

CHAPTER-I

SOCIAL, GENERAL AND ECONOMIC SECTORS (Non-PSUs)

1.1 Trend of Expenditure

The comparative position of expenditure incurred by the Government during the year 2017-18 and in the preceding two years is given below in **Table 1.1**.

Table 1.1: Comparative position of expenditure

(₹ in crore)

Disbursements	2015-16	2016-17	2017-18
Revenue expenditure			
General services	2560.08	2872.43	3516.93
Social services	2190.58	2265.44	2732.11
Economic services	2472.32	2402.80	2658.63
Grants-in-aid and contributions	1196.58	1325.31	1635.23
Total	8419.56	8865.98	10542.90
Percentage of increase of Revenue expenditure from year 2015-16		5.30	25.22
Capital Expenditure			
Capital outlay	1622.27	1638.73	2094.07
Loans and advances disbursed	2.69	3.41	33.93
Repayment of public debts	439.22	467.75	790.09
Total	2064.18	2109.89	2918.09
Grand total	10483.74	10975.87	13460.99
Percentage of increase of total expenditure from year 2015-16		4.69	28.39

(Source: Finance Accounts of the State for the respective years)

The total expenditure of the State increased by 28 per cent from ₹ 10,484 crore in 2015-16 to ₹ 13,461 crore in 2017-18. The revenue expenditure of the State increased by 25 per cent from ₹ 8,420 crore in 2015-16 to ₹ 10,543 crore in 2017-18.

The share of revenue expenditure to total expenditure stood at 81 per cent during the last two years (2015-17). However, it was reduced to 78 per cent during 2017-18. There was corresponding increase in capital expenditure to 22 per cent during 2017-18, when compared to 19 per cent during 2015-17.

1.2 Authority for Audit

The authority for audit by the Comptroller and Auditor General (CAG) is derived from Articles 149 and 151 of the Constitution of India. The Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 (CAG's (DPC) Act) further reinforce its authority. The CAG conducts audit of expenditure of the Departments of Government of Goa under Section 13 of the CAG's (DPC) Act. The CAG is the sole auditor in respect of 13 Autonomous Bodies which are audited under the provisions of Sections 19 and 20 of the CAG's (DPC) Act. In addition the CAG also conducts audit of bodies/authorities which are substantially funded by the Government, under Section 14 of the CAG's (DPC) Act. Principles and methodologies for various audits are prescribed in the Auditing Standards and the Regulations on Audit and Accounts, 2007 issued by the CAG.

1.3 Planning and conduct of Audit

There are 59 departments in the State at the Secretariat level headed by Chief Secretary/Principal Secretaries/Secretaries. They are assisted by Directors/Commissioners and subordinate officers under them. In addition there are 13 autonomous bodies which are audited by the Accountant General, Goa.

Audit process starts with the assessment of risks faced by various departments of Government. The risks are assessed on the basis of expenditure incurred, criticality/complexity of activities, levels of delegated financial powers, internal controls, media reports and concerns of stakeholders. Previous audit findings are also considered in this exercise. Based on this risk assessment, the frequency and extent of audit are decided.

After completion of audit of each unit, Inspection Reports (IRs) containing audit findings are issued to the Heads of the Departments. The Departments are requested to furnish replies to audit observations within four weeks of receipt of the IRs. Whenever replies are received, audit observations are either settled or further action for compliance is advised. The important audit observations arising out of these IRs are processed for inclusion in the Audit Reports. The Audit Reports are submitted to the Governor of the State under Article 151 of the Constitution of India.

During 2017-18, in the Social and General Sector Audit Wings, 810 party-days were used to carry out audit of 144 units. The Economic Sector-I Audit Wing conducted audit of 18 units utilising 345 party days and the Economic Sector-II Audit Wing audited 102 units utilising 468 party days. The audit plan covered those units/entities which were vulnerable to significant risk as per our assessment.

1.4 Lack of responsiveness of Government to Audit

1.4.1 Inspection reports outstanding

The Accountant General (AG) arranges to conduct periodical inspections of Government departments to test-check their transactions. The AG also verifies the maintenance of important accounting and other records as per prescribed rules and procedures. These are followed up with inspection reports (IRs) which are issued to the heads of the offices inspected with copies to the next higher authorities. Half yearly reports of pending IRs are sent to the Secretaries of the concerned departments. This will facilitate monitoring of the action taken on the audit observations included in these IRs.

As of June 2018, 477 IRs (1,781 paragraphs) were outstanding for want of compliance. Year-wise details of IRs and paragraphs outstanding are detailed in **Appendix 1.1**.

1.4.2 Response of departments to the draft paragraphs

Five draft paragraphs and one performance audit report were forwarded (July and October 2018) to the Principal Secretaries/Secretaries of the concerned departments. The Government's replies to these draft paragraphs and performance audit report were required to be received within six weeks. But replies to all draft paragraphs and performance audit report have not been received (March 2019).

1.4.3 Follow up on Audit Reports

Timeline for follow up of Audit Reports is prescribed in the Internal Working Rules of the Public Accounts Committee of the Goa Legislative Assembly. According to it, the Administrative Departments were required to furnish Explanatory Memoranda (EM) to the Accountant General for vetting. The EMs in respect of the paragraphs included in the Audit Reports were to be furnished to the State Legislature within three months from the date of tabling of Audit Report.

Three departments as detailed in **Appendix 1.2** had not submitted EM for six paragraphs pertaining to Audit Reports for the years 2013-14 to 2016-17 (March 2019).

URBAN DEVELOPMENT, RURAL DEVELOPMENT AND SCIENCE, TECHNOLOGY AND ENVIRONMENT DEPARTMENTS

1.5 Performance Audit on Management of Solid Waste in Goa

Executive Summary

Solid Waste Management (SWM) in Goa is an important challenge due to rising population – both residential and floating. Health, hygiene, environment and aesthetics are all impacted by SWM. In Goa, the prime responsibility of managing solid waste is vested with the local bodies.

A performance audit of ‘Management of Solid Waste in Goa’ for the period 2013-14 to 2017-18 was conducted in 2018 to assess whether planning for waste management in the State was adequate, and efficient waste management systems and monitoring mechanisms were put into place.

The audit findings revealed that while the State Government had initiated steps for policy formulation, identification of regional waste processing sites, development of infrastructure, rehabilitation of legacy dumps *etc.*, concerted efforts were needed to step up the initiatives already taken.

The policy notified by the State Government in October 2018 was deficient to the extent that it assigned roles and responsibilities of solid waste management to bodies which already stood defunct. The average waste generation (219.26 TPD) and collection (210.50 TPD) reported by 14 urban local bodies (ULBs) during 2013-18 appeared to be unrealistic as (i) the methodologies adopted for estimating waste generation were neither uniform nor conformed to the procedures prescribed in the Municipal Solid Waste Management Manual, 2016 and (ii) beneficiary survey, media reports, visit to ULBs and complaints received from local residents indicated problems in waste collection. Incidentally, none of the 191 Village *Panchayats* (VPs) furnished reports on waste management to any State Government agency during the last five years. Despite an expenditure of ₹ 53.91 crore, the contracts for beach and highway cleaning could not be implemented effectively.

Solid waste was being transported in an environmentally unsound manner. Only nine of the 14 ULBs had waste processing facilities which were under-utilised to the extent of 103.40 TPD. The Saligao waste treatment plant commissioned in August 2016 to cater to the needs of VPs

of North Goa had been operating beyond its installed capacity almost since the beginning, leading to high downtime. The State Government's plan for capacity addition of 450 TPD through establishment of new waste treatment plants also did not materialise due to change in scope of work, delay in land acquisition, site encroachment *etc.*

While the landfill sites available with six of 14 ULBs were not in use either due to poor maintenance or dumping of mixed waste, 145 of the 191 VPs had not even identified such sites. Rehabilitation of 2.14 lakh tonnes of accumulated waste – 1.14 lakh tonnes at six exhausted dumpsites under ULBs and the legacy dump of one lakh tonne at Saligao – was yet to be taken up. Whereas, rehabilitation works carried out in four dumpsites at Patto, Campal, Saligao (in North Goa) and Sada (in South Goa) between May 2016 and May 2018 at a cost of ₹ 12.29 crore remained ineffective due to failure to plan for disposal of refuse derived fuel and inerts, post-rehabilitation. During past six years (up to November 2018), 230 incidents of bird hit had been reported around Dabolim international airport due to its proximity to the Sada dumpsite.

The waste processing and disposal sites were neither fenced nor equipped with firefighting equipment; waste was being handled manually without protective gears; leachate was not handled scientifically thus, posing threat to surface and ground water *etc.* There were no waste management plans in place as yet for bio-medical, hazardous and electronic wastes. The monitoring of the solid waste management activities by the stakeholders, especially Goa State Pollution Control Board was weak.

1.5.1 Introduction

Solid Waste Management (SWM) is a challenging issue for Goa given its small size, high population density and large tourist influx. Health, hygiene, environment and aesthetics are all impacted by SWM policy and strategy.

Successful SWM strategy requires that all the waste that is generated should be properly and fully collected at source. Thereafter, all of it should be transported and safely processed in accordance with the principles of reduce, reuse and recycle. The inert material remaining after processing has to be safely disposed. The process of SWM is depicted diagrammatically below:



Solid Waste Management Rules, 2016 issued by the Ministry of Environment, Forests and Climate Change provide the framework for managing SWM activities. In Goa, urban and rural local bodies have the responsibility of solid waste management within their jurisdictions while the Goa Waste Management Corporation (GWMC) looks after creation of processing facilities in the State as well as State Level SWM policy matters. Besides, the Goa State Urban Development Agency (GSUDA) undertakes waste disposal activities (rehabilitation of old dumpsites) for the Urban Local Bodies (ULBs).

The work of waste collection from beaches is managed by the Tourism Department while cleaning along highways was managed by Goa State Infrastructure Development Corporation (GSIDC) which was subsequently transferred to GWMC from November 2017. The Goa State Pollution Control Board (GSPCB) has the responsibility to enforce implementation of various waste management Rules in the State.

During 2013-18, Government of Goa incurred an expenditure of ₹ 299.52 crore¹ on SWM.

