

## CHAPTER-II

### 2. Compliance Audit Observations on Departments

#### Electronics, Information Technology and Biotechnology and Science & Technology Department

##### 2.1. Implementation of Policy initiatives by the Electronics, Information Technology, Biotechnology and Science & Technology Department

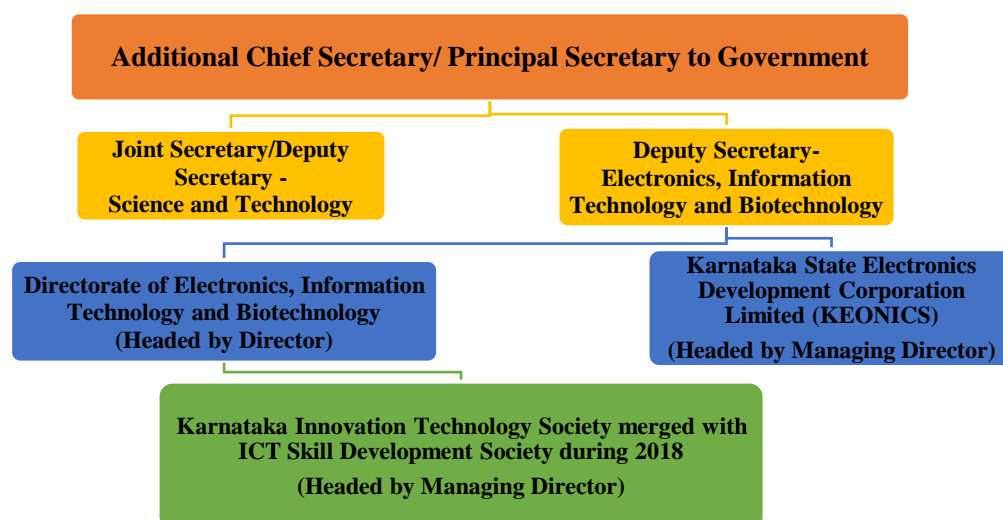
###### Introduction

**2.1.1.** In view of the phenomenal growth of IT/ITeS<sup>6</sup> Sector in Bengaluru from the mid-1990s, the Government of Karnataka (GoK) brought out the first IT Policy in the country in 1997 to further the growth of the sector. This was later followed by the ‘Millennium IT Policy’ in 2000 and Information Communication and Technology (ICT) Policy 2011. The State announced a Karnataka Animation, Visual Graphics and Comics (KAVGC) Policy in 2012 and Karnataka Electronic System Design and Manufacturing (KESDM) Policy 2013.

The *i<sup>4</sup>* policy announced during 2014 primarily intended to provide incentives and concessions across sectors apart from skilling. The Startup policy was branched out from *i<sup>4</sup>* policy during 2015 to promote innovation and to encourage startups. The KAVGC and KESDM policies were revised in 2017. A brief of the afore mentioned four policies are given in *Appendix-6*.

###### Organisational setup

Chart No.2.1.1: Showing Organisational setup



<sup>6</sup> Information Technology and Enabled Services.

**2.1.2.** The Department is headed by an Additional Chief Secretary (ACS) to the Government of Karnataka, and the Directorate of E, IT and BT is headed by a Director who releases the grants to the Implementing Agencies viz., *Karnataka Innovation Technology Society, Bengaluru (KITS)*<sup>7</sup> and *Karnataka State Electronics Development Corporation Limited (KEONICS)*, which is a Government of Karnataka owned company. At the Apex level, the ACS carries out the overall monitoring of the activities of the Department.

### **Audit Scope, Objectives and Criteria**

**2.1.3.** Compliance Audit (CA) on the implementation of the IT related policy initiatives under the Directorate of Information Technology and Biotechnology, for the period 2015-20 was undertaken from November 2019 to December 2020 and covered four policies<sup>8</sup> relating to IT and related sectors.

The CA involved an examination of records in the Secretariat and the Directorate of ITBT. An Entry Conference with the Additional Chief Secretary of E, IT, BT, S&T Department was held in January 2020 to discuss the Audit Objectives, scope, and methodology. Exit Conference was held on 12 August 2021 with the Additional Chief Secretary of E, IT, BT, S&T Department. Audit conclusions were drawn after considering the replies given by the Department.

