January 2008 to May 2008 by test-check of the records of the offices of the Principal Secretary to Government, MI Department, CEs, North and South Zones, EEs of eight MI Divisions¹⁸ and one EE of quality control division at Dharwar and one SE at Gulbarga.

Out of 47 works completed during 2003-08, 17 works were selected for test-check. Besides, 16 ongoing works were also taken up for performance audit. In addition, rejuvenation of 256 LISs under Eleventh Finance Commission (EFC) grants (2001-05) and maintenance aspects of LISs were also examined. The sample selection was judgmental considering the number of LISs and expenditure incurred.

The audit objectives, criteria were discussed with CEs in the entry conference (January 2008). The audit findings were communicated to the auditee units through audit memos and discussed with the Principal Secretary in the exit conference held on 25 August 2008. The Department agreed to the findings mentioned in the report. Besides, the Principal Secretary attributed the failure of the LISs to drought conditions in the State affecting the source of water to LISs and short supply of power. He further agreed to transfer the machineries of defunct LISs to other works and dispose of the unserviceable machineries. He also instructed the departmental officers to speed up the process of handing over of LISs overlapping with other irrigation projects.

¹⁸ Belgaum, Bellary, Bijapur, Chitradurga, Dharwar, Gulbarga, Kushtagi and Mysore

3.3.6 Allocation and expenditure

The year-wise position of funds allocated to the Department under plan (including NABARD) and non-plan sectors for LISs during the period 2003-08 and expenditure incurred there against was as under:

Table 1: Budget allocation and expenditure

(Rupees in crore)

Year	Budget allocation		Expenditure		Percentage shortfall in utilisation of funds	
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan
2003-04	8.00	12.57	12.13	7.22	-	43
2004-05	17.05	15.04	13.78	7.96	19	47
2005-06	10.23	12.70	8.64	13.33	16	-5
2006-07	49.86	34.46	18.95	23.21	62	33
2007-08	71.42	22.74	18.43	17.93	74	21
Total	156.56	97.51	71.93	69.65	54	29

The Department attributed the reasons for shortfall in utilisation of funds to the lengthy process involved in sanction of fresh works like preparation of estimates, getting approval, etc.

3.3.7 Performance of projects in utilisation of irrigation potential

As of December 2007, the State had 435 LISs. The Department rejuvenated (2001-05) 256 sick and idle LISs out of 'Special Problem Grants' from Government of India. The designed irrigation potential of the LISs and the potential actually utilised during each year from 2002-03 to 2006-07 were as under:

Table 2: Utilisation of irrigation potential

(in lakh ha)

Year	No. of projects	Designed irrigation potential ¹⁹	Irrigation potential utilised	Percentage of shortfall
2002-03	463	1.04	0.08	92
2003-04	471	1.05	0.12	89
2004-05	463	1.06	0.17	84
2005-06	402	0.90	0.27	70
2006-07	435	0.93	0.18	81

Against designed irrigation potential of 90 thousand ha to 1.06 lakh ha, area irrigated ranged between 8 thousand ha to 27 thousand ha

Against the designed irrigation potential which ranged from 90 thousand ha to 1.06 lakh ha during 2002-03 to 2006-07, the actual area irrigated ranged from 8 thousand ha to 27 thousand ha with percentage shortfall ranging from 70 to 92. Scrutiny of departmental records revealed that the duration of power supplied in respect of the LISs was about 4-6 hours per day as against 16 hours considered in the estimates. Estimates Committee of the State Legislature in its Report (July 2007) recommended Government to provide separate power line for each LIS for successful functioning of LISs. Details of action taken in this regard, if any, were not furnished.

¹⁹ Based on 16 hours electricity supply

3.3.7.1 Defunct LISs

211 LISs with
atchkat of 42,115 ha
remained defunct
for periods ranging
from 3 to 25 years

As per the status report (2007), 211 LISs with a designed *atchkat*²⁰ of 42,115 ha remained defunct for a period ranging from 3 to 25 years for various reasons such as no demand for water (99 LISs), no water source (65 LISs), no power supply (27 LISs) and repairs (20 LISs).

In eight test-checked divisions, 165 LISs with a designed *atchkat* of 36,899 ha were defunct due to no demand for water (74 LISs), no water source (59 LISs), no power supply (15 LISs) and repairs (17 LISs). Consequently, the command area of 5,483 ha under 91 LISs was deprived of irrigation facility.

3.3.8 Planning, survey and investigation of projects

Defective survey/initial investigation

3.3.8.1 According to the LIS guidelines, proper survey and investigation should be carried out, besides ensuring availability of sufficient water for the LIS for the designed cropping period, demand from the beneficiaries, availability of land for the project, upstream/down stream commitments at the project site, existence of major/medium irrigation command area, ensuring availability of power at site, *etc.*, before proposing any LIS for execution. Further, the works are to be completed in time so that the benefits of the scheme are available to the command area.

2,013 ha under six
LISs could not be
irrigated due to
inadequate survey
and investigation

Scrutiny of records revealed inadequate survey and investigation in six LISs²¹. In the first LIS, jackwell was shifted after entrustment of work due to presence of barrage downstream leading to design changes and increase in the length of rising main. In the second LIS, no *atchkat* could be irrigated due to inadequate source of water. In the third LIS, Department proposed (February 2008) to extend canal network on the ground that the canal network originally designed and executed was not sufficient to irrigate the designed *atchkat*. In the fourth LIS, non-availability of power line in the vicinity of the scheme necessitated drawal of power from a distance of 23 Kms resulting in escalation in the cost of work besides adverse BC Ratio. The work had not been completed (March 2008). The remaining two LISs were taken up despite their designed *atchkat* was overlapped by the command area of other Projects. Consequently, irrigation could not be provided to 2,013 ha of land despite incurring an expenditure of Rs. 10.03 crore.

3.3.8.2 Six LISs (five in Hassan and one in Bellary Division) taken up during 1993-2000 were abandoned (2003-05) after completion of civil works. Out of these, four LISs were abandoned before completion on the plea that the water source had dried up. Further, one LIS was abandoned after completion of civil works on the plea that there was no demand for water due to delay in completion of the scheme and farmers had made an alternative arrangement. In another case, LIS was proposed for dropping as the *atchkat* of the LIS was coming under the command area of another major irrigation project. Consequently, expenditure of Rs. 83 lakh incurred on these works was rendered wasteful.

²⁰ irrigable area

²¹ Gowrapur, D.B.Kere, Chiknasabi, Salamwadi, Mallikwad and Pattanaseragu

3.3.8.3 According to LIS guidelines, a scheme proposed for construction is considered financially viable if it provides water for a minimum of two cropping seasons in a year. The BC ratio of the project should not be less than one to ensure that the project is economically viable. However, five LISs²² were taken up (2003-07) to provide water during one cropping season only rendering them financially unviable. In three cases (Jalihai, Motitalab and Salamwadi), the BC ratio worked out to less than one due to cost escalation rendering these LISs economically non-viable.

3.3.9 Execution of LIS works

3.3.9.1 Delay in completion of work due to non-acquisition of land

Codal provisions stipulate that works should be commenced only on land duly acquired for the purpose for timely execution of projects without cost escalation. Records revealed that the Department did not adhere to the above condition in five LISs out of 17 ongoing works of the six test-checked divisions. Though the work was taken up, proposal for acquisition of land was made after a gap of six years (two cases), one work was started without acquiring the land, no provision was made in the estimate (one case) and due to litigation by the land holders (two cases) as detailed in **Appendix 3.9**. Consequently, the above works remained incomplete without any benefit even after incurring an expenditure of Rs. 5.47 crore.

3.3.9.2 Defective execution of works/ deficiency in check measurements

Defective works were executed and paid for in five LISs works

Codal provisions prescribe monitoring of work by departmental officers at different levels of execution to ensure that the works are executed according to the specifications and are technically sound. Codal rules and departmental instructions also provide that the divisional officers should measure the works in progress and maintain a register of measurement. Test-check of records produced in five divisions in respect of nine LISs revealed cases of defective/unnecessary execution of works and payments made without execution of works, *etc.*, in violation of the codal provisions. The details are indicated in **Appendix 3.10**.

3.3.9.3 Non-synchronisation of different components of work

Execution of different components of LISs works were not synchronised leading to delay in completion of works

According to LIS guidelines, execution of various components such as civil/electrical/mechanical and power supply should be synchronised in such a manner that the LIS should not be kept non-functional due to delay in completion of any of the components. Test-check of records in five divisions involving expenditure of Rs. 9.54 crore revealed that various components like execution of civil works, erection of machinery, power supply *etc.*, of the LISs were not synchronised leading to non-realisation of intended benefits. The details are indicated in **Appendix 3.11**.

Non-synchronisation of various components of six LISs rendered an expenditure of Rs. 9.54 crore unfruitful.

²² Agasanamatti, Badanahatti, Moti talab, DB Kere and Gowrapur

Command area of 55 LISs overlapping with other irrigation projects were not transferred

3.3.9.4 *Overlapping of atchkat of LISs*

Government issued (April 1982) orders for transfer of all completed/ongoing LISs, the *atchkat* of which were coming under the command area of major/medium irrigation projects for execution and maintenance to avoid duplication of capital investment.