1.5.2 Organisational set-up

The management of solid waste at the apex level is overseen by four Secretaries² of Government of Goa who are assisted by the executive heads of the various agencies³. These agencies are in turn assisted by the Municipal Commissioner/Chief Officers at the ULB level and Deputy Directors/Block Development Officers/Village *Panchayat* Secretaries at the *Panchayat* level for implementation of various activities related to waste management. The responsibilities allocated to the Tourism Department, GWMC and GSPCB are implemented through the Deputy/Assistant Directors, the Assistant Managers and the Environmental Engineers respectively.

1.5.3 Audit Objectives

The broad audit objectives of the performance audit were to assess whether:

- Planning for management of solid waste was adequate;
- Level of compliance to laws regulating SWM (collection, segregation, storage, transportation, processing and disposal) was effective; and
- Monitoring of compliance to SWM Rules was effective.

1.5.4 Audit Criteria

The major audit criteria were drawn from the provisions of:

- The Municipal Solid Wastes (Management and Handling) Rules, 2000;
- The Solid Waste Management Rules, 2016;

¹ State funds: ₹ 162.17 crore; local bodies' own funds: ₹ 119.78 crore; *Swachh Bharat* Mission funds: ₹ 8.95 crore; and Finance Commissions' funds: ₹ 8.62 crore

² Departments of Urban Development/Municipal Administration (DMA); *Panchayats* (DoP); Tourism; and Science, Technology and Environment (DSTE)

³ Directors of Municipal Administration, *Panchayats* and Tourism Department; Managing Director of GWMC; Member Secretaries of GSUDA and GSPCB

- Municipal Solid Waste Management Manual, 2016 prepared by Central Public Health and Environmental Engineering Organisation (CPHEEO), Ministry of Urban Development;
- The E-waste (Management) Rules, 2016;
- The Bio-Medical Waste Management Rules, 2016; and
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

1.5.5 Audit Scope and Methodology

The State has two *Zilla Panchayats*⁴ (ZPs) and 12 *talukas* (five in North Goa and seven in South Goa). There is one Municipal Corporation⁵, 13 Municipal Councils (MCs) and 191 Village *Panchayats* (VPs).

The performance audit was conducted between April 2018 and September 2018 covering a period of five years from 2013-14 to 2017-18. For this purpose, Audit visited and examined the records in the offices of the GWMC, DMA, DSTE, DoP, GSUDA, GSPCB, Tourism Department, GSIDC including three⁶ of 14 ULBs and 12⁷ of the 191 VPs selected through random sampling. Besides, the response of 302 households⁸ (comprising 1,135 individuals) was also obtained through questionnaire to assess the adequacy of waste management in 15 selected local bodies.

The audit objectives, criteria, scope and methodology were explained in an entry conference held (April 2018) with the Chief Secretary and the concerned Secretaries. The audit findings were communicated to the State Government in October 2018 and these were also discussed in the exit conference held (January 2019) with the Secretaries of Urban Development, *Panchayats* and STE. The reply of the State Government was awaited as of August 2019. However, replies received from the heads of audit units have been incorporated in the report at appropriate places.

1.5.6 Acknowledgement

Audit acknowledges the co-operation and assistance extended by the State Government and its implementing agencies in conducting the performance audit.

Audit Findings

1.5.7 Policy for Solid Waste Management

A well-defined waste management policy facilitates development and implementation of proper mechanisms to effectively manage solid waste on a sustainable basis. Rule 11(a) of SWM Rules, 2016 stipulates that State

⁴ North Goa and South Goa districts

⁵ Corporation of the City of Panaji (CCP)

⁶ CCP, Mapusa and Quepem

⁷ Arambol, Taleigao, Naqueri-Betul, Agonda, Calangute, Chicolna-Bogmalo, Navelim, Molem, Sanvordem, Usgao-Ganjam, Cana-Benaulim and Pissurlem. One VP in each *taluka* of Goa was covered. The VPs covered represented both the coastal region and the hinterland

⁸ 102 households in ULBs and 200 households in VPs

Governments shall prepare a state policy and strategy on SWM within one year of coming into force of the SWM Rules, 2016 *i.e.* by March 2017⁹.

1.5.7.1 Formulation of State Policy

The State Government undertook several initiatives during the last decade for SWM such as identification of regional waste processing sites at Bainguinim in North Goa, Cacora and Verna in South Goa and establishment of solid waste treatment plant of 100 tonnes per day (TPD) capacity at Saligao (North Goa), formation of Monitoring-cum-Working-Committee (McWC)¹⁰ in March 2011 and High Level Task Force (HLTF)¹¹ in November 2012 for effective enforcement/implementation of the Goa Non-biodegradable Garbage (Control) Act, 1996 and Rules 1997 and the Plastic Waste (Management and Handling) Rules, 2011.

The State Government formed (October 2016) the GWMC through an Act of the Legislature to frame policies and to establish and develop facilities for effective management of all wastes at places selected by the Government.

In terms of Rule 15 of SWM Rules, 2016, the GWMC prepared (January 2017) an action plan for SWM and engaged (April 2018) Infrastructure Development Corporation (Karnataka) Limited as consultant for preparation of a comprehensive and holistic municipal solid waste management policy for the State of Goa in compliance to Rule 11 of the SWM Rules, 2016. Further, in terms of Rule 23 of SWM Rules, 2016, the State Government formed (March 2017) a State Level Advisory Body to review the matters related to implementation of SWM Rules, 2016, State policy and strategy on SWM and give advice to the State Government for taking measures that were necessary for expeditious and appropriate implementation of SWM Rules.

As per consultancy services contract of 02 April 2018 signed between GWMC and the consultant, the consultant was required to submit the solid waste management policy documents in five stages *viz.* submission of (i) inception report by 16 April 2018, (ii) waste characterisation survey report by 30 April 2018, (iii) system and technology strategy report by 30 May 2018, (iv) preliminary policy document by 30 June 2018, and (v) final policy document by 30 October 2018.

Audit observed that the State Government approved the inception report (first stage) and waste characterisation survey report (second stage) while the third stage was pending approval with the State Government as of August 2019. The preliminary policy document and final policy document (fourth and fifth stages) were not submitted to the State Government as of August 2019. The submission of solid waste management policy document of the State has, therefore, been delayed by 10 months (November 2018 to August 2019).

⁹ The SWM Rules, 2016 came into force from April 2016

¹⁰ The Committee was chaired by the Minister of Environment and the Chairman, GSPCB; Secretary, Environment; Collectors of North and South Goa; Director, DoP; Director, DSTE *etc.* were co-opted as members

¹¹ The Task Force was chaired by the Chief Minister and the Minister for Urban Development was the Vice Chairman. The Ministers for Panchayat and Environment; Chief Secretary of the State; Chairman, GSPCB; Principal Secretaries, Environment and Urban Development; Secretary, Panchayati Raj; Commissioner, Corporation of the City of Panaji and Member Secretary, GSPCB were co-opted as members

However, the State Government filed (July 2018) an affidavit before the Hon'ble Supreme Court declaring that the action plan initially prepared by GWMC in January 2017 was the State's holistic policy on SWM, and a notification to this effect was issued in October 2018.

Incidentally, the policy of October 2018 designated the HLTF as the apex body for taking all decisions pertaining to SWM including setting up of SWM facilities in the State. It also made the McWC responsible for implementing provisions of various Acts and Rules pertaining to SWM in the State. However, this action of the State Government lacked rationale as both HLTF and McWC had been defunct¹² since July 2017 and their powers, roles and responsibilities transferred to GWMC.

Thus, the policy notified by the State Government in October 2018 was deficient to the extent that it assigned roles and responsibilities of solid waste management to bodies which already stood defunct. Moreover, the action plan (which was hastily converted into policy of the State in October 2018) lacked credibility because, it considered a historical figure of 400 to 450 TPD of waste in the State as estimated by GSPCB as early as 2014-15 while in the waste characterisation survey report (second stage) submitted in January 2019, the consultant has estimated a total solid waste generation of 766 TPD in the State for the year 2018. Since the quantity of waste generated helps in estimating the staffing, vehicles and equipment required for primary collection, transportation, processing and disposal options that could be adopted, an understatement of 316 TPD in the notified policy raises doubts over the reliability and robustness of planning for effective management of solid waste in the State.

1.5.8 Generation of waste

Section 1.4.3.3.1 of CPHEEO Municipal Solid Waste Management (MSWM) Manual, 2016 prescribes that for long term planning, the average amount of waste disposed by a specific class of generators should be estimated by averaging data from several samples collected continuously for seven days at multiple representative locations during each of the three main seasons (summer, winter, and rainy). Waste quantities should be aggregated over the seven-day period, weighed, and averaged. These quantities can then be extrapolated to the entire population and per capita generation assessed.

Scrutiny of records revealed that GSPCB maintained yearly data on waste generation reported by the 14 ULBs. However, no reports on waste management had been submitted by the 191 VPs to GSPCB during last five years, though mandatory under the Municipal Solid Wastes (Management and Handling) Rules, 2000¹³ and Solid Waste Management Rules, 2016. As a result, the State Government does not have data on the quantum of waste generated, collected and disposed of by the VPs during the last five years.

As per reports submitted by the 14 ULBs to GSPCB, the average waste generation during 2013-18 was 219.26 TPD. In order to check the level of compliance to Manual provisions, Audit enquired the methodology/procedures

¹² The State Government dissolved both the bodies on 21 July 2017

¹³ The Special Secretary (Law), Government of Goa interpreted (March 2009) that Municipal Solid Wastes (Management and Handling) Rules, 2000 was also applicable to the VPs of Goa, apart from ULBs

adopted by these 14 ULBs in estimating waste generated within their jurisdictions.

It was observed that while Corporation of the City of Panaji (CCP) had estimated waste generation on the basis of field surveys conducted in waste management zones, four MCs¹⁴ reported the figures based on visual estimation. The remaining nine MCs¹⁵ reported the quantities transported for processing/disposal as waste generated. This indicated that the methodology/procedures adopted by the ULBs were neither uniform nor did they conform to the procedures prescribed in the CPHEEO Manual mentioned above.

Even the quantity of waste estimated by the consultant in January 2019 (766 TPD for the State) was based on a survey over three consecutive days during the months of June 2018 to October 2018, which is the minimum requirement for short term planning, and may not be adequate to estimate the logistical and technological requirements for long term planning horizon of 20 to 25 years, as prescribed in the MSWM Manual, 2016.

Recommendation 1: The State Government may expedite promulgation of a comprehensive and holistic policy for management of solid waste. The policy should be prepared as per MSWM Manual, 2016 of the CPHEEO.

1.5.9 Collection of waste

Waste collection system is necessary to ensure that waste stored at source is collected regularly and it is not disposed of on the streets, drains, water bodies, etc. Inefficient waste collection has an impact on public health and aesthetics. Section 1.4.5.10 of MSWM Manual, 2016, provides for mandatory door-to-door collection of segregated waste. The collection service should be regular and reliable.

1.5.9.1 Collection of waste by Local Bodies

Collection of waste in Urban Local Bodies

The reports submitted by the 14 ULBs to GSPCB indicated that average waste collection in ULBs during 2013-18 was 210.50 TPD which was 96 per cent of the average waste generated (219.26 TPD). The reports also indicated that while nine¹⁶ of 14 ULBs had collected 100 per cent waste, the remaining five¹⁷ had collected waste to the extent of 85 per cent during 2013-18. In quantitative terms, these five ULBs logged a collective shortfall of 15,991 tonnes between generation (1,08,788 tonnes) and collection (92,797 tonnes) of waste, with CCP registering the highest shortfall of 14,235 tonnes.

Despite the ULBs claim of waste collection to the extent of 96 per cent, Audit observed dumping/littering at 19 spots¹⁸ during random visits to six ULBs

¹⁴ Pernem, Canacona, Bicholim and Mormugao

¹⁵ Sanquelim, Cuncolim, Curchorem-Cacora, Sanguem, Valpoi, Margao, Mapusa, Quepem and Ponda

¹⁶ Bicholim MC, Valpoi MC, Mapusa MC, Ponda MC, Mormugao MC, Margao MC, Curchorem-Cacora MC, Cuncolim MC and Canacona MC

¹⁷ CCP, Sanquelim MC, Pernem MC, Quepem MC and Sanguem MC

¹⁸ 08 in CCP; 02 each in Mapusa, Quepem, Mormugao and Pernem MCs; and 03 in Curchorem-Cacora MC

between May and July 2018. Audit even noticed sanitation workers at Economic Development Corporation (EDC) complex within CCP jurisdiction dumping waste in nearby vegetations as shown in the photographs below.



Sanitation workers at EDC complex dumping collected waste in vegetations (18 May 2018)

Survey of 102 households in three selected ULBs further revealed non-collection of wet and dry waste from nine households¹⁹ (nine *per cent*) and 12 households²⁰ (12 *per cent*) respectively. Consequently, household waste was either being burnt or thrown in open.

In order to check the monitoring mechanism established by the ULBs for sustainable collection of waste, Audit called for monitoring reports from all the 14 ULBs for the period 2013-18. Though the ULBs claimed that their Municipal Supervisors were monitoring collection of waste, none of the ULBs could produce any supporting documents.

CCP along with 10 MCs²¹ received 2,645 complaints on *Swachh* City App of the Ministry of Housing and Urban Development, GoI during 2016-19 regarding non-collection of garbage, dumping and lack of sweeping. Besides, there was a flurry of complaints²² in the 24x7 helpline introduced by CCP in August 2018 on non-collection of waste/garbage and dumping of garbage. This indicated that the ULBs did not have a sustainable waste collection mechanism. It also undermines the claim of the nine¹⁶ MCs having achieved 100 *per cent* waste collection efficiency during 2013-18.

Collection of waste in Village Panchayats

As already mentioned in **paragraph 1.5.8**, none of the 191 VPs had submitted annual reports to GSPCB on waste management during the last five years.

Good Practice

During 2018-19, Mapusa MC adopted a unique method to stop littering/dumping at black spots (where garbage is thrown regularly by public at large) by turning 14 such spots into beauty spots



'Before' and 'After' status of black spot near Government Primary School, Xelpem, Mapusa

¹⁹ 01 household in CCP, 03 households in Mapusa MC and 05 in Quepem MC

²⁰ 02 households in CCP, 05 households in Mapusa MC and 05 in Quepem MC

²¹ Except 03 MCs (Quepem, Mormugao and Sanguem) where user registration was 'Nil'

²² 286 complaints were lodged between August 2018 and February 2019

However, information provided (October 2018) by DoP to GWMC revealed that while four of 191 VPs (two *per cent*) collected no waste, only 45 VPs (24 *per cent*) collected both wet and dry waste. The remaining 142 VPs (74 *per cent*) collected only dry waste. Survey of 200 households in 12 selected VPs further revealed non-collection of dry and wet waste from 70 households (35 *per cent*) and 159 households (80 *per cent*) respectively. The respondents also accepted that household waste was being burnt, thrown in open/water bodies or buried. Audit also observed dumping/littering at 49 spots during random visits to 11 of the 12 selected VPs in July 2018.

During 2018, four leading English dailies²³ reported 223 instances of dumping in 11 of the 12 Talukas of the State which only reinforces the observations of Audit about the deficiencies in the system of collection of waste across the State.

Section 1.4.5.13 of the MSWM Manual, 2016 further stipulates that an efficient waste management, regardless of strategy, requires co-operation and support from the community. Inducing behaviour change in people and seeking their co-operation in managing their waste is key to successful SWM. For this purpose, sustained public outreach is essential to convince the people to become a part of the SWM process. However, in response to questionnaire, 228 of 302 households (75 *per cent*) in 15 selected local bodies acknowledged that they had never been approached by any State Government agency through an awareness campaign.

1.5.9.2 Collection of waste from beaches and highways

Cleaning of beaches

The Tourism Department is responsible for collection of waste from beaches. The contracts for cleaning of 36 beach stretches in the State were awarded (August 2014) to two contractors²⁴ for an initial period of 15 months (August 2014 to November 2015). Both the contracts were extended for a further period of 13 months up to December 2016. The Tourism Department paid ₹ 16.33 crore to both the contractors against payments due up to July 2016. Scrutiny of documents in Tourism Department and GSPCB relating to beach cleaning contracts revealed the following:

- As per conditions of the contracts, the Tourism Department constituted (September 2014) a State Level Monitoring Committee for conducting quarterly inspection of beaches and award grades²⁵ to the contractors from 'A' to 'D' with attendant financial penalties for default. Award of two grade 'C' or below in a year were liable to terminate the contracts. The Monitoring Committee, however, conducted only three inspections (11 June 2015, 14 August 2015 and 09 January 2016) against the mandatory nine and gave satisfactory reports in favour of the contractors, without awarding any grades.
- However, during inspection of 36 beach stretches conducted in July and August 2015, GSPCB observed that (i) the collection of waste along

²³ The Times of India, The Navhind Times, The Goan and The Herald

²⁴ Bhumika Transport, Mumbai (for North Goa beaches) and Ram Engineering and Construction Company, Mumbai (for South Goa beaches)

²⁵ Grade 'A'- no deduction; Grade 'B'- 5 *per cent* deduction; Grade 'C'- 20 *per cent* deduction; and Grade 'D'- more than 20 *per cent* deduction

the beach shores was not in a segregated form, (ii) the contractors were either burning the collected waste on the beaches or waste was being strewn in the vegetation/buried in the sand, (iii) the contractors were not maintaining any kind of log books or records regarding quantity of waste collected, transported and disposed of and (iv) the contractors did not construct segregation sheds and composting pits to recycle the biodegradable component into manure. Consequently, 4,000 sq. meter of land allotted temporarily to the contractors at Saligao dumpsite in North Goa for scientific segregation and disposal of beach waste had been indiscriminately used to dump mixed beach waste in a haphazard manner.

- Though the scope of work included mechanised cleaning of beaches in eight²⁶ of 36 stretches, the contractors carried out manual cleaning, as neither of them could successfully demonstrate the beach cleaning machines bought to site after one year of commencement of contract (August 2015). The Tourism Department, however, took cognizance of this major violation of contract condition together with other deviations such as, non-installation of porta cabins²⁷, constructions of segregation sheds and composting pits *etc.* only in September 2016 *i.e.* 25 months after the award of contracts. The contracts were terminated on account of these violations/deviations in December 2016.
- The beach cleaning contract was subsequently awarded (December 2016) to another contractor²⁸ without competitive bidding. Between December 2016 and May 2019, a payment of ₹ 22.26 crore had been made to the agency for manual cleaning of beaches. Even the performance of this contractor was far from satisfactory, as four leading English dailies²³ reported 57 cases of beach dumping/littering during 2018.

Thus, the Tourism Department failed not only to monitor beach cleaning contracts but also ignored transparency and competition while awarding the second beach cleaning contract.

Cleaning of highways

In the second meeting of HLTF (February 2013) chaired by the Chief Minister, it was decided to assign the responsibility of collection, segregation and transportation of solid waste along the National and State highways to GSIDC. The GSIDC executed the works through various contractors between March 2013 and October 2018 for which a payment of ₹ 15.32 crore had been made to the contractors till August 2019.

In order to seek an assurance whether highway cleaning works were done effectively and efficiently by the contractors, Audit covered seven stretches of highways spread over a distance of 172 km in three zones (North, Central and South) along with the officials of GSIDC and the contractors on 10 and 11 July 2018 and found solid waste dumped at 52 locations. Two of such instances are depicted in the photographs below.

²⁶ Four stretches in North Goa were awarded to Bhumika Transport, Mumbai and the remaining four stretches in South Goa were awarded to Ram Engineering and Construction Company, Mumbai

²⁷ These are the portable cabins to be used as site offices

²⁸ Drishti Lifesaving Private Limited, Mumbai



Karaswada to Sanquelim road stretch
(10 July 2018)



Waste along Panaji to Margao NH
(11 July 2018)

Four leading English dailies²³ also reported 12 cases of dumping on the highways during 2018.

Though the original contracts came to an end in October 2018, no fresh contract(s) had been concluded as of August 2019. In the meantime, the works of highway cleaning were awarded (May-June 2019) to the earlier appointed contractors for the North, Central and South zones, after a gap of six to seven months, as a stop-gap arrangement.

The observations of Audit, responses to the survey, results of joint inspections/site visits, news reports and online complaints were pointer to deficient waste collection system in the State.