Test-check of records in five divisions²³ revealed that *atchkat* of 55 LISs targeted to irrigate 17,479 ha coming under the command area of major/medium irrigation projects were not transferred to the concerned project authorities by the Minor Irrigation Department and continued to incur expenditure on their rejuvenation and maintenance. An expenditure of Rs. 4.59 crore was incurred (2001-05) on rejuvenation of 32 such LISs of which 16 rejuvenated LISs became defunct rendering the expenditure of Rs. 2.30 crore thereon unfruitful.

The Department also took up (2000-2005) construction of seven fresh LISs at a cost of Rs. 18.89 crore coming under the command area of major/medium irrigation projects. Out of this, four LISs were completed (2001-03) while three LISs were under progress. Records revealed that against the designed *atchkat* of 1,394 ha in respect of three completed LISs, an *atchkat* of 164 ha only was provided irrigation in one year.

3.3.10 Non-adherence to the conditions of contract

3.3.10.1 *Non-recovery of extra cost*

Conditions of the contract stipulate that extra expenditure incurred by the Government in getting the work executed through other agency at higher rates due to default of first contractor should be recovered from the first contractor. Records revealed that in three out of five²⁴ LISs pertaining to five test-checked divisions, the contract was rescinded at the risk and cost of the contractor. The extra cost incurred on completion of leftover works of the default contractor was not assessed and recovered.

Records for watching the dues recoverable from the contractors in such cases were also not maintained indicating that there was no system to review and monitor recoveries outstanding against the defaulting contractors.

3.3.10.2 *Change in scope of work after entrustment*

The designs of the work were to be got approved by the competent authority before commencement of work and approved drawings would constitute part of the contract. The guidelines prescribe various parameters to be adopted in designing LIS relating to pumping machinery, pipes and accessories. The Government also instructed (1991) that directions to change the design/scope of work involving additional financial burden to Government were not to be issued after entrustment of work. Records revealed nine cases of change in the scope of work after entrustment involving execution of extra items. As against Rs. 15.13 crore provided in original estimates, an expenditure of

²³ Bellary, Bidar, Bijapur, Gulbarga and Kushtagi

²⁴ Ankanathapura, Ankanalupanal, Chiknasabi, Gowrapura and Pattanaseragu

Rs. 25.78 crore was incurred on these works. Subsequently, the estimates were revised to Rs. 30.28 crore. Change in scope of the work resulted in delay of 2 to 8 years in completion of 5 works and cost overrun of Rs. 15.15 crore in nine cases (**Appendix 3.12**).

3.3.10.3 Failure to avail of Central Excise Duty exemption

The benefit of CED exemption on purchases of LIS machineries did not accrue to the Department

The Government of India fully exempted (8 January 2004) Central Excise Duty (CED) on all items of machineries, equipment, pipes, instruments, *etc.*, required for setting up of water supply plants and delivery of water for irrigation and drinking purpose. In order that the contractor may avail of the benefit of CED exemption and pass on the benefit to the department, a certificate to the effect that the goods are cleared for the intended use *i.e.*, the plant and equipments which are going to be used in setting up of water supply plants was to be issued by the Deputy Commissioner based on the certificate issued by the divisional officers.

Test-check of records of 130 contracts for purchase of machineries/equipment costing Rs. 43.85 crore (involving CED element of Rs. 6.05 crore) finalised after January 2004 revealed that the Department failed to include appropriate clause in the contract that would bind the contractor to pass on the CED exemption to the Department. The Department also issued recommendations without ensuring that it had received CED exemption in eleven contracts of Rs. 13.18 crore. No follow up action was taken to ascertain whether the CED exemption was availed of by the contractors to adjust the same in their work bills. In one case, the contractor had availed CED exemption (value of goods: Rs. 1.54 lakh) based on recommendation of the EE, MI Division, Dharwar but benefit was not passed on to the department as noticed (April 2008) in audit.

3.3.11 Deficiency in maintenance of LIS

Quarrying of sand from the river bed downstream of LIS should be avoided as the water level goes below the designed level which would make the LIS inoperative. Further, it was the responsibility of the department to check unauthorised/illegal quarrying of sand from the river bed.

Records revealed that four LISs in two divisions²⁵, constructed between 1990 and 1995, became defunct due to depletion of water below the intake level on account of illegal sand quarrying in the vicinity of LIS location. Consequently, additional works of diversion weir, shifting of jackwell, barrage, *etc.*, were executed at a cost of Rs. 2.13 crore during the period 2002-04 to restore water source for the LISs which was avoidable.

3.3.12 Annual Maintenance Expenditure (AME)

Record of maintenance works such as servicing, replacement of parts, water supply, *etc.*, required to be maintained as per LIS Manual was not maintained in any of the test-checked divisions. The logbooks of the machinery wherever maintained were not updated fully by filling up all the columns *viz* frequency

²⁵ Bangalore and Mysore

of servicing, nature of repairs undertaken, discharge of each pump, electrical units consumed, etc.

3.3.12.1 Expenditure incurred without sanction to AME

Expenditure on maintenance of LISs was incurred without due sanction from competent authority

Codal provisions provide that payments for works should be made by divisional officer against sanctioned estimates only. Records revealed that during the period 2003-04 to 2006-07, Rs. 12.90 crore incurred towards AME in six²⁶ divisions were not covered by sanction from competent authority and an amount of Rs. 8.67 crore was spent in excess of the sanctioned amounts.

In respect of 87 LISs test-checked, an expenditure of Rs. 16.76 crore was incurred against the sanctioned amount of Rs. 14.53 crore under EFC grants. Excess expenditure over sanction amounted to Rs. 2.23 crore.

3.3.12.2 Maintenance of defunct LIS

Expenditure on defunct LISs incurred unnecessarily

Government issued (May 2005) instructions not to incur any expenditure on maintenance of defunct LISs. Further, power supply was also required to be disconnected immediately. The *atchkat* was to be denotified and the LISs were to be deleted from the departmental list. In addition, adequate measures to protect the land, buildings and machineries were to be taken until such denotification.

The Department incurred an expenditure of Rs. 5.91 crore towards maintenance of 71 defunct LISs during 2003-07. Further, out of 111 defunct LISs under North Zone, the Department deleted 63 LISs from the list of LISs without obtaining orders of the Government for declaring them as permanently defunct and without denotifying the *atchkat*. The overall irrigable command area of the department was thereby overstated.

3.3.12.3 Payment of electricity charges

LISs incur recurring maintenance cost and energy charges which worked out to 53 per cent²⁷ of the total maintenance cost during the review period. The LISs are designed to lift water during one or two crop seasons only in a year. Electricity charges are levied based on actual consumption or minimum tariff whichever is higher. Further, minimum charges are imposed even if the plant or machines are not operated and no power is consumed unless the power supply is disconnected by invoking the conditions of agreement with Karnataka Power Transmission Corporation Limited (KPTCL) authorities.

Records revealed that the Department incurred (2003-04 to 2007-08) a liability of Rs. 2.47 crore towards minimum electricity charges in respect of 35 defunct LISs in six²⁸ test-checked divisions due to failure in disconnecting power supply. Liability that accrued in respect of the remaining LISs was not ascertainable due to non-availability of information with the Department.

²⁶ Bijapur, Belgaum, Chitradurga, Dharwar, Gulbarga and Kustagi

²⁷ Excluding Chitradurga division

²⁸ Bellary, Bijapur, Chitradurga, Dharwar, Gulbarga, Kushtagi

3.3.12.4 Pending bills of electricity charges

Correctness of dues towards electricity bills of LISs was not ensured

As per departmental records, bills towards payment of electricity charges amounting to Rs. 10.61 crore were pending settlement as at the end of March 2003. In addition, demand for an amount of Rs. 43.72 crore was raised by KPTCL during 2003-08 out of which an amount of Rs. 37.34 crore was paid by the department (up to March 2008) and bills to the tune of Rs. 9.74 crore were pending settlement as at the end of March 2008.

Scrutiny of records revealed that as against dues of Rs. nine crore, an amount of Rs. 11.69 crore was demanded by two²⁹ Zonal companies of KPTCL and paid by Government in January 2007. The balance of Rs. 2.69 crore was not refunded (October 2008). In addition, the department did not ascertain the details of amounts adjusted in case of each LIS in the books of KPTCL. Consequently, the correctness of subsequent dues demanded by KPTCL was not ensured by the Department due to non-reconciliation of balances of electricity charges.

In Mysore division, monthly demand (March 2006) for payment of electricity charges amounting to Rs. 1.43 lakh was raised by KPTCL twice (April 2006 and May 2006) and the same was paid (November 2006 and January 2007) by the Department resulting in double payment indicating that proper checks were not exercised at the divisional level relating to payment of electricity charges. In other test-checked divisions, watch register was not maintained for this purpose.

3.3.13 Rejuvenation of defunct and sick LIS under EFC grants

Government of India released grant for revival of sick and defunct LISs based on the recommendations of EFC covering the period 2000-2005. The guidelines issued (2002) by the Government envisaged that the rejuvenation should be proposed by the divisional officers after field study and assessment of local needs duly consulting the beneficiaries. Further, availability of water and adequate electricity was also required to be ensured. For this purpose, a checklist was required to be prepared indicating the present status of LIS and requirement of repair/replacement of components including canals to enable the Department to take up rejuvenation works for bringing the LIS into optimum use. The claims for the works were to be submitted before March 2005.

Despite rejuvenation of 86 LISs at a cost of Rs. 12.34 crore, they remained defunct due to non-availability of water, power, repairs, etc.

Based on the action plan approved (March 2001) by SLEC³⁰ for Rs. 55.22 crore involving 308 works for stabilisation of an *atchkat* of 77,608 ha, Government approved (February 2002) rehabilitation/ rejuvenation of sick and idle LISs during the period from 2000-01 to 2004-05. As per completion certificate (August 2005) of the Department, 256 works were rejuvenated at a cost of Rs. 55.50 crore and an *atchkat* of 32,853 ha was declared (August 2005) as restored.

²⁹ Gulbarga and Hubli Electricity Supply Companies

³⁰ State Level Empowered Committee

Audit scrutiny revealed that out of above 256 LISs works, 86 LISs rejuvenated at a cost of Rs. 12.34 crore to irrigate an *atchkat* of 19,581 ha were not functioning for various reasons as detailed below:

Table 3: Rejuvenated defunct LISs

No. of LISs	<i>Atchkat</i> in ha	Expenditure (Rs. in crore)	Reasons for non-functioning
26	3,293	2.84	No water source
21	4,587	3.72	No power
15	4,864	1.92	For want of repairs
24	6,837	3.86	No demand for water/ <i>Atchkat</i> overlapping with major/ medium projects
86	19,581	12.34	

In test-checked divisions, it was also seen that no checklist was kept on record except in Mysore Division. In Chitradurga Division, seven LISs identified as defunct for want of water were taken up for repairs and replacement of machineries at a cost of Rs. 68 lakh.

3.3.13.1 *Diversion of funds*

Funds provided for rejuvenation works were diverted for construction of tanks and barrages

The EFC guidelines provide for construction of a barrage or any other structure that would restore the pumping head for a defunct scheme. However, construction of four barrages and six tanks at a total cost of Rs. 10.71 crore were taken up under EFC grants by three divisions³¹ though the tank/ barrage works were not related to feed water to any existing LISs. Out of this, an amount of Rs. 8.38 crore was spent on a barrage cum bridge which was not completed before March 2005 and balance cost of Rs. 8.32 crore was met out of State Budget after revising (May 2007) the estimated cost of the work to Rs. 16.70 crore. In Mysore Division, contingent expenses (rent, telephone bills, electricity bills, *etc.*) amounting to Rs. 5.27 lakh was met out of EFC funds.

3.3.14 **Water rates**

Guidelines under National Water Policy (NWP) 2002, envisaged that the water charges should be fixed to cover at least the operation and maintenance charges of providing the service initially and a part of the capital costs subsequently. The water rates were last revised by the Government in July 2000 under Karnataka Irrigation Act, 1965. Under the Act, the divisional officer is required to issue a notification before the stipulated date³² for raising the demand for collection by Revenue Department. The water rates for irrigation provided through LISs were fixed at thrice the normal rates³³ for wet crops like sugarcane, paddy and at twice the normal rates for other crops. The year-wise position of water rate demand raised and maintenance expenditure incurred during 2002-03 to 2006-07 was as under:

³¹ Belgaum, Bijapur and Gulbarga

³² Khariff (31 August), Rabi (31 December) and Summer (31 March)

³³ Normal rate is the rate applicable for irrigation through tanks, barrages, *etc.*

Table 4: Year-wise water rate demand

(Rupees in crore)

Year	Maintenance expenditure	Demand made
2002-03	11.10	0.31
2003-04	7.22	0.32
2004-05	7.96	0.95
2005-06	13.33	1.16
2006-07	23.21	1.20
Total	62.82	3.94

The demand raised during 2002-03 to 2006-07 was not in conformity with NWP as it constituted only six *per cent* of the maintenance cost during 2002-07.

Details of recovery of water rates were not maintained by any of the test-checked divisions.

3.3.14.1 Failure to demand water rate in respect of working LISs

Audit scrutiny of five test-checked divisions revealed that demand for water rate was not raised against consumers in respect of 10 functioning LISs and maintained at a cost of Rs. 94 lakh during 2003-08. Reasons for the same were not available. In Bellary Division, revenue of Rs. 1.11 lakh was foregone as notification required under the Act was not issued by the divisional officer within the stipulated period in respect of three LISs during the period (2003-2007).

In Gulbarga and Chitradurga Divisions (2006-07), water rate was demanded both at normal rate as well as at the penal rate (for violation of cropping pattern). However, the details of the extent and types of crops grown in the irrigable area of LISs were not maintained as a result of which correctness of the demand raised could not be verified.

3.3.14.2 Violation of cropping pattern

The requirement of water per ha in respect of wet crops is different compared to other crops and water rates were fixed differently. Since violation of cropping pattern had adverse effects on availability of water for the designed *atchkat*, particularly for the tail end reaches, the Department had to ensure that the water was shared optimally among the projected beneficiaries. Further, recovery had to be effected at five times of normal water rate in cases of violation of cropping pattern. Scrutiny of records in five³⁴ test-checked divisions revealed cases of violation of cropping pattern in an *atchkat* of 6,923 ha. The Department imposed a penalty amounting to Rs. 1.63 crore for violation of cropping pattern in 5,467 ha in four Divisions. However, the recovery of the amount was not being watched.

3.3.15 Non-formation of Water Users' Associations

According to the guidelines under NWP, Water Users' Associations (WUAs) were required to be formed and registered under the Karnataka Societies Registration Act of 1960. Under EFC grants, the rejuvenated LISs were

³⁴ Belgaum, Bellary, Chitradurga, Gulbarga and Kushtagi

required to be handed over to these WUAs for further maintenance and collection of water rates.

As against 370 WUAs required to be formed, only 92 were formed as of March 2008 and none was registered. Thus, the Department continued to bear maintenance expenditure which during 2003-04 to 2006-07 worked out to Rs. 51.72 crore. As none of the projects were handed over to WUAs for maintenance, the objective of promoting water management and maintenance of projects with the active participation of farmers was not achieved.

3.3.16 Miscellaneous issues

3.3.16.1 Inadequate and untrained manpower

The operation and maintenance of the scheme consists of hourly and daily operation of plants, machinery, equipment, *etc.*, which are required to be attended to by an operator. For this purpose operators entrusted with the task have to be trained. Services of sowdies³⁵ are essential to ensure effective distribution of water. Records revealed that the requirement of the above personnel was not assessed by the department. It was noticed that as against 141 LISs functioning, services of 88 sowdies and 80 pump operators were available and none of them were trained in the operation of LISs.

3.3.16.2 Register of Assets

The divisions are required to maintain a Register of Assets indicating their book value so as to provide details of the assets at the disposal of the Department. The Register of Assets maintained did not indicate the cost of assets and additions or alterations made thereto. Government issued (May 2005) instructions to transfer or dispose of the machineries in respect of defunct LISs to the best advantage of Government. However, the working condition of the machineries in respect of defunct LISs was not assessed for using them in ongoing works or to dispose of these. Account for the dismantled machineries was also not maintained in any of the test-checked divisions. In two test-checked divisions (Bijapur and Chitradurga), machineries were reported to be not available in respect of 47 defunct LISs. However, no action was initiated to investigate the loss of machineries and fix responsibility.

3.3.17 Monitoring and Evaluation

Codal provisions, departmental instructions and NWP 2002 stipulate close monitoring and supervision of projects so that works are executed in time and at economy enforcing strict financial discipline. There should also be a system to monitor and evaluate the performance and socio-economic impact of the project/ scheme which is essential to judge their success or failure.

³⁵ Persons engaged for regulating supply of water to irrigable area

Audit scrutiny revealed that except in two LISs, no evaluation was conducted to assess the performance and socio-economic impact of the schemes. A review of the evaluation reports of these two projects conducted (2005-07) by external agencies revealed that the deficiencies in survey, estimation, mismatch between targeted and achieved *atchkat* were not brought out though referred to the agencies. In one case, evaluation was conducted in respect of an LIS which was overlapping with a major irrigation project. No database was available with the department regarding economical viability and efficiency of the LISs. Periodical inspections as envisaged in the guidelines were also not conducted to assess the working condition of the LISs.