1.5.10 Transportation of waste

Once collected, the solid waste has to be safely transported for treatment and disposal. The SWM Rules, 2016 provide for transportation of waste in an environmentally sound manner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions. As per the time frame prescribed in the Rules, the local bodies were to ensure transportation of waste in covered vehicles up to processing or disposal facilities within two years of the enforcement of the Rules *i.e.* by March 2018.

Information provided by 15 selected local bodies revealed that out of total 53 vehicles available for waste transportation, 20²⁹ were being deployed without protective covers while 47³⁰ did not have leachate³¹ collection tanks. Besides, none of the nine vehicles deployed by the beach cleaning contractor (Drishti Lifesaving Private Limited, Mumbai) for transporting waste from the beaches had leachate collection tanks.

During site visits of four³² dumping sites and Solid Waste Treatment Plant (SWTP) at Saligao, Audit observed that the garbage was being transported to dumpsites in open vehicles while leachate was leaking profusely from the trucks carrying garbage to SWTP, as depicted in the photographs below.

²⁹ 12 in CCP, 06 in Mapusa MC and 02 in Taleigao VP

³⁰ 15 in CCP, 11 in Mapusa MC, 06 in Quepem MC and 15 in all the 12 selected VPs

³¹ Water that has percolated through a solid and leached out some of the constituents

³² Sada (Mormugao MC), Sonsoddo (Margao MC), Curchorem-Cacora MC and Assagao (Mapusa MC)



Open vehicle at the dumpsites of Mormugao
(31 May 2018)



Leakage from truck at SWTP, Saligao
(24 August 2018)

The GSPCB issued a show cause notice (December 2018) to the concessionaire running the SWTP at Saligao for ferrying garbage to the plant without protective covers and leachate collection tanks. The concessionaire, however, contested that as per the scope of work, they were required to only treat the waste as received at the plant from various locations through collection and transportation agencies authorised/directed by GWMC/DSTE/GSIDC *etc.*

The GSPCB issued repeated directives (December 2018, March 2019 and May 2019) to DoP to ensure that VPs transport waste in covered vehicles having leachate collection system. However, no action was taken by DoP in this regard.

Thus, the State Government failed to ensure transportation of waste in an environmentally sound manner as prescribed in the Rules.

Recommendation 2: The State Government may strengthen its waste collection system in order to ensure that all waste generated is fully collected at source. It may also ensure that waste is transported in an environmentally sound manner as prescribed in the Solid Waste Management Rules, 2016. The highway and beach cleaning contracts may be awarded after exercising due diligence.

1.5.11 Processing and disposal of waste

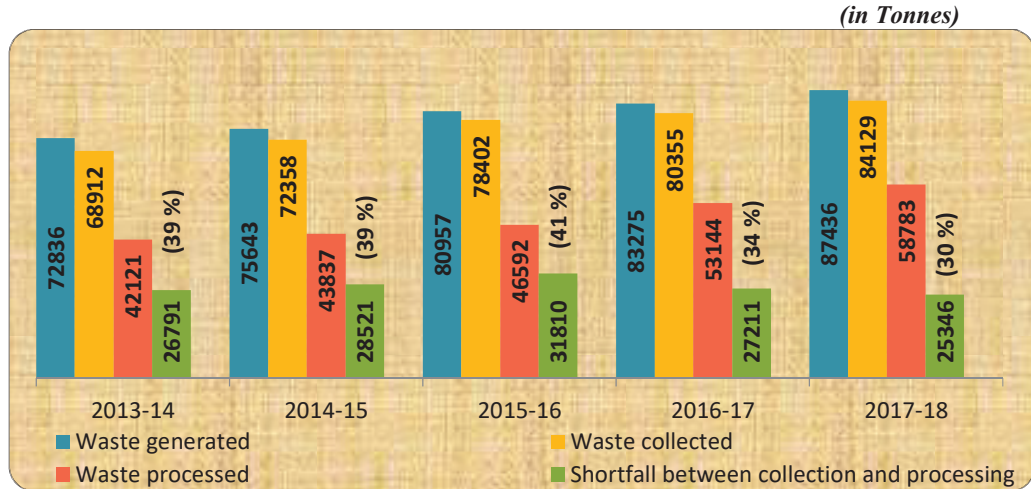
1.5.11.1 Processing of waste

Processing means conversion/transformation of waste into useful fractions/products. The biodegradable waste should be processed by composting, vermi-composting, aerobic digestion or any other appropriate biological processing so as to minimise the burden on landfill. Similarly, the non-biodegradable waste should be processed by recycling or co-processing³³.

As per the annual reports submitted by ULBs to GSPCB, the quantum of waste generated, collected and processed in 14 ULBs during 2013-18 was as given in **Chart 1**.

³³ Co-processing means use of non-biodegradable and non-recyclable solid waste as raw material or as a source of energy to replace or supplement the natural mineral resources in industrial processes

Chart 1: Generation, collection and processing of waste by ULBs and shortfall between collection and processing



(Source: Annual reports on solid waste management submitted by ULBs to GSPCB)

It may be seen from the **Chart 1** above that around 64 *per cent* of the waste collected had been processed during 2013-18. Low rate of processing in the ULBs was due to non-availability of adequate processing infrastructure such as, composting facilities, bio-methanation plants *etc.* and under-utilisation of the available processing infrastructure.

Audit observed that three³⁴ of the 14 ULBs did not have processing plants. The processing plants in two³⁵ ULBs having a combined installed capacity of 45 TPD were non-functional since 2013 and 2015 due to (i) non-supply of electricity on account of mounting electricity bill arrears, and (ii) break-down of sub-assembly³⁶ of the processing plant. The remaining nine³⁷ ULBs, where composting facilities was available, had under-utilised the installed capacities to the extent of 103.40 TPD³⁸.

So far as the VPs were concerned, 189³⁹ of 191 VPs (99 *per cent*) did not have waste processing facilities. The waste (wet and dry) was either being sent to SWTP at Saligao or disposed of on their own or through private contractors.

In order to address the issue of management of garbage/solid waste in the VPs of North Goa, the State Government commissioned a SWTP at Saligao in August 2016 on design, build, finance, own and transfer basis at a cost of ₹ 146 crore for a concession period of 10 years through GSIDC.

Good Practice

For more than a decade, Corporation of the City of Panaji had been composting residential wet waste (currently 1.5 TPD) in decentralised composting stations established in residential societies.



Composting station at Kamat Tower Housing Society, Tonca (CCP)
After successful trials in February 2019, Calangute VP has also decided to replicate this practice.

³⁴ Curchorem-Cacora MC, Sanguem MC and Canacona MC

³⁵ Pernem MC (5 TPD) and Mormugao MC (25 to 40 TPD)

³⁶ Sieving machines

³⁷ CCP, Bicholim MC, Sanquelim MC, Valpoi MC, Mapusa MC, Ponda MC, Margao MC, Quepem MC and Cuncolim MC

³⁸ Against combined installed capacity of 222.50 TPD, waste processed was 119.10 TPD

³⁹ Nuvem and Navelim VPs under Sattari Taluka have composting machines

As per authorisation, the plant was to cater to the needs of 25 of 191 VPs as well as handle waste collected from beaches and highways. However, during the last 25 of 30 months of its operation till January 2019, the plant had been operating beyond its installed capacity (140 TPD *vis-à-vis* 100 TPD) and thus, over-stressed. The situation has arisen because, the local bodies, other than the 27 authorised entities⁴⁰, were also disposing of waste at the SWTP on daily basis, over which the State Government had no control. Due to processing of surplus waste, the plant, as admitted by the concessionaire in November 2018, was not getting timely preventive maintenance, leading to increased downtime of the plant, thus, affecting its operational life and efficiency as well. The State Government belatedly decided (March 2019) to augment the capacity of the plant from 100 TPD to 250 TPD.

In addition to the SWTP at Saligao, the State Government had also planned capacity addition of 450 TPD for processing/treatment of waste through three projects⁴¹ over a period of five years (2012-17). Audit observed that none of these projects took off as of August 2019 due to the following reasons:

- The project at Bainguinim for CCP which was to commence in July 2014 and planned to be completed by October 2015, suffered on account of (a) change in the mandate of JnNURM resulting in the project becoming ineligible for funding under the Mission⁴² (b) change in scope of work from localised plant to handle segregated waste to a centralised facility for handling mixed waste, (c) capacity enhancement from 100 TPD to 250 TPD midway, and (d) encroachment on the land earmarked for installation of SWTP. The project cost shot up from ₹ 96.64 crore in August 2013 to ₹ 248.50 crore in August 2018.
- The Cacora SWTP of 100 TPD capacity in South Goa was planned (August 2013) simultaneously with the Saligao SWTP to be executed through GSIDC. The work orders for both the projects were issued in March 2014. While, the SWTP at Saligao was commissioned in August 2016, the SWTP at Cacora remained a non-starter due to delay in conducting public hearing for the project, change in financial model⁴³ of the project and delay in transfer of land from GSIDC to GWMC. The project has been rescheduled for completion by March 2021. The project cost has also increased from ₹ 146 crore in March 2014 to ₹ 189.99 crore in March 2019.
- The project for 250 TPD plant at Verna approved in July 2017 was in land acquisition stage as of August 2019.

⁴⁰ 25 VPs, beaches and highways

⁴¹ Bainguinim (100 TPD), Cacora (100 TPD) and Verna (250 TPD)

⁴² Land was acquired in 2008 and CCP took possession in 2009. However, the Detailed Project Report (DPR) was submitted to GoI only in July 2013 by which time, the initial JnNURM period (2005-2012) was over

⁴³ From 100 *per cent* finance by concessionaire to 75 *per cent* finance by State Government and 25 *per cent* by concessionaire

1.5.11.2 Disposal of waste

Disposal of waste at landfills

Post-processed residual waste includes waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing. Such wastes should be disposed of in the sanitary landfill⁴⁴ and not merely dumped.

As per the annual report for the year 2017-18 submitted (December 2018) by GSPCB to Central Pollution Control Board (CPCB), only six⁴⁵ of 14 ULBs had landfill sites and the remaining eight ULBs were either in the process of acquiring land to establish landfills or the landfills were under construction. Audit, however, observed that none of the landfills in six ULBs was in use, as discussed below.