3.3.18 Conclusion

The Department did not utilise the funds in full due to delay in preparation and approval of estimates of fresh LISs. The designed irrigation potential of the LISs was not achieved due to non-completion of projects and the completed projects remaining defunct due to non-availability of water/short supply of power, repairs and overlapping of the irrigable area with other irrigation projects. Delay in acquisition of land, defective execution of works, non-synchronisation of different components of works, change in scope of works after entrustment to the contractors, *etc.*, delayed the completion of works. The correctness of dues towards power supply of LISs were not examined and reconciled. Despite rejuvenation of defunct LISs under 'special problem grant scheme' most of the LISs remained defunct. Water rates for the irrigated area were not duly assessed and recoveries thereof not monitored. Water Users' Association were not formed as envisaged in National Water Policy. Control mechanism to monitor and evaluate the LISs were not in place. Consequently, the intended objective of irrigating land through lift irrigation was not achieved.

3.3.19 Recommendations

Government should ensure that:

- funds provided for the LISs are fully utilised by obtaining sanction to estimates well in time.
- necessary action to irrigate the envisaged irrigable area is taken by ensuring availability of water, power supply, *etc.*
- the execution of LISs works is monitored so as to synchronise all the components of work and also executed as per schedule to prevent cost and time over run of projects.
- action is initiated to transfer such of the LISs whose *atchkat* overlap with other irrigation projects to the project authorities concerned.
- Water Users' Associations are formed as targeted to enable maintenance of LISs self-sustainable.

The matter was referred to Government in August 2008; reply had not been received (October 2008).

CO-OPERATION DEPARTMENT

3.4 Waiver of agricultural loans and interest subsidy schemes

3.4.1 Introduction

The Government issued (December 2004-May 2007) orders to subsidise the interest rates on agricultural loans taken by farmers, waive the outstanding loan and interest where farmers have paid interest in excess of the principal amount of loan and to waive interest and penal interest outstanding where farmers have cleared the principal amount by a specified period. These orders were issued to mitigate the hardship caused to the farmers on account of continuous drought conditions during the period 2001-04 in the State, fall in the prices of agricultural produce, reduction in harvest due to pests and diseases as well as due to floods and famine during 2006-07. The benefits of loan waiver and interest were subject to conditions and the various co-operative societies and co-operative banks who had lent the agricultural loan to the farmers were required to submit reimbursement claims on this account to Government after getting them duly certified and countersigned by the designated officers of the Co-operation Department. The details of the schemes implemented, the amounts released under each scheme, subsidy disbursed and the balance claims are given in **Appendix 3.13**.

The Secretary, Co-operation Department was the administrative head of the Department and the Registrar of Co-operative Societies (RCS) assisted by Deputy Registrars of Co-operative Societies (DRCS) at the district level was responsible for implementation of the loan waiver and interest subsidy schemes. The Director of Co-operative Audit (DCA) assisted by the Deputy Directors of Co-operative Audit (DDCA) at district level was responsible for certifying the claims of the Co-operative Societies and the Co-operative Banks. The funds were released to the Apex Bank which in turn released the funds to the Primary Agricultural Co-operative Societies (PACS) and Primary Co-operative and Rural Development (PCARD) banks through District Central Co-operative (DCC) banks and Karnataka State Co-operative and Rural Development (KSCARD) banks.

The implementation of schemes during the period 2004-08 was reviewed (February-June 2008) at the specific request of Government (February 2008) by test-checking the records of Secretary, RCS and the co-operative credit institutions viz. PACS, PCARD banks, DCC banks and KSCARD banks of 13 districts³⁶. The audit findings were discussed with Principal Secretary, Finance Department and Secretary, Co-operation Department in exit conference held during September 2008. The Secretary agreed to take necessary remedial action in the matter.

³⁶ Bagalkot, Belgaum, Bidar, Bijapur, Dakshina Kannada, Davanagere, Dharwar, Gadag, Hassan, Haveri, Mandya, Shimoga, Udupi

3.4.2 Financial outlay

Scheme-wise release of funds and settlement of claims of PACS and PCARD banks under the different schemes during the period 2004-08 were as follows:

Table 1: Scheme-wise release of funds

(Rupees in crore)

Sl. No.	Name of the scheme	Total claims preferred	Amount released				Total	Claims pending
			2004-05	2005-06	2006-07	2007-08		
1.	Interest subsidy scheme	354.25	45.00	80.00	76.50	152.63	354.13	0.12
2.	One time waiver of outstanding dues	65.85	49.00	-	-	-	49.00	16.85
3.	Interest and penal interest waiver	1,160.48	-	850.00	200.00	110.48	1,160.48	-
4.	Loan waiver scheme of 2007	1,862.39	-	-	500.00	1,239.88	1,739.88	122.51
	Total	3,442.97	94.00	930.00	776.50	1,502.99	3,303.49	139.48

Although the release of funds was based on the eligible claims as per the books of various co-operative societies and banks, the reasons for claims of Rs. 139.48 crore still remaining unpaid were not on record.

3.4.3 Implementation of schemes

3.4.3.1 Interest subsidy scheme

The Government approved (December 2004) short, medium and long term loans to farmers carrying interest at six *per cent* per annum subject to condition that the subsidised interest was applicable to term loans provided on or after 1 April 2004 and that only agricultural loans were entitled to this subsidy. Under the scheme, while the Government share of interest was 5.50 *per cent*, the farmer's share was six *per cent* and the lending co-operative society/bank had to bear remaining one *per cent* in respect of short and medium term loans. The co-operative credit institutions had to bear one *per cent* extra on long term loans. The Government reduced (May 2006) the farmer's share of interest to four *per cent* in respect of loans disbursed from 1 April 2006 and onwards enhancing its share to 7.50 *per cent*. The main objective of the scheme was to provide substantial relief to the farmers from the burden of heavy interest rates charged by the co-operative banks.

PCARD banks were paid subsidy of Rs. 1.67 crore irregularly by allowing ineligible claims

Records of PCARD banks of the test-checked districts revealed that these banks while claiming reimbursement from Government also included loans provided for non-agricultural purposes such as purchase of two wheelers, land, poultry and forestry activities, *etc.*, which was contrary to the scheme guidelines. Test-check of 1.06 lakh claims of selected districts paid during 2004-08 revealed inclusion of 10,880 ineligible claims amounting to Rs. 1.67 crore (**Appendix 3.14**). These claims were admitted by the respective DDCA and DRCS resulting in excess release of subsidy to PCARD Banks. The DDCA and the DRCS did not furnish any reason for their failure to exercise the necessary checks in this regard.

3.4.3.2 *One time waiver of outstanding loans*

The Government announced (March 2005) a one time loan waiver scheme with a view to help the farmers who had been put to hardship on account of the term loan remaining uncleared in spite of the fact that the interest paid as on 31 March 2004 was in excess of the principal amount borrowed by them. The scheme was applicable to all medium term and long term loans availed of by the farmers from the co-operative credit institutions for agriculture and agriculture related purposes only.

Review of loan ledgers of PCARD banks in test-checked districts revealed:

Inclusion of claims where interest paid was less than principal amount

PCARD banks irregularly claimed Rs. 85.07 lakh by inflating the figures and including ineligible claims

Ineligible claims such as interest paid after 31 March 2004, postage charges, recovery charges, *etc.*, were included in the claims of 119 farmers. The inadmissible claim so made in these cases was Rs. 20.57 lakh which included 30 instances of inflating the claims (Rs. 4.93 lakh) just to arrive at the eligible amount to claim waiver benefits as the interest actually paid fell short of this amount in all these cases. In 235 cases, the PCARD banks included the benefits of interest waiver and subsidy received by the farmers under similar schemes announced by Government during the period 1994-2004 to establish that the interest paid was in excess of principal borrowed. These claims were inadmissible for reimbursement and liable to be rejected by the respective DDCA and DRCS while certifying the claims of the PCARD banks. The inadmissible amount so claimed by and paid to the banks in these cases worked out to Rs. 64.50 lakh.

Inclusion of loans advanced for non-agricultural purposes

Loans advanced for rural housing scheme, poultry, piggery, non-farming sectors like flour mills, readymade garments, bakery, *etc.*, were also irregularly included and a waiver of Rs. eight crore was claimed by and paid to the PCARD banks in respect of 2,181 ineligible cases (**Appendix-3.15**).

Double reimbursement of claims

Three double claims amounting to Rs. 36,768 and one double claim of Rs. 15,071 were preferred by and reimbursed to the PCARD banks at Maddur and Kundapur respectively. Remarks of the departmental officers as to their failure to regulate the claims as per the scheme guidelines were awaited (October 2008).

3.4.3.3 *Waiver of interest and penal interest on term loans*

The Government ordered (April 2005) waiver of interest and penal interest due on all agricultural term loans as on 31 March 2005 subject to the condition that the farmers repay the entire principal overdue as on 31 March 2004 by 30 June 2005. The due date for repayment was extended subsequently up to 31 May 2006.

Records of PACS and PCARD banks in test-checked districts revealed:

Irregular claims by PACS by mis-representation of facts

PACS in the test-checked districts claimed Rs. 36.04 crore by mis-representation of facts

The PACS of test-checked districts claimed Rs. 36.04 crore in respect of 34,674 cases (**Appendix 3.16**) stating that in all these cases farmers had fully paid the principal amount due on 31 March 2004. Verification of details of claim bills (reimbursement bills) with reference to bank scrolls and loan accounts of PACS maintained at DCC Banks revealed that the amounts shown in the claim bills as payments received from farmers were actually not remitted by the PACS as the bank scrolls did not confirm such remittances. The extent of short remittance was Rs. 63.05 crore. The PACS were required to remit the payments received from farmers within a day or two to the DCC bank as per their own by-law but were not remitted even after seven days of the purported date of payment by the farmers. The PACS could not furnish any other proof of such remittances in reply to audit queries in this regard. The respective DDCA and DRCS too did not disallow these claims at the time of certification and admittance. The remarks of the departmental officers on their omissions to regulate the claim as per scheme guidelines were awaited (October 2008).

Irregular reckoning of cut off date

PCARD banks irregularly reckoned the cut off date as 31 March 2005 and claimed Rs. 51.78 crore

The Government Order issued under this scheme specified *inter alia*, that only the principal amount overdue as on 31 March 2004 and paid by the farmers by 31 May 2006 would become eligible for waiver of interest and penal interest. But the KSCARD bank in their circular instructions to the PCARD banks indicated (April 2005) that principal instalments overdue as on 31 March 2005 and repaid by 31 May 2006 would be eligible for the waiver of interest and penal interest as on 31 March 2005. Consequently, the PCARD banks worked out the claims for reimbursement considering the principal instalments overdue as on 31 March 2005 also, which was in violation of the Government Order. The excess claim on this account was Rs. 51.78 crore and the respective DDCA and the DRCS failed to disallow these while certifying and admitting the claims. When the excess payments were pointed out in audit (September 2006 and January 2007), Government adjusted (January 2008) the amounts out of further releases to KSCARD Bank. However, no action was taken against the concerned DDCA and DRCS.

3.4.3.4 Crop loan waiver scheme of 2007

The Government, in order to mitigate the hardship caused to the farmers due to famine and floods during 2006-07, ordered (April 2007) waiver of Rs. 25,000 out of crop loans of Rs. 50,000 and below, which were drawn on or after 1 February 2006 and remaining outstanding as on 31 December 2006. This waiver was also admissible to those farmers who had drawn crop loans in excess of Rs. 25,000 and having repaid the principal exceeding Rs. 25,000 before 30 April 2007. The Government Order further provided that the benefit of waiver of Rs. 25,000 was applicable to those farmers also who had already repaid the principal but the reimbursement in these cases was to be made after three years with interest at four *per cent* per annum. The effective date of

sanction of crop loans and the due date for repayment of principal amount in excess of Rs. 25,000 were subsequently relaxed (May 2007) to 1 January 2006 and 31 May 2007 respectively by the Government besides removing the upper limit of Rs. 50,000 for crop loans.

Records of PACS and PCARD banks of the test-checked districts revealed:

Reimbursement of claims without verification of genuineness of claims

**PCARD bank,
Chikkodi claimed
Rs. 73.97 lakh in
290 cases by
tampering the
records**

The PCARD bank, Chikkodi claimed Rs. 73.97 lakh on the ground that crop loans of Rs. 25,000 and above, were sanctioned to 290 farmers during May, June and December 2006 and were outstanding as on 31 December 2006. But scrutiny of claims revealed the following:

- In respect of 56 loan transactions where the loan disbursed in each case was in excess of Rs. 25,000 (total loan amount: Rs. 50.75 lakh), the bank fictitiously created 148 loan accounts each of less than or equal to Rs. 25,000 and claimed Rs. 52.72 lakh towards the benefit of loan waiver. This was evident from the fact that the cash book was tampered by interpolating the entries in support of sanction of these individual loans. These loans were indicated in the cash book as adjusted against another outstanding loan account under a regular bank loan scheme. The individual savings bank (SB) account was also not maintained in respect of these individual farmers as was done for other beneficiaries in the bank. There was also no evidence of having claimed interest subsidy on the loans in these cases.
- In respect of 72 cases, the benefit of loan waiver of Rs. 17.50 lakh was claimed although no loan was disbursed in any of these cases as evidenced by absence of individual SB account and bills claiming interest subsidy.
- In 14 other cases, loans disbursed prior to 1 January 2006 and after 31 December 2006 were included in the claims by mis-representing that loans had been disbursed in all these cases during the period 1 January 2006- 31 December 2006. The claims so preferred were Rs. 3.75 lakh.

In the absence of proof of loan disbursement and in view of several discrepancies in the allied records of the PCARD bank, it was not clear as to how the DDCA and the DRCS of Belgaum district certified and admitted the claims of Rs. 73.97 lakh. Their remarks to the audit queries made in this regard were awaited (October 2008).

Irregular claims by reversing loan transactions

**PCARD bank,
Shiggaon claimed
Rs. 86,573 by mis-
representation of
facts**

Scrutiny of 33 claim bills of PCARD bank of Shiggaon in Haveri district with reference to loan ledgers revealed that in three cases, although the farmers had repaid the entire loan before 31 December 2006, the last instalment paid by them was reversed (March 2007) and taken to a suspense account which was later restored (May 2007) to their respective loan account and claims of loan waiver scheme 2007 preferred by the bank. In five other cases, the principal repaid by the farmers between 30 April 2007 and 2 May 2007 was initially transferred to a suspense account and were restored to their loan account on

31 May 2007 only to avail of the benefit of interest waiver (Rs. 607) by the bank. The total amount thus, irregularly claimed was Rs. 86,573, of which Rs. 78,617 amounted to premature release of the benefits in terms of the Government order and the remaining amount was irregularly claimed by the bank. A critical scrutiny of the claim bill with other connected records of the bank during certification and admittance of claims by DDCA and DRCS of Haveri district would have prevented such irregular claims. On this being pointed out, the DDCA, Haveri confirmed (October 2008) the irregularities and stated that they could not be detected while certifying the claims due to pressure of work.

Irregular claims by mis-representation of facts

PACS in the test-checked districts claimed Rs. 56.49 crore by mis-representation of facts

The PACS of the test-checked districts irregularly claimed Rs. 56.49 crore in 25,815 test-checked cases by mis-representing in their claim bills that in all these cases, the farmers had paid the principal amount in excess of Rs. 25,000 by the prescribed due date. The scrutiny of claim bills with bank scrolls and loan accounts revealed that the repayments purportedly made by the farmers within the due date were not remitted by the PACS to the banks to authenticate their claim for reimbursement. The extent of short remittance was Rs. 91.52 crore. On this being pointed out (June-August 2008) in audit, the PACS failed to furnish any evidence in support of the claims in all these cases. The respective DDCA and the DRCS too failed to exercise necessary checks while certifying and admitting these claims leading to excess payment of Rs. 56.49 crore (**Appendix 3.17**). The remarks of the DDCA and DRCS were awaited (October 2008).

Irregular inclusion of claims in respect of loans drawn before and after the specified dates

PACS of Bidar district irregularly included 117 cases in the claims although in these cases, loans had been disbursed either prior to 1 January 2006 or after 31 December 2006. The total amount so claimed was Rs. 24.21 lakh which was not disallowed by the claims certifying and admitting authorities. On this being pointed out (July 2008), the Managing Director (MD), DCC Bank, Bidar remitted (October 2008) the amount to Government. PCARD bank, Alur of Hassan district included an ineligible claim of Rs. 5,594 in respect of loan disbursed on 30 November 2005. PCARD bank, Navalgund of Dharwar district included an ineligible claim of Rs. 25,910 in respect of loan disbursed after 31 December 2006.

Irregular inclusion of cases where no loan was outstanding

As per the scheme guidelines, all farmers who had borrowed loans between 1 January 2006 and 31 December 2006 and who had repaid the entire loan before 31 December 2006 were also eligible for the benefit of waiver of loan up to Rs. 25,000 and interest till date of repayment under the scheme. However, the amount eligible for waiver shall be deposited in the treasury and the same would be repaid to the farmers after three years together with interest at four *per cent* per annum. Accordingly, RCS issued instructions for indicating such claims separately. It was, however, noticed that PACS of

Bidar district instead of exhibiting such cases separately included irregularly in their claim bills and received Rs. 5.03 lakh in 30 cases. On this being pointed out (July 2008), the MD, DCC Bank, Bidar remitted (October 2008) the amount.

Excess claim of interest

As per the interest subsidy scheme, the co-operative credit institutions were entitled to claim only Government's share of interest (at 5.5 *per cent* and 7.50 *per cent* depending on whether the loan drawn was short term and medium term or long term agricultural loan). It was, however, noticed that PCARD bank, Navalgund, claimed interest at full rate resulting in excess claim of Rs. 33,367 in respect of 33 cases.

Irregular inclusion of health premia paid under 'Yeshaswini' scheme

The PACS of Bidar and Bijapur districts treated the health premia paid by farmers under the 'Yeshaswini' scheme as loans paid and claimed reimbursement of Rs. 52.79 lakh on this account from the Government. The action of the PACS was irregular as the Government order did not provide for such benefits and the respective DDCA and DRCS failed to disallow these claims during their scrutiny and audit. Consequently, there was an excess payment of Rs. 52.79 lakh to these PACS. On this being pointed out (July 2008), the MD, DCC Bank, Bidar remitted (October 2008) Rs. 32.29 lakh to Government.