- The landfill at Bicholim was not in use, as the inert waste generated was being baled and sent to a cement factory in Karnataka for co-processing.
- The landfill at Quepem was not in use as of August 2019 due to filling of rain water and non-working of leachate pipeline.
- The composting plant at Pernem was non-functional since 2013 and therefore, no residual waste was being generated, and the landfill remained unutilised.
- The landfill at Canacona was not in use as it had reached its full capacity due to dumping of mixed waste.
- In 2014, the landfill site/pit at Sanquelim was gutted in fire and the seepage-proof lining/geo-lining of the landfill was burnt. Therefore, the landfill was not in use.
- The landfill site at Cuncolim was not in use since 2013-14 due to maintenance works.

As regards VPs, only 46 of 191 VPs (24 *per cent*) including five⁴⁶ of the 12 selected VPs have identified landfill sites as of August 2019.

Disposal of waste at dumpsites

Open solid waste dumpsites having no engineered liner system, leachate collection system or an appropriately designed cover system pose a threat to the environment and human health. As per SWM Rules, 2016, such dumpsites were to be closed within five years of the date of notification of the Rules *i.e.* by March 2021.

There are 25 dumpsites in the State – nine⁴⁷ of the 14 ULBs own 13 dumpsites while 12 of 191 VPs own one dumpsite each. Of the 13 dumpsites in ULBs, eight⁴⁸ had reached their full capacity while five⁴⁹ were still receiving waste

⁴⁴ A landfill is an excavated piece of land, scientifically designed and constructed with protective measures for safe disposal of residual solid waste and inert wastes to safeguard against pollution of ground water, surface water and air

⁴⁵ Bicholim MC, Canacona MC, Cuncolim MC, Pernem MC, Quepem MC and Sanquelim MC

⁴⁶ Agonda VP, Molem VP, Chicolna-Bogmalo VP, Arambol VP and Taleigao VP

⁴⁷ CCP (04), Margao MC (01), Mormugao MC (01), Mapusa MC (01), Bicholim MC (01), Pernem MC (02), Canacona MC (01), Curchorem-Cacora MC (01) and Cuncolim MC (01)

⁴⁸ CCP (04), Mapusa MC (01), Pernem MC (01), Canacona MC (01) and Cuncolim MC (01)

⁴⁹ Margao MC, Mormugao MC, Pernem MC, Bicholim MC and Curchorem-Cacora MC

(live). As regards VPs, all 12 dumpsites were live. All the eight exhausted dumpsites in the ULBs were to undergo a process of rehabilitation⁵⁰. In addition, there was a legacy dump of 1,45,674 tonnes⁵¹ at Saligao in North Goa which was also to be rehabilitated.

The State Government carried out rehabilitation works at four dumpsites (two⁵² of eight exhausted, one⁵³ of five live in ULBs and one at Saligao) between May 2016 and May 2018 using remediation/bio-remediation⁵⁴ method. However, the State Government was yet to take up rehabilitation of six exhausted dumpsites having an accumulated waste of 1.14 lakh tonnes. Even, the four dumpsites which were taken up for rehabilitation did not achieve the intended objectives, as discussed below:

- The rehabilitation works at the two exhausted dumpsites at Campal and Patto within CCP jurisdiction having 34,669 tonnes and the legacy waste of 45,674 tonnes at Saligao (totalling 80,343 tonnes) was completed between May 2016 and December 2016 at a total cost of ₹ 8.26 crore. During site visits, Audit, however, noticed that the rehabilitated waste (in the form of refuse derived fuel⁵⁵ and inerts) of approximately 35,250 tonnes was lying at these sites since 2016. Non-disposal of the rehabilitated waste for long period may lead to further degradation⁵⁶ of waste already rehabilitated due to continuous exposure to sunlight and mechanical erosion. This may also render the exercise of rehabilitation carried out at a cost of ₹ 8.26 crore unfruitful. The remaining legacy dump of 1,00,000 tonnes at Saligao was not rehabilitated as of April 2019.
- The rehabilitation of the live dumpsite at Sada under Mormugao MC having 36,250 tonnes of waste (estimated in November 2015) was undertaken (September 2016) on the directives of National Green Tribunal at a cost of ₹ 4.20 crore to be completed by May 2018. However, failure of the MC to provide alternative site to accommodate inert residual/rehabilitated waste led to stoppage of work in May 2018 after rehabilitation of 34,199 tonnes and payment of ₹ 4.03 crore. During the intervening period (November 2015 to March 2018), there was an average daily addition of around 28 tonnes of waste. As of November 2018, the dump stood at a height of 10 metres with 40,324 tonnes.

It is pertinent to mention that the Sada dumpsite is in proximity to Dabolim international airport and commercial aircrafts landing and taking off from the

⁵⁰ A process by which disposed waste in an existing dumpsite is excavated and either reused or disposed in an environmentally friendly manner

⁵¹ 45,674 tonnes was lying within the SWTP site while one lakh tonnes was dumped outside the premises of the SWTP

⁵² At Campal and Patto under CCP

⁵³ At Sada under Mormugao MC

⁵⁴ The use of either naturally occurring or deliberately introduced micro-organisms for consumption and break-down of environmental pollutants, in order to clean polluted sites

⁵⁵ Fuel derived from combustible waste fraction of solid waste like plastic, wood *etc.* in the form of pellets produced by drying, shredding, dehydrating and compacting of solid waste

⁵⁶ As per scientists of National Institute of Oceanography, Goa in their article titled "Characteristics, seasonal distribution and surface degradation features of micro-plastic pellets along Goa coast, India" (2016)

airport remained vulnerable to bird hits. In fact, the Directorate of Civil Aviation, Goa reported 230 bird hit cases during 2013-19 (up to November 2018).

Apart from the above, rehabilitation of dump at Sonsoddo under Margao MC (another dumpsite out of five live dumpsites in ULBs) was also envisaged as early as 2010 by screening, composting and carting away the waste to another location. The Consortium⁵⁷ to whom rehabilitation work was awarded (February 2010) reported in May 2011 presence of heavy metals in the waste such as arsenic, copper, chromium and lead. A SWM expert⁵⁸ engaged subsequently noted in its Report (January 2012) that screening and carting of waste containing heavy metals may affect the environment adversely and contaminate the ground water as well and therefore, recommended scientific capping⁵⁹/closure of the site. The State Government accepted this recommendation and a DPR for this purpose was prepared by another consultant⁶⁰ in December 2012 for ₹ 7.76 crore. However, the DPR was not implemented and in July 2015, the State Government decided to revert to the original plan of screening, composting and carting away the existing dump to another location. As of April 2019, no conclusive decision had been arrived at on adoption of appropriate method/technology for rehabilitation of dumpsite at Sonsoddo.

As of November 2018, the dump at Sonsoddo grew to a staggering 1,00,000 tonnes (measuring 16.5 meters vertically) with a daily addition of around 20-25 tonnes, and continues to pose environmental and health hazard.

As a stop-gap measure, the Margao MC laid plastic covers over the dump which were left in tatters and dislocated, due to vagaries of weather, as shown in photographs below.



Garbage dumps at Sonsoddo, Margao (26 June 2018)

1.5.11.3 Non-compliance to provisions of SWM Rules, 2016

Rule 15 and Schedule I of the SWM Rules, 2016 entrust the local bodies with the responsibility to prevent burning of waste, mixing of leachate from solid waste locations with surface run-off water, ensure provision and usage of

⁵⁷ Sociedade de Fomento Industrial Private Limited, Margao, Goa and IL&FS Waste Management and Urban Services Limited, New Delhi

⁵⁸ Urban Management Consultants

⁵⁹ The landfill capping system is a controlling process that forms a barrier between the unwanted hazardous waste and the environment. A capping system is necessary to shield the waste materials from harming the surrounding environment and human health.

⁶⁰ K. R. Gopalakrishnan, Cochin

protective gears such as, hand gloves, footwear, masks *etc.* by the workers at waste facilities, and provision of fire equipment at landfill sites. However, site visits by Audit to waste processing and dumpsites of seven⁶¹ ULBs (including three selected ULBs) between May 2018 and July 2018 revealed the following non-compliances:

- Waste was seen burnt at many locations in the jurisdictions of CCP, near landfill site of Pernem MC and near dumpsite of Curchorem-Cacora MC.
- No fire protection equipment was installed by the ULBs despite incidences of fire at the waste segregation and baling station at Cacora under Curchorem-Cacora MC (January 2014) and Sonsoddo dumpsite under Margao MC (June 2017 and May 2019).
- Waste was being handled manually without adequate protective gears like gloves, gumboots, face masks *etc.*
- Leachate was seen flowing⁶² at the dumpsites/processing plants posing threat to surface and ground water as depicted in photographs below.



**Leachate at dumpsite of Mormugao MC
(31 May 2018)**



**Leachate at processing plant of Margao MC
(26 June 2018)**

- Waste processing and disposal sites were not protected and stray animals were seen roaming⁶³ inside.

⁶¹ CCP, Quepem MC, Mapusa MC, Mormugao MC, Pernem MC, Curchorem-Cacora MC and Margao MC

⁶² Mapusa MC, Curchorem-Cacora MC, Margao MC and Mormugao MC

⁶³ Segregation site of CCP at St. Inez and dumpsites of Curchorem-Cacora MC and Mormugao MC



Segregation and baling station of CCP
(17 May 2018)



Dumpsite at Cacora
(08 June 2018)

- The dumpsite at Sada under Mormugao MC was in close proximity to the sea with the wall on the sea side broken thus, increasing the chances of the plastic being blown/washed into the sea with strong wind/rain posing threat to marine organisms.

1.5.12 Management of other wastes

Waste generated in the State *inter alia* includes bio-medical waste (BMW), electronic-waste (E-waste) and hazardous waste. All these wastes pose serious threat to environment and public health and hence, need to be collected, transported and disposed of in a scientific manner. Audit examined the records of GSPCB to examine enforcement of Rules relating to BMW, E-waste and hazardous waste as well as GWMC to check the efforts made in creation of required infrastructure relating to management of these wastes.

1.5.12.1 Bio-medical waste

The GoI notified (March 2016) the Bio-Medical Waste Management Rules, 2016 for effective and improved collection, segregation, processing, treatment and disposal of bio-medical waste in an environmentally sound manner.

As per the provisions of the Rules, GSPCB was responsible for monitoring the enforcement of the Rules and submit annual reports (calendar year-wise) to CPCB. Reports submitted by GSPCB to CPCB revealed that while BMW generation in the State showed a declining trend⁶⁴ during the last four calendar years (2014 to 2017), the number of health care facilities (HCFs) registered in the State during calendar years 2014 to 2018 showed an increasing trend⁶⁵. The reduction of BMW with increase in number of HCFs with passage of time shows that the GSPCB did not have reliable data on the quantum of BMW generated in the State.

The State Government also did not have a bio-medical waste management plan and a common bio-medical waste treatment facility (CBMWTF) which has considerable advantages over individual treatment facilities in terms of capital investment, manpower, monitoring by regulatory agencies *etc.*

Further, there was no comprehensive BMW collection system in the State. The GSPCB has authorised one firm⁶⁶ which had been collecting and

⁶⁴ 9.59 tonnes in 2014, 7.92 tonnes in 2015, 2.66 tonnes in 2016 and 0.87 tonnes in 2017; BMW generation during calendar year 2018 slightly increased to 1.84 tonnes.

⁶⁵ 434 in 2014, 541 in 2015, 590 in 2016, 601 in 2017 and 718 in 2018

⁶⁶ Goa Health Monitoring Services

managing some amount of BMW generated in the State, primarily in and around CCP. Thus, there lies the risk of dumping of BMW, open burning and disposal of BMW along with municipal waste which poses a serious public health concern.

Site visit (May 2018) to dumpsite at Sada under Mormugao MC in South Goa revealed BMW dump consisting of blood-stained cotton, flesh, plaster casts, syringes, medicine bottles *etc.* in open in contravention of BMW Rules, 2016 as shown in the photographs below.



Biomedical waste at Sada dumpsite under Mormugao MC (31 May 2018)

1.5.12.2 Electronic-waste

The E-waste (Management) Rules, 2016 notified by the GoI in March 2016 aimed at putting in place an effective mechanism to regulate the generation, collection, storage, transport, import, export, environmentally sound recycling, treatment and disposal of the E-waste.

Audit observed that the State Government did not have an E-waste management plan for the State. GWMC advised the ULBs to collect and store E-waste with them till the formulation of an E-waste management plan and availability of necessary infrastructure.

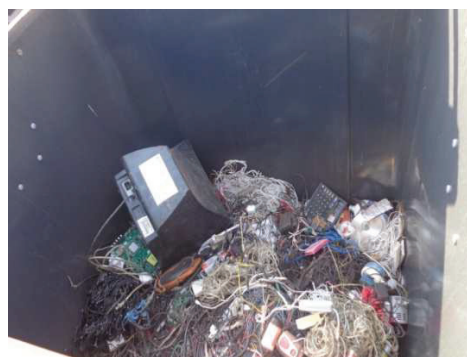
As per annual reports submitted by GSPCB to CPCB (2013-18) under the provisions of the Rules, the E-waste collection in the State showed an increasing trend from 48 tonnes in 2013-14 to 449 tonnes in 2016-17. However, GSPCB reported a meager collection of only 61 tonnes in 2017-18, creating doubts on the reliability and consistency of data being reported to CPCB. Further, GSPCB failed to prepare a systematic inventory of E-waste in the State though provided for in the Rules.

During site visits, huge quantity of E-waste was seen dumped at various⁶⁷ segregation, landfill and dumpsites. A few instances are depicted in the photographs below.

⁶⁷ Segregation sites of CCP and Mapusa MC; landfill site of Pernem MC; and dumpsite of Margao, MC



Segregation site of CCP at St. Inez
(17 May 2018)



Segregation site of Mapusa MC
(05 July 2018)

1.5.12.3 Hazardous waste

The GoI notified (April 2016) the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for effective handling, collection, treatment, storage, utilisation and disposal of hazardous⁶⁸ and other waste in an environmentally sound manner.

A common hazardous waste treatment, storage and disposal facility (CHWTSDF) reduces the number of hazardous waste sites and also eliminates the pollution potential. Also, the management of waste at common facility is relatively easier, economically viable and easy to monitor. The State Government had neither set up a CHWTSDF within the State nor did it prepare an integrated plan for management and transboundary movement of hazardous waste as of August 2019.

As per Rule 20 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, GSPCB was to submit an annual inventory to CPCB regarding the quantum of the waste generated, recycled, recovered, utilised, re-exported and disposed of in the State. The annual reports of GSPCB for the years 2016-17 and 2017-18 showed that of the 1,409 hazardous waste generating units in the State authorised to generate 82,731 tonnes, only 221 units submitted annual returns to GSPCB showing a waste generation of 24,796 tonnes during 2016-17. Similarly, of the 1,440 units authorised to generate 75,977 tonnes, only 349 units submitted annual returns to GSPCB showing a waste generation of 26,301 tonnes during 2017-18. As majority of industries (84 per cent in 2016-17 and 76 per cent in 2017-18)⁶⁹ did not submit returns, GSPCB was not aware of the quantum of waste generated by these industries.

Recommendation 3: The State Government/ULBs may ensure timely completion of ongoing projects and full utilisation of existing infrastructure for processing and disposal of waste. The open dumpsites should be scientifically rehabilitated within the timelines given in Solid Waste Management Rules, 2016. They may also draw a roadmap for establishment of common waste treatment and disposal facilities for bio-medical and hazardous wastes.

⁶⁸ A waste that has one or more of the hazardous traits - ignitability, reactivity, corrosivity or toxicity

⁶⁹ $(1,188 \div 1,409) \times 100$ in 2016-17 and $(1,091 \div 1,440) \times 100$ in 2017-18

1.5.13 Monitoring

The purpose of monitoring is to track implementation and outputs systematically, and measure the effectiveness of programmes. It helps to determine exactly when a programme is on track and when changes may be needed.

As per various Waste Management Rules⁷⁰, GSPCB is responsible for enforcement and monitoring the provisions of the Rules in the State. However, GSPCB failed on many counts in ensuring that (i) VPs had furnished annual reports on waste management, (ii) timelines prescribed in the Rules for transportation of waste in an environmentally sound manner had been adhered to, (iii) landfills were scientifically constructed and utilised and, (iv) a comprehensive inventory of BMW, E-waste and hazardous waste had been prepared. Besides, Audit called for (May 2018) information from GSPCB regarding authorisations granted/consents given to local bodies or operator of a facility or any other agency authorised by local body to operate SWM facilities, and inspections conducted of such facilities to ensure compliance to conditions specified in the authorisations/consents. However, no information was provided by GSPCB despite reminders in June 2018 and May 2019.

Further, Tourism Department and GSIDC failed to monitor the beach and highway cleaning contracts effectively and efficiently leading to many inadequacies in their implementation.

GSPCB accepted (January 2019) that in absence of dedicated staff, enforcement and monitoring the provisions of the Rules could not be carried out effectively.

Recommendation 4: The stakeholders need to strengthen their monitoring mechanism in order to ensure that all the Statutory Rules and contract conditions are meticulously complied with for effective management of solid waste in an environmentally sound manner.

1.5.14 Conclusion

The State of Goa does not have a comprehensive and holistic municipal solid waste management policy. The action plan of January 2017, which was converted into State's holistic policy on solid waste management, had its own drawbacks. The preparation and submission of new solid waste management policy documents by the consultant had already been delayed by 10 months. The methodologies adopted by the urban local bodies to determine the quantum of waste generated was neither uniform nor did these conform to the procedures prescribed in the Municipal Solid Waste Management Manual, 2016.

Even the claim of the urban local bodies having achieved waste collection to the extent of 96 *per cent* lacked credibility as beneficiary survey by Audit, newspaper reports and visits to local bodies revealed problems in waste collection. While beach cleaning contract lacked transparency, fresh contracts for highway cleaning were not finalised after October 2018. Solid waste was

⁷⁰ Solid Waste Management Rules, 2016; Bio-Medical Waste Management Rules, 2016; E-waste (Management) Rules, 2016; and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

being transported in an environmentally unsound manner. During 2013-18, the urban local bodies processed only 64 per cent of the collected waste.

None of the 191 Village *Panchayats* furnished waste management data to any State Government agency during the last five years. As a result, the State Government had no data on waste generated, collected and disposed of by the VPs during the last five years. While the waste treatment plant at Saligao was over-stressed, the plan for capacity enhancement through establishment of projects at Bainguinim, Cacora and Verna had been delayed considerably.

Only six of 14 urban local bodies had landfill sites which too were not in use either due to poor maintenance or dumping of mixed waste. Despite an expenditure of ₹ 12.29 crore, four dumpsites (three in North Goa and one in South Goa) could not be rehabilitated effectively due to failure to plan for disposal of refuse derived fuel and inerts, post-rehabilitation. The rehabilitation of six already exhausted dumpsites had not been taken up. The State Government neither formulated waste management plans for bio-medical, hazardous and electronic wastes nor did it have any common waste treatment and disposal facilities for bio-medical and hazardous wastes. The monitoring of the solid waste management activities by the stakeholders was weak.

PUBLIC WORKS DEPARTMENT

1.6 Loss of Government property

Due to negligence and lack of co-ordination between two Divisions of Public Works Department, distribution pipelines laid by one Division under a water supply project were partially damaged by the contractor engaged by another Division for road widening works in the same area, resulting in loss of Government property valuing ₹ 2.40 crore.

As per Rule 21 of General Financial Rules, 2005 (GFR) every public officer is expected to exercise the same vigilance in respect of expenditure incurred from public moneys as a person of ordinary prudence would exercise in respect of expenditure of his own money. Rule 37 further stipulates that an officer shall be personally responsible for any loss sustained by the Government through fraud or negligence on his part. Further, as per Clause 17 of the conditions of contracts executed between the contractors and Public Works Department (PWD), if the contractor or his working people or servants break, deface, injure or destroy any water pipes, cables, drains, electric or telephone posts or wires *etc.*, the contractor shall make good the loss.