3.4.3.5 Waiver of interest for the year 2006-07

Government issued (April 2007) orders to waive interest due for the year 2006-07 on all agricultural term loans (except short term agricultural loans not exceeding Rs. 50,000) drawn on or after 1 February 2006 if the farmers repay the principal by 30 April 2007. The cut-off date for applicability of this benefit and the due date for repayment of principal instalments were relaxed to 1 January 2006 and 31 May 2007 respectively in May 2007. Review of records of PCARD banks in the test-checked districts revealed:

Inclusion of ineligible claims for loan waiver

PCARD banks of test-checked districts claimed Rs. 38.43 lakh by including ineligible claims

The PCARD bank of test-checked districts claimed Rs. 38.43 lakh by including 903 ineligible claims where loans had been provided for purposes other than agriculture and agriculture related activities such as housing, land purchase, poultry, *etc.*, which were not eligible as per the Government orders. The claims were admitted by DDCA and DRCS without scrutiny resulting in excess reimbursement by Rs. 38.43 lakh (**Appendix 3.18**).

Miscellaneous irregular claims

Other miscellaneous irregular claims under waiver of interest included reckoning principal not due for recovery, interest subsidy already availed and share of interest to be borne by PCARD banks

Records of the PCARD banks of the test-checked districts revealed other miscellaneous irregular claims amounting to Rs. 41.46 lakh as detailed below:

- The banks irregularly included in the claims, their share of interest (one *per cent* in case of short term and medium term loans and two *per cent* in case of long term loans) also instead of absorbing them as per the Government orders resulting in excess claim of Rs. 5.07 lakh in 750 cases (**Appendix 3.19**).
- Principal amounts which were not due for recovery during 2006-07 were irregularly included in claims in 834 cases resulting in excess reimbursement of Rs. 10.70 lakh to PCARD banks of Dharwar, Dakshina Kannada and Udupi districts.
- The interest subsidy already provided by the Government was irregularly included in the claims preferred by PCARD banks of Navalgund in Dharwar District and Belthangady in Dakshina Kannada district resulting in double reimbursement of Rs. 15.81 lakh in 334 cases.
- Two hundred and forty four cases of loans sanctioned either prior to 1 January 2006 or after 31 December 2006 were irregularly included in the claims by the banks resulting in excess claim of Rs. 9.88 lakh (**Appendix 3.20**).

The correctness of the claims in these cases was not ensured by the respective DDCA and DRCS resulting in excess claim of Rs. 41.46 lakh.

3.4.3.6 Interest and penal interest waiver scheme of 2007

Government ordered (April 2007) waiver of interest and penal interest on all agricultural term loans overdue as on 31 December 2006 provided the principal amount was repaid by the farmers by 30 April 2007. The Government order issued in May 2007 relaxed the due date for repayment up to 31 May 2007.

Review of records of PACS and PCARD banks of the test-checked districts revealed:

Inclusion of ineligible claims

Claims included loans taken for non-agricultural purposes amounting to Rs. 4.40 crore

The co-operative credit institutions irregularly included 2,188 cases where loans disbursed were for other than agriculture and agriculture related purposes such as housing, land purchase, poultry, piggery, *etc.*, and claimed reimbursement of Rs. 4.40 crore towards interest and penal interest waiver. In the absence of scrutiny of these claims by the respective DDCA and DRCS, there was excess claim of Rs. 4.40 crore (**Appendix 3.21**).

Irregular claims by misrepresentation of facts

PCARD bank, Shiggaon claimed Rs. 3.12 lakh by mis-representation of facts

The PCARD bank, Shiggaon in Haveri district irregularly claimed Rs. 3.08 lakh in respect of 11 cases where farmers had fully repaid either the principal instalment or the interest within the due dates. The bank in all these cases exhibited the principal/interest as outstanding as on 31 December 2006 by transferring the last instalment of principal/interest paid to the suspense account and restoring the same to the loan account subsequently to show as if the farmers paid the last instalment before 31 May 2007 so as to claim the benefit of interest/penal interest waiver under this scheme. In respect of other 12 cases where the farmers had repaid the principal instalments during the period from 24 April 2007 to 10 May 2007, the bank transferred these payments to the suspense account and later restored them on 31 May 2007 so as to claim the benefit of excess interest of Rs. 4,335. These irregular claims were not noticed by the DDCA and DRCS of Haveri district resulting in excess claim/reimbursement of Rs. 3.12 lakh. On this being pointed out, the DDCA, Haveri confirmed (October 2008) the irregularities and stated that they could not be detected while certifying the claims due to pressure of work.

Other miscellaneous irregular claims

Other miscellaneous irregular claims under the scheme included claiming interest on principal amounts not due, interest already waived by Government of India, etc. aggregating Rs. 53.92 lakh

Records of PCARD banks of test-checked districts viz., Hassan, Chitradurga, Udupi, Dharwar, Dakshina Kannada and Shimoga revealed the inclusion of the following miscellaneous irregular claims under this scheme:

- Principal amount due as on 31 December 2006 but not overdue (to become eligible for waiver of interest and penal interest as per the Government order) was included in 1,780 cases by PCARD banks of Arsikere, Jagalur and Kundapura resulting in excess claim of Rs. 51.09 lakh.
- In 167 cases, the PCARD banks of Navalgund and Karkala included the share of interest which otherwise should have been absorbed by them under this scheme, as per the Government orders resulting in excess claim of Rs. 1.14 lakh.
- PCARD bank, Shimoga, irregularly included 27 cases of loans in the claim bills where interest due as on 1 July 2006 had already been waived by Government of India under the Prime Minister's Special Rehabilitation Package for suicide prone districts in the country. This resulted in double claim of Rs. 90,719.
- The scheme was applicable only for cases where the principal was due for recovery during 2006-07. It was, however, noticed that PCARD bank, Udupi irregularly included cases where principal was not due for recovery during 2006-07. The excess claim in this regard was Rs. 20,992 in three cases.
- PCARD bank, Channarayapatna of Hassan district incorrectly claimed an amount of Rs. 47,161 towards interest waiver in respect of 15 cases where there was no loan outstanding as on 31 December 2006.

- PCARD bank, Sagar of Shimoga district wrongly included the principal instalment under interest and preferred the claim of one case resulting in excess claim of Rs. 9,965.

3.4.4 Conclusion

The implementation of loan/interest waiver and interest subsidy schemes was not effective due to lack of proper scrutiny of claims by the DDCA and DRCS despite detailed instructions issued by Government. Preference of ineligible claims by the co-operative institutions without due observance of the terms and conditions of Government Orders and often by mis-representing the facts to circumvent them coupled with lack of adequate checks by the controlling authorities resulted in irregular reimbursement of Rs. 110.40 crore in respect of 81,838 out of 8,32,544 claims test-checked in 13 districts. Consequently, the various waiver and subsidy schemes announced by Government were exploited by the co-operative credit institutions to further their own financial interest.

3.4.5 Recommendations

- Expeditious action should be taken to investigate the excess claims preferred by co-operative credit institutions through mis-representation of facts and inclusion of ineligible claims and to take appropriate action as per law.
- Responsibility should be fixed on the DDCA and DRCS for their failure to exercise the prescribed checks to prevent excess claims by co-operative institutions.
- The excess claims preferred by the co-operative credit institutions should be recovered/adjusted against future payments expeditiously.
- A suitable mechanism may be devised to prevent recurrence of such irregular claims.

The matter was referred to Government in September 2008; reply had not been received (October 2008).

FOREST, ECOLOGY AND ENVIRONMENT DEPARTMENT

3.5 Administration of Forest (Conservation) Act, 1980

3.5.1 Introduction

With a view to conserving the forests and minimising the adverse environmental impact and threat to ecological stability, the Central Government enacted (October 1980) the Forest (Conservation) Act, 1980 (FC Act). The Act imposes certain restrictions on de-reservation of forests and use of forest land for non-forest purposes.

FC Act permits only unavoidable use of forest land for various developmental purposes. The Act is regulatory in nature and facilitates the sustainable development needs of the country contributing to better environment, health and economy.

Under the Act, no State Government or other authority shall, except with the prior approval of Government of India (GOI), divert any forest land for non-forest purpose. GOI accords approval to diversion of forest land for non-forest purpose in two stages. Stage I involves grant of in-principle approval specifying the conditions to be fulfilled by the user agency to whom the forest land is proposed to be handed over. Stage II involves final clearance for the project subject to compliance of conditions specified in Stage I. The forest land would be handed over to the user agency after Stage II approval. The Forest Department is required to monitor the diverted area periodically with reference to field maps, forest survey numbers, etc., to check any unauthorised use of forest land by the user agency and report omissions in this regard to GOI.