Audit scrutiny of the documents in PWD Division III revealed that the Division implemented (September 2014) the works of improvement of water supply to Kadamba Plateau (Phase-I) at a cost of ₹ 12.48 crore. As part of this work, the Division laid (between March 2011 and August 2014) Ductile Iron (DI) pipes of various diameters valuing ₹ 10.20 crore⁷¹ parallel to two lane National Highway 748 (NH 748). The water supply project has not been

⁷¹ 3,850 m (200 mm diameter pipes) @ ₹ 7,689 per m; 1,897.50 m (250 mm diameter pipes) @ ₹ 7,989 per m; 3,729 m (400 mm diameter pipes) @ ₹ 13,889 per m; 44 m (150 mm diameter pipes) @ ₹ 6,889 per m under one work plus 2,500 m (150 mm diameter pipes) @ ₹ 2,135 per m under another work

commissioned (March 2019) due to non-completion of water treatment plant of 10 MLD⁷² at Maisal Panchwadi in Ponda Taluka.

While examining the documents in Division III, audit observed that PWD through Division VII had executed (between October 2014 and January 2017) the work of four laning by widening and strengthening of existing two lane road of NH 748. However, while executing the four laning work, the road contractor damaged around 2.19 km of pipelines (1,641 m pipes of 400 mm diameter and 550 m pipes of 150 mm diameter) laid earlier by Division III at various places in Kadamba Plateau at a cost of ₹ 2.40 crore⁷³. The damages to pipes came to the notice of Division III during periodic inspection of the project site in October 2014. Division III re-laid 1,240 m of 400 mm pipes and the entire length of 550 m of 150 mm pipes, leaving 401 m of 400 mm pipes that remained un-laid as of March 2019. A payment of ₹ 0.44 crore was made to the contractor in October 2018 for re-laying works and no further payment was made as of March 2019.

Audit scrutiny further revealed that Division VII had cautioned (August 2012 and February 2013) Division III that the pipelines had been laid in the right of way of the proposed road widening works and therefore, these should be shifted to the edge of the land acquired for four laning work. Division III, however, did not take any corrective action on the ground that the pipelines were laid in consultation with National Highway Authority of India (NHAI) officials, through areas outside the land demarcated by NHAI for the road widening works. During four laning of NH 748, the road contractor engaged by Division VII cut the hillocks to extract earth/rubble for use in road widening works, without prior permission of Division VII, causing extensive damage to the pipelines at several places. However, Division VII neither held the contractor responsible for the loss of Government property nor effected recoveries from him, in violation of the codal provisions.

Responding to the audit observation, Division III stated (September 2018) that whenever a development project is undertaken by a division/agency, it is the responsibility of that division/agency to protect the existing utilities, such as, water supply pipelines, electric cables, telephone cables *etc.* But in this case, neither Division VII nor the agency (contractor) took adequate measures to prevent damages to the existing water supply pipelines. In the above context, it was not correct to hold the Division responsible for damage to Government property. Division VII, on the other hand, maintained (May 2017 and October 2018) that the question of recovering the cost of damaged pipelines from the contractor does not arise, as no one had registered any complaint against the contractor either with the Department or the Police.

With no one owning responsibility for the damages, in the end there was loss to Government property valuing ₹ 2.40 crore due to negligence and lack of co-ordination between the Government agencies.

The matter was referred to the Government in July 2018; their reply was awaited as of June 2019.

⁷² Million Litres Per Day

⁷³ 1,641 m (400 mm diameter pipes) @ ₹ 13,889 *per* m and 550 m (150 mm diameter pipes) @ ₹ 2,135 *per* m

WATER RESOURCES DEPARTMENT

1.7 Wasteful expenditure on canal distributary infrastructure

The Water Resources Department awarded contracts for canal distributary works without conducting survey and soil investigations leading to changes in the scope of works and foreclosure of contracts. As a result, canal works executed at a cost of ₹ 30.67 crore remained unutilised for more than seven years, of which, ₹ 10.94 crore had been rendered wasteful.

As per Section 2 and 4 of the Central Public Works Department (CPWD) Manual, before commencing any work, a preliminary estimate should be prepared and administrative approval obtained based on the preliminary estimate. Once administratively approved, the concerned department should prepare detailed plans, designs, drawings and estimates including detailed specifications for each item of work. The detailed estimates should be complete and prepared as comprehensively as possible, after detailed study and investigations such as, site survey, soil investigations etc.

Tillari Irrigation Project is an interstate project being implemented jointly by the Governments of Maharashtra and Goa. The project includes a left bank main canal (LBMC) and a right bank main canal (RBMC) with a total command area⁷⁴ of 23,654 hectare (ha). The project has many distributaries which are basically irrigation channels that take off water from main canals for irrigation purpose.

The Water Resources Department (WRD) awarded between January 2009 and May 2009 construction of B/6 distributary on the RBMC of Tillari project from Chainage (Ch) 7.122 km to Ch 15.870 km (8.748 km) at a total cost of ₹ 16.01 crore for irrigating 396 ha in seven⁷⁵ villages of North Goa district. The distributary work was divided into seven sections to be completed between January 2009 and February 2010. Of the seven sections, five sections totaling 6.858 km (from Ch 7.122 to 7.740 km and from 9.630 km to 15.870 km) had been completed between December 2011 and January 2013 at a total cost of ₹ 18.81 crore. In the remaining two intervening sections comprising 0.480 km⁷⁶ and 1.410 km⁷⁷, works could not be completed for a length of 0.330 km and 0.090 km respectively till March 2019.

Audit examined (July 2017) the reasons for non-completion of works for a length of 0.330 km and 0.090 km and its larger implications on the B/6 distributary project in Division VII of WRD.

Audit scrutiny of records revealed that work of a length of 0.480 km was awarded (January 2009) to a contractor⁷⁸ at a cost of ₹ 2.87 crore for completion by January 2010. Considering the fact that the alignment of the work traversed through high contours, the tenders provided for laying of Reinforced Cement Concrete (RCC) pipes in the entire stretch of 0.480 km instead of open canal. During execution of work, the contractor/WRD observed that the soil strata at site were of collapsing nature. Therefore, to avoid probable leakages from the pipes and consequential problems to the

⁷⁴ The area which can be irrigated from a scheme and is fit for cultivation

⁷⁵ Mopa, Tamboxem, Ugvem, Ambere, Khazne, Poroscodem and Pernem

⁷⁶ Ch 7.740 km to Ch 8.220 km

⁷⁷ Ch 8.220 km to Ch 9.630 Km

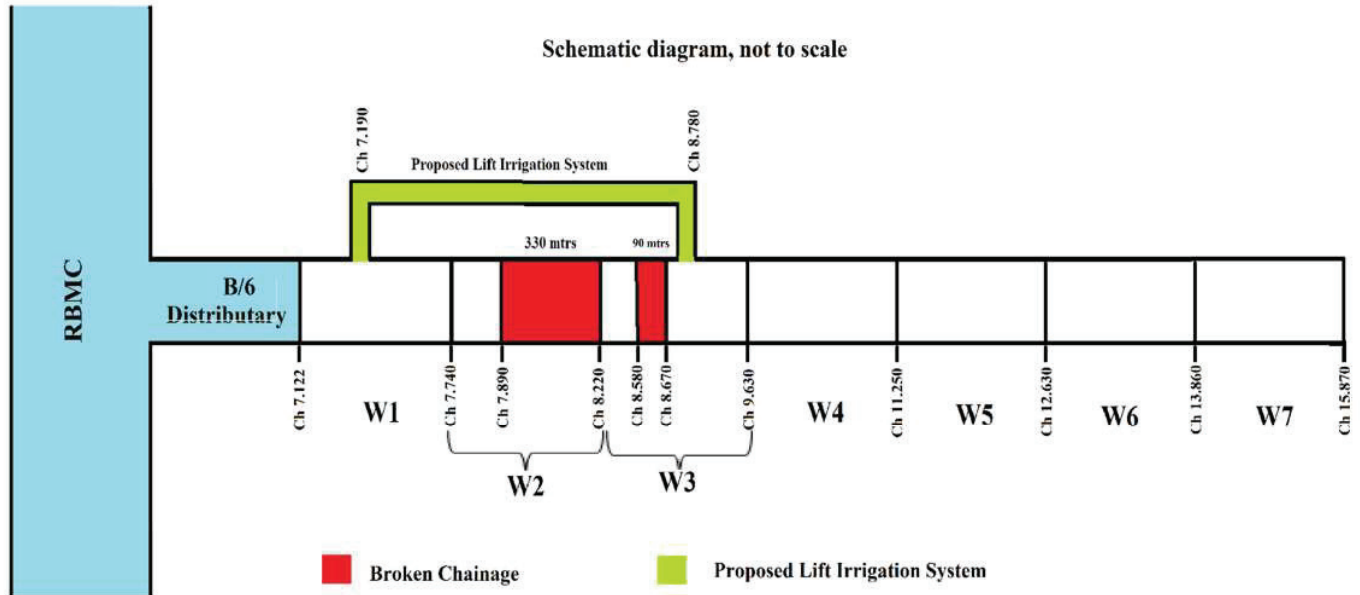
⁷⁸ South East Construction Company Private Limited, Chennai

habitation downstream, the WRD decided (March 2010) to execute the work with Mild Steel (MS) pipes instead of RCC pipes. However, the contractor could lay only 0.150 km MS pipes due to continuous collapse of strata resulting in earth rolling down from the canal section. The work of remaining stretch of 0.330 km (from Ch 7.890 km to Ch 8.220 km) was foreclosed in March 2012 and the contractor was paid ₹ 5.73 crore up to May 2012.

The work of a length of 1.410 km was awarded (February 2009) to another contractor⁷⁹ at a cost of ₹ 1.98 crore for completion by February 2010. The tender envisaged construction of an open canal with concrete lining. During execution of work, the same problems were encountered as discussed in the above paragraph and therefore, WRD decided (March 2010) to execute the work using MS pipes instead of an open canal. However, after laying 1.320 km MS pipes, the remaining 0.090 km (from Ch 8.580 km to Ch 8.670 km) could not be laid by the contractor, as the terrain had become dangerous and risky due to collapsible nature of soil. This work was also fore closed (April 2012) and the contractor was paid ₹ 6.13 crore up to June 2012.