3.5.2 Audit coverage

The records in the office of the Chief Conservator of Forests (Forest Conservation), Bangalore, Conservator of Forests (CF) at Shimoga, Chickmagalur and Sirsi and nine Divisions³⁷ headed by Deputy Conservators of Forests (DCFs) were test-checked during January / April 2008. Omissions noticed in administration of FC Act are discussed below:

3.5.3 Violations of Forest (Conservation) Act

Under the provisions in Sections 3A and 3B of FC Act, violations of the Act, including unauthorised use of forest land attract punitive action. The GOI authorises an officer not below the rank of CF to proceed against the person / authority/department, *prima facie*, found guilty of the violation in the jurisdictional Court of law. In addition, penal Compensatory Afforestation

³⁷ Chickmagalur (Territorial), Chickmagalur (Wildlife), Karwar, Koppa, Sagar, Shimoga, Sirsi, Tumkur and Yellapur

(CA) charges³⁸ were to be imposed over the forest land worked / used in violation.

Test-check of records of nine divisions³⁹ revealed violation of the provisions of the Act in nine out of 60 cases that occurred between 1984 and 2006. Seven user agencies had sought approval for utilisation of 342.35 ha for non-forestry purposes. However, 391.71 ha of forest land was utilised prior to obtaining approval of GOI as detailed in **Appendix 3.22**. This included 49.36 ha of forest land utilised in excess of that sought/approved for diversion in respect of two cases of Bidar and Mangalore Divisions.

The unauthorised use of forest land indicated failure of the Department in administration of the Act. The Department, except for issuing of notices in two cases at Mangalore and Bagalkot, neither took any punitive action nor reported the matter to GOI. Penal CA charges of Rs. 1.84 crore had also not been recovered from four user agencies⁴⁰, reasons for which were not on record.

3.5.4 Non-compliance of Government of India conditions

Compliance to conditions imposed by GOI was not ensured despite lapse of 2 to 27 years from the date of GOI approval

In terms of paragraph 4.15 of chapter 4 of GOI guidelines on FC Act 1980, the Nodal Officer⁴¹ should report non-compliance of GOI conditions to the Regional Office of Ministry of Environment and Forests (MOEF) who should there upon inspect the site from time to time. Quarterly progress Reports are required to be furnished by the Nodal Officer to the Director, FC of the Monitoring Cell of MOEF regarding compliance of GOI conditions.

It was observed that in 19 cases of diversion of forest land for non- forestry purposes like irrigation, wind power, mining, power transmission line and road work projects involving an area of 3,198 ha, compliance with conditions imposed by GOI was not ensured despite a lapse of 2 to 27 years from the dates of clearance accorded by GOI as detailed in **Appendix 3.23**. This included non-recovery of Rs.1.83 crore towards cost of strip plantation from one user agency in Belgaum Division and shortfall in execution of Catchment Area Treatment Plan for Rs. 120.42 crore in Shimoga Division. GOI stipulated these conditions for compliance by the user agencies with a view to mitigate adverse impact on environment.

Further, one of the conditions stipulated by GOI while approving use of forest land for non-forest purposes is that diverted land should not be used for purposes other than that for which approval was granted. The Department was to resume any unused forest land. However, the Department had not done so, in case of 540.38 ha of unused forest land in five cases of four⁴² divisions.

³⁸ Calculated at one and half times of Rs.54,200 per ha fixed by State Government

³⁹ Bagalkot, Bidar, Chickmagalur, Haliyal, Karwar, Koppa, Mangalore, Shimoga and Yellapur Divisions

⁴⁰ Karnataka Neeravari Nigam Limited, Karnataka Power Transmission Corporation Limited, Petronet MHB Limited and Chickmagalur Golf Club

⁴¹ Chief Conservator of Forests (Forest Conservation), Bangalore

⁴² Bangalore Rural, Dakshina Kannada, Karwar and Mandya

In one case, out of 594.10 ha of forest land approved (December 1995/September 1996) for settlement of displaced families of Sea Bird Project in Karwar, only 182.94 ha of land was utilised. Out of balance area of 411.16 ha of land, an area of 277 ha where felling was done (October 2000), was afforested subsequently during 2002 to 2004 at a cost of Rs. 45.49 lakh without resuming the land.

Further, in five divisions conditions stipulated while according approval for diversion of forest land had not been complied with, resulting in non-recovery of Rs. 4.71 crore towards CA and other charges as follows:

Table 1: Non-recovery of CA charges

Division	Area in ha	Purpose	Period	Revenue not realised
Karwar	330.21	Transmission line	2003	Supervision charges of 10 <i>per cent</i> of total expenditure for executing the work at Rs. 3.61 lakh was not recovered from the user agency.
Belgaum	1.00	Micro wave station	2006	CA was to be carried out in 1.60 ha of degraded forest area at the cost of user agency. Penal CA charges of Rs. 8.67 lakh was not recovered.
Gadag	65.74	Wind power	2004	Charges of Rs. 32.93 lakh are yet to be recovered from the user agency.
Honnavar	427.62	Sharavathi Tail Race Project	1993	User agency was to bear the total cost of extraction of trees. The Department incurred Rs. 2.89 crore towards the extraction. The same was not recovered from the user agency.
Sirsi	74.00	Sharavathi Tail Race Project	1993	Rs. 1.37 crore being extraction cost of trees was not recovered from the user agency
	898.57			

The Nodal Officer neither monitored the compliance of GOI conditions nor assessed the adverse impact in these cases. Quarterly progress reports on compliance to conditions stipulated by GOI were also not furnished.

3.5.5 Utilisation of forest land without renewal of lease

As per the Hand Book of guidelines and clarifications on FC Act issued by GOI, proposals for renewal of leases were to be submitted to GOI one year before expiry of the lease period. Proposals for renewal of lease of the forest land for various purposes like education, cultivation, *etc.*, were not forwarded by Principal Chief Conservator of Forest to GOI in respect of twenty two cases despite lapse of one to forty five years as detailed in **Appendix 3.24**. Though renewal of lease in two other cases was rejected by GOI, land area of 24.90 ha was not resumed. Audit scrutiny revealed that the user agencies continued to utilise forest land unauthorisedly in all these cases as verified from divisional records.

3.5.6 Sub-leasing of forest land

Under GOI guidelines (April 2005) sub-lease by the user agencies was not to be done without the prior permission of GOI. For this purpose, the original user agency was required to submit no objection certificate for such transfer and the new user agency was to submit an undertaking that they shall abide by all the conditions on which the forest land was leased to the original user

agency and any other condition which may be stipulated by the Central Government/State Government in future.

It was observed in test-check that two user agencies had sub-leased 158.62 ha of forest land in Chitradurga and Hassan divisions in August 2005 and July 2007 without prior permission of GOI. The Nodal Officer had not reported the matter to MOEF.

3.5.7 Grant of forest land by Revenue Department

Forest land of 483.52 acres was transferred by Revenue Department without GOI approval

As soon as an area is notified as Reserve Forest under Section 17 of Karnataka Forest Act 1963, the revenue authorities are required to effect 'Mutation' of forest land by making corresponding entries in the revenue records to the effect that the area is declared as Reserve Forest (RF). The forest staff was required to co-ordinate with the revenue authorities to ensure mutation with suitable entries in the revenue records. The purpose of mutation was to prevent unauthorised transfer of forest land by Revenue Department.

Test-check revealed that in three divisions, 483.52 acres of forest land was transferred by the Revenue Department between 1980 and 2007 to 157 persons without approval of GOI under the FC Act as mentioned below:

Table 2: Forest land transferred by Revenue Department

Sl. No.	Name of the Division	Extent of forest land transferred by Revenue Dept. (in Acres)	Date of transfer	Remarks
1	Yellapur	243.38	May 2006 to Jan. 2007	The land was leased for cultivation (April 1969) to landless farmers. Subsequently, the leased land was utilised by other cultivators as the same was not put to use by the original lessees. The Revenue Department transferred the land to the present cultivators as the original lessees were untraceable.
2	Chickmagalur (Territorial)	107.54	1980 to 1995	The forest land in Sargod RF was transferred to 34 cultivators vide Govt. Order dated 1-8-1964. The actual transfer took place after enactment of FC Act and hence was subject to de-notification and prior approval of GOI.
3		70.14	1980 to 2003	Nine persons encroached upon the forest land in Masgali RF. Subsequently, the Rev. Dept. regularised the same by transfer which was, however, violative of the provisions of the FC Act.
4	Chickmagalur (Wildlife)	62.46	1982 to 2001	The Revenue Department transferred the forest land of Kundur Minor Forest in favour of 23 cultivators without prior approval under FC Act.

Thus, lack of co-ordination between Forest and Revenue Departments resulted in forest lands being transferred unauthorisedly and without prior approval of GOI.

3.5.8 Delay in notifying non-forest land as Reserve Forest

Non-forest land brought under compensatory afforestation were not notified as prescribed

GOI instructions required notification of the non-forest land brought under Compensatory Afforestation (CA) as Reserve Forest (RF) within a period of six months from the date of approval of diversion with a view to ensure conservation of forests and enable the Forest Department to effectively manage the afforested area. Delay/non-issue of notification could result in release of such land by Revenue Department or its encroachment.

Test-check of records in Bellary and Chitradurga Divisions revealed that 2,039.27 ha of forest land was yet to be notified as RF as of March 2008. The delay ranging from one to 25 years was attributed by CF, Bellary to non-submission of proposals for notification by the Department.

In Chickmagalur Division, out of 843.44 ha of non-forest land identified for CA, 510 ha was mutated in favour of Forest Department up to March 2008 which was yet to be notified as RF.

The Department carried out CA during 1995-99 (cost: Rs. 29.27 lakh) in one case over an area of 126.25 ha in Bangalore in lieu of 125.5 ha forest land diverted in favour of a firm in Bellary district. This land was not notified as RF. Bangalore Mahanagara Palike (BMP) used (June 2004) 54 ha of the planted land for dumping hazardous waste with the knowledge of Forest Department. The Department received Rs. 20 lakh (July 2005) from BMP towards the loss of plantations. The Net Present Value (NPV) of the forest area with minimum vegetation density of 0.25 however, worked out to Rs. 3.13 crore. The non-forest land for CA is yet to be identified. Failure in notifying non-forest land as RF where CA had been undertaken resulted in BMP utilising 54 ha of this land unauthorisedly.

3.5.9 Non-demarcation of diverted forest lands and lack of inspection

As per the provisions of the Act, the diverted forest areas were to be demarcated with RCC pillars at the cost of user agencies to prevent encroachments.

Test-check revealed that the demarcation of forest lands with RCC pillars at the cost of four user agencies spread over seven divisions⁴³ was not ensured in case of 1,042 ha of forest land diverted for wind power and irrigation projects, despite lapse of one to seven years from the date of final clearance accorded for the projects by the GOI.

3.5.10 Incorrect identification of forest lands

Government of India approved⁴⁴ diversion of 722.70 ha of forest land for construction of dam across the River Sharavathi in Shimoga Forest Division

⁴³ Belgaum, Bellary, Chitradurga, Davanagere, Hassan, Shimoga and Tumkur

⁴⁴ 1993: 700 ha; 2006: 22.70 ha

and for laying railway line between Kadur-Chickmagalur-Sakleshpur with the condition that CA was to be taken up in equivalent non-forest land . Audit scrutiny (April 2008) revealed that the identified non-forest lands were actually notified forest lands and as such CA was to be taken up in forest lands twice the extent of forest area diverted. This resulted in short recovery of CA charges of Rs. 89.29 lakh and shortfall of 722.70 ha in raising CA. The Divisional Officer, Chickmagalur stated that necessary action would be taken to recover the same from the user agency.

3.5.11 Compensatory Afforestation in lieu of diverted forest lands

Compensatory afforestation was not carried out in 5,732.97 acre

GOI guidelines on FC Act require that CA shall be done over equivalent area of non-forest land *in lieu* of forest land diverted for non-forest purpose. In the event of non-availability of non-forest land, CA shall be carried out over degraded forest land twice the extent of the area being diverted. However, CA was not required where the diversion of forest land was one hectare and less.

Forest land of 39,974.86 ha⁴⁵ was diverted between 1980 and June 2007 for construction of irrigation projects, hydel/wind power projects, laying of transmission and railway lines, mining/quarrying, construction of buildings *etc.* The Department in its report indicated (June 2007) that CA had been carried out to an extent of 38,988.57 ha leaving a balance of 986.29 ha. However, the extent of CA undertaken included 9,493.36 ha of degraded forest which meant that the afforestation was done less by 4,746.68 ha. As such, the actual CA yet to be carried out was to the extent of 5,732.97 ha. Thus, the Department failed to realistically assess the extent of CA to be carried out.

In seven test-checked divisions⁴⁶, CA had been taken up in 16 cases of diversions of forest land to an extent of 1,624 ha after a lapse of 1 to 25 years as detailed in **Appendix 3.25**. There was no time frame fixed under the Act for CA work. No study to assess the impact on eco system due to diversion of forest land for non-forest purposes like construction of irrigation projects, mining, power projects, construction of buildings *etc.*, was made by the department.

The shortfall and delay in taking up CA and its adverse impact on forest conservation against development needs at sustainable levels were not assessed.

3.5.12 Identification of non-forest lands for compensatory afforestation

According to GOI guidelines under FC Act 1980, the non-forest land for CA should be identified contiguous to or in the proximity to RF to enable the department to effectively manage the newly planted area. In the event of non-availability of non-forest land for CA within the district, the same may be

⁴⁵ 40,076.86 ha *minus* 102 ha of diversion of forest land less than one hectare in each case

⁴⁶ Bangalore Rural & Urban, Belgaum, Bidar, Dakshina Kannada, Karwar and Mandya

identified any where in the State as near as possible to the site of diversion so as to minimise adverse impact on the micro ecology of the area. During the period 1980 to June 2007, CA was undertaken in 29,495.21 ha of non-forest lands. Data on proximity/contiguity of non-forest land to the RF was neither available nor monitored at the nodal officers' level.

In three divisions⁴⁷, an area of 235 ha of forest land diverted during 2002-07, non-forest land of equivalent extent was approved for CA in other districts despite the availability of non-forest land for afforestation within the same district as identified by Revenue Department. In Bellary district, as against 4,306 ha forest land diverted since 1980 for mining and other purposes, CA for only 2,740 ha had been carried out. Of this, only 698 ha non-forest land was identified for CA though 8,951 ha of non-forest land was available within the same district as evidenced by revenue records on land bank.

Execution of CA on non-forest lands which were not in the proximity/contiguity of RF was in deviation of prescribed guidelines. The adverse impact on this account had not been assessed.

3.5.13 Non-recovery of Net Present Value from user agencies

NPV of Rs. 17.09 crore remained unrecovered from 23 user agencies

GOI issued guidelines (September 2003) for recovery / collection of Net Present Value (NPV) at the rates varying from Rs. 5.80 lakh to Rs. 9.20 lakh per hectare depending upon the nature of forest, density and type of species in the forest area proposed for diversion. It directed (September/October 2007) the State Government/Nodal Officer to recover NPV from the user agencies and deposit the amount with Compensatory Afforestation Fund Management and Planning Authority (CAMPA). NPV was also recoverable in cases where Stage I approval (in-principle) had been accorded prior to 30 October 2002⁴⁸.

Test-check revealed that recovery of NPV was pending in 15 Divisions⁴⁹ in respect of 23 user agencies involving 294.70 ha of forest land diverted (October 2001 to October 2006) for non-forest purposes like laying of transmission lines, railway lines, water pipelines, setting up of hydel/wind power projects, construction of buildings, renewal of leases, *etc.* Even by adopting the lowest rate of Rs. 5.80 lakh per ha, the recoverable NPV worked out to Rs. 17.09 crore. Reasons for non-recovery were not on record.

The PCCF, Bangalore replied (July 2008) that directions had been issued (December 2007) to recover the same.

3.5.14 Monitoring by Nodal Officer

The Nodal Officer was to monitor compliance to the conditions stipulated by GOI prescribed at the time of approving the diversion of forest land for various projects. He was also to furnish quarterly reports on non-compliance

⁴⁷ Bidar, Gadag and Gulbarga

⁴⁸ Date of Judgement of Hon'ble Supreme Court regarding collection of NPV

⁴⁹ Bagalkot, Bangalore, Belgaum, Bellary, Chitradurga, Chickmagalur, Haliyal, Honnavar, Karwar, , Madikeri, Mysore, Raichur, Shimoga, Tumkur and Udupi

of conditions stipulated to GOI by user agencies after conducting periodical inspections. Besides, he was also to monitor the survival ratio of plants in compensatory afforestation plantations raised and their status. A monthly report on the applications received by the State Government and their status of processing was to be furnished to Regional Officer/Assistant Inspector General of Forests (Forest Conservation)/Director in charge of monitoring cell.

Inspection reports relating to monitoring of the survival status of the Nodal Officers were not furnished. The prescribed monthly and quarterly reports were also not furnished. In view of this, the extent of monitoring of the implementation of FC Act by the Nodal Officer could not be assessed in audit.

3.5.15 Conclusion

Forest (Conservation) Act, 1980 was enacted with the objective of conserving the forests and to minimise the adverse environmental impact and endangerment of ecological stability. The continued violations under the Act, non-compliance to GOI conditions, release of large extent of forest area for lease by Revenue Department and non-resumption of forest land on expiry of lease period were observed. The adverse environmental impact due to diversion of forest land for other purposes on endangerment of ecological stability was not assessed by the Government. In some cases, non-forest land where compensatory afforestation plantations were raised was not notified under Forest Act. NPV was also not recovered in some cases. Deficiency in monitoring and failure in forest boundary consolidation exposed forest area to encroachments and for unauthorised diversion.

3.5.16 Recommendations

- Penal action should be initiated for violations of Forest (Conservation) Act, 1980 by user agencies.
- Compliance to conditions imposed by Government of India should be ensured to mitigate adverse impact on environment.
- Forest land on expiry of lease period should be resumed and afforested.
- All non-forest land where compensatory afforestation plantations were raised should be notified as reserve forest under Forest Act.
- Recovery of NPV should be ensured from user agencies.