In order to connect the broken chainage of B/6 distributary, WRD decided (September 2018) to construct a lift irrigation (LI) system⁸⁰ for lifting water by pump from Ch 7.190 km to Ch 8.780 km (1.590 km) at an estimated cost of ₹ 6.38 crore. The work of LI system was awarded to a contractor⁸¹ in February 2019 at a cost of ₹ 5.84 crore for completion by November 2019.

A schematic diagram of seven works executed, broken chainages and new LI system is depicted below.



⁷⁹ Ultracon Constructions Private Limited, Goa

⁸⁰ Consisting of a pump house, rising mains and allied structures

⁸¹ South East Construction Company Private Limited, Chennai

Audit observed that WRD had finalised the alignment of the B/6 distributary based on the study conducted by a Consultant⁸². However, neither the consultant nor WRD had dug any trial pits⁸³ to ascertain the soil classification, and the quantity of the soil strata was assumed at 60:40 (hard soil: ordinary rock). Consequently, during actual execution, the contractor/WRD encountered totally different site conditions, leading to non-completion of a length of 0.330 km and 0.090 km in two stretches.

Since the gap of 0.420 km (0.330 km+0.090 km) in the B/6 distributary remained unlinked, WRD had not been able to release water for irrigation to seven villages of North Goa district for more than seven years⁸⁴ despite spending ₹ 30.67 crore on the completed portion. This also implied that once the LI system is operational, it would render an expenditure ₹ 10.94 crore⁸⁵ incurred on the broken chainage and a portion of already constructed chainage wasteful, as these would now fall intermediately between the start point (Ch 7.190 km) and the end point (Ch 8.780 km) of LI system, and would not be used anymore.

The Executive Engineer (EE) Division VII of WRD stated (July 2017) that although ideally it may be desirable to investigate sub-surface conditions comprehensively before taking up a work in hand, it may not always be possible to do so. The more commonly followed practice is to accept a certain risk associated with the absence of complete data obtained from a detailed programme of investigation and to attend to such risks if and when they arise by effecting suitable changes through deviations *etc.* The EE added that there was room to further improvise and radically change the proposals to eliminate as far as possible all wasteful expenditure.

The reply is not acceptable, as the preparation of estimates and starting the work without conducting adequate surveys was in violation of the procedures prescribed in the CPWD Manual. Had WRD conducted the trial pits through the finalised alignments, especially on the difficult terrains and near habitations, the work could have been completed without any impediments, thus, precluding the need for any untoward risks being taken at the execution stage. Clearly, the risks accepted by WRD in this case far out-weighed the prescribed codal provisions.

The matter was referred to the Government in July 2018; their reply was awaited as of June 2019.

⁸² Tritech Engineering Projects, Pune

⁸³ A trial pit (or test pit) is an excavation of ground in order to study or sample the composition and structure of the subsurface, usually dug during a site investigation, a soil survey or a geological survey. Trial pits are dug before the construction

⁸⁴ From April 2012 (date of foreclosure) till June 2019

⁸⁵ Proportionate expenditure incurred from (i) Ch 7.190 km to Ch 7.740 km (₹ 2.78 crore); (ii) Ch 7.740 km to Ch 8.220 km (₹ 5.73 crore); and (iii) Ch 8.220 km to Ch 8.780 km (₹ 2.43 crore)

FINANCE DEPARTMENT

1.8 Excess payment of interest

The Memorandum of Understanding (MoU) with the Bank of India (BoI) for providing house building advance to the State Government employees expired in September 2015. The State Government neither renewed the MoU nor accepted the lowest rate offered by the State Bank of India but, continued to pay interest at 10.20 per cent to BoI against its lower prevailing interest rates, resulting in excess payment of interest of ₹1.88 crore during October 2015 to September 2017.

The State Government employees in Goa are eligible for House Building Advance (HBA) for construction or acquisition of houses. HBA is repayable with interest at rates notified by Government from time to time. Owing to financial constraints, the State Government notified (October 2001) a Scheme to provide HBA to its employees through banks by bearing the additional burden of interest charged by the banks over the interest rates applicable as per HBA Rules.

Under this Scheme, the State Government entered (September 2006)⁸⁶ into a Memorandum of Understanding (MoU) with the Bank of India (BoI) for grant of HBA to its employees for a period of nine years at 8.50 *per cent per annum* for an initial period of three years (2006-2009), subject to revision after expiry of every three years. The rate of interest (8.50 *per cent*) continued for the next three years (2009-12) and revised to 10.20 *per cent* for the last spell of three years (2012-15 up to September 2015).

On expiry of MoU with BoI in September 2015, the State Government invited (November 2015) fresh bids and received proposals from four banks. Of the four proposals, the offer of the State Bank of India (SBI) at 9.55 *per cent* was found to be the lowest. However, till April 2016, the State Government failed to sign MoU with the SBI due to disagreement on various issues, such as, rate of interest, valuation of property, title deed, mortgage of property, repayment mode *etc.*

In the meantime, while negotiations with the SBI fell through, the State Government neither processed the second lowest offer of BoI of 9.70 *per cent* nor did it renew the lapsed MoU with BoI with effect from October 2015. Instead, it continued to transact with BoI at 10.20 *per cent* as per the old (lapsed) MoU from October 2015 to September 2017. However, BoI *suo motu* reduced the interest rate to 8.40 *per cent* for the loans sanctioned from October 2017 onwards.

Audit is of the view that after expiry of MoU in September 2015, BoI should have charged interest at the same rates as applicable to its other patrons, which varied from 8.40 *per cent* to 9.95 *per cent* during October 2015 to September 2017. However, failure of the State Government initially to process the lowest and the second lowest offers of SBI and BoI respectively and subsequently, its inability to impress upon BoI to streamline the interest rates charged to HBA with the prevalent rates resulted in an excess payment of interest of ₹ 1.88 crore during the period October 2015 to September 2017.

⁸⁶ The initial agreement was with Housing Development Finance Corporation from October 2001 to August 2006

It is also pertinent to mention that while the State Government paid an average rate of interest of 7.42 *per cent* on its borrowings (Major Head 6003 - 'Internal Debt of the State Government') during the last five years, it paid an interest of 10.20 *per cent* to the Bank of India under the HBA Scheme. This anomalous situation calls for a review of the present Scheme architecture by the State Government.

The matter was referred to the Government in July 2018; their reply was awaited as of June 2019.

GENERAL ADMINISTRATION DEPARTMENT

1.9 Injudicious public investment in private property and nugatory expenditure on rent

Failure of the State Government to hire ready to move in premises for office use led to an expenditure of ₹5.89 crore post-hiring on internal modifications. Pending internal modifications, the offices could not shift to the hired premises for periods ranging from five months to 35 months. However, the State Government continued to pay rent for the vacant period, thus, rendering an expenditure of ₹11.17 crore nugatory.

In order to provide additional space required for various Government offices and also to house the offices paying huge amount of rent to private parties, the State Government decided (November 2012) to hire premises that were ready to move in and simultaneously directed the General Administration Department (GAD) to identify land for construction of building to accommodate Government offices. The GAD invited (February 2013) expression of interest (EoI) from the owners of commercial premises for suitable office space measuring 6,000 sqm to 7,000 sqm on hire purchase basis for a period of three years extendable to six years, if required.

Against the EoI, three bids were received in March 2013. A five members Committee under the Chairmanship of the Principal Secretary (Public Works Department) inspected (April 2013) the premises offered by the bidders and recommended Apex Computers and Engineering Services (ACES), Goa, who had offered the maximum space, for consideration of the State Government.

In January 2014, the State Government signed a lease deed with ACES, Goa for hiring a total office space of 5,416.50 sqm in two adjacent commercial buildings at Patto Plaza, Panaji – 4,841 sqm in SPACES building and 575.50 sqm in Kamat Towers – at a negotiated monthly rental of ₹ 42.93 lakh for a period of three years commencing from 01 November 2013 to 31 October 2016. The State Government extended the lease for a further period of three years from 01 November 2016 to 31 October 2019.

Audit observed that since the leased premises were not in ready-to-move condition, the State Government roped in (18 November 2013) Goa State Infrastructure Development Corporation (GSIDC) for carrying out internal modifications in the premises as per requirements of the allottee departments⁸⁷. ACES handed over the possession of premises to GSIDC between 27 November 2013 and 20 March 2014. The modifications were

⁸⁷ GSIDC; District Sessions Court, North Goa; Commercial Taxes Department; Town and Country Planning Department; and Goa State Information Commission

scheduled to be completed in three months between August 2014 and November 2014, against which, the modifications were actually completed at a cost of ₹ 5.89 crore⁸⁸ in September 2016, a delay of almost two years. Thus, while the initial three years of the six years of the lease period was spent on providing interiors to the premises, huge public investment in private properties indicated scant regard for value for money.

Pending internal modifications, while the allottee departments could not shift to the leased premises for periods ranging from five months to 35 months, the State Government paid rent of ₹ 11.17 crore⁸⁹ to ACES (**Appendix 1.3**) for the intervening non-occupied period, which was nugatory.

The Secretary, GAD stated (June 2018) that the expenditure cannot be considered as wasteful since all the departments who were allotted the premises had their own internal modifications to be undertaken before occupying the allotted premises.

The contention of the Secretary is not tenable as the rent was paid for the premises without any Government departments using it. Further, while the Government's initial directive (December 2012) was to identify and hire 'readymade' premises, the EoI issued in February 2013 did not mention this critical requirement. This eventually led to huge public investment on interiors post-hiring. The Government could also have moderated its investment on interiors to enable the offices to shift to the new premises faster.

The matter was referred to the Government in July 2018; their reply was awaited as of June 2019.

⁸⁸ Modular furniture (₹ 2.07 crore); Heating, Ventilation and Air Conditioning equipment (₹ 0.83 crore); Electrical works (₹ 1.21 crore); Carpentry works (₹ 0.61 crore); Consultancy (₹ 0.48 crore); Firefighting (₹ 0.05 crore); False ceiling (₹ 0.21 crore); and other works (₹ 0.43 crore)

⁸⁹ GSIDC: ₹ 3.60 crore for 35 months; District and Sessions Court: ₹ 5.93 crore for 25 months; DRDA, North Goa: ₹ 1.03 crore for 23 months; Town and Country Planning: ₹ 0.09 crore for five months; and Goa State Information Commission: ₹ 0.52 crore for 14 months