The Compliance Audit was to assess whether the initiatives envisaged in the Policies were implemented, and the intended targets were achieved, in terms of whether:

- ❖ Plans were suitably prepared with reference to the Policy goals/initiatives and that funds provided were utilised efficiently;
- ❖ infrastructure facilities were established as enumerated in the Policies; and
- ❖ the internal control and monitoring mechanisms were adequate and functioned effectively.

#### **The main sources of Audit Criteria to arrive at the audit findings were:**

- i) IT, ITeS, Innovation Incentive( *i*<sup>4</sup>) Policy – 2014, Karnataka Animation, Visual Effects, Gaming and Comics (KAVGC) Policy 2012 and 2017, Karnataka Startup Policy 2015-2020, Karnataka Electronic Design and Manufacturing (KESDM) Policy 2013 and 2017 including implementation Guidelines;
- ii) Karnataka Budget Manual and Karnataka Financial Code; and
- iii) Orders/Circulars of Government/Vision Documents.

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<sup>7</sup> Karnataka Biotechnology and Information Technology Services (KBITS) was established in 2001 and was renamed Karnataka Innovation Technology Society, Bengaluru (KITS) in April 2018.

<sup>8</sup> IT, ITeS, Innovation Incentive( *i*<sup>4</sup>) Policy – 2014, Animation, Visual Effects, Gaming and Comics (AVGC) Policy 2012 and 2017, Karnataka Startup Policy 2015-2020, Karnataka Electronic System Design and Manufacturing (KESDM) Policy 2013 and 2017.

Audit findings are discussed under four major headings viz., planning, financial management, policy implementation and monitoring.

## Planning

### *Annual Plans not being comprehensive*

**2.1.4.** The Department, through the *four* policies covered in audit, provided a roadmap for implementation of 36 initiatives, of which, about 22 were directed towards promotions<sup>9</sup> and 14 were programme<sup>10</sup> based (details given in *Appendix-7*). The policies also prescribed specific goals like stimulating 20,000 startups, providing direct and indirect employment to 18 lakh people, *etc.* The goals/targets set in the Policies were to be achieved in a span of five years.

Audit scrutiny revealed that the Department did not make any comprehensive Annual Plans (APs) covering the initiatives like AVGK Parks, Venture Capital Funds, Mega Projects, engage with the 50 top ESDM companies of the world to invite investments into the State, *etc.* due to which, the implementation of the Policy initiatives is likely to witness slippages. The deficiencies in the implementations are discussed in *Paragraphs from 2.1.11 to 2.1.18*.

The Government replied (August 2021) that action would be taken to prepare the Annual Action Plan comprehensively comprising all schemes. With respect to achieving the goals, it was stated that goals were only aspirational and relevant for industry as a whole and could not be taken as target for assessment. The reply is not tenable as the initiatives taken to address the gaps and needs of the industry require fixing of key performance indicators (KPIs) to gauge the outcome of the initiatives. However, the Department did not fix any such KPIs to assess the impact of the departmental efforts.

## Financial Management

### *Budget and Expenditure*

**2.1.5.** As per Finance Department guidelines No. FD11 BPE 2014 dated 30 October 2014 for preparation of expenditure estimates, budget estimates have to be prepared with due care and forethought and should be based on realistic requirement of funds. Anticipated savings which are not required should be surrendered to Government.

The abstract of yearwise budget proposals, grant and expenditure for the period 2015-20 under the four policies are given in the following table:

<sup>9</sup> Promotional based initiatives included Stamp Duty Exemption, Concessional Power Tariff, *etc.*

<sup>10</sup> Program based initiatives included Skilling programs and setting up of Centres of Excellence, providing incubation facilities, funding early-stage startups, *etc.*

Table No. 2.1.1: Year-wise abstract of budget and expenditure

(₹ in crore)								
Sl. No.	Year	Proposals	Budget	Grant-Opening Balance	Grants released	Total Grants received*	Total expenditure #	Grant closing Balance
1	2015-16	276.96	80.24	69.36	73.73	73.73	34.65	89.47
2	2016-17	141.93	88.98	89.47	88.98	95.35	33.33	135.94
3	2017-18	178.40	147.76	135.94	140.76	162.72	137.91	144.12
4	2018-19	225.09	106.70	144.12	101.30	106.19	103.29	149.54
5	2019-20	97.68	87.28	149.54	52.59	58.36	99.93	94.58
Total		<b>920.06</b>	<b>510.96</b>	<b>69.36</b>	<b>457.36</b>	<b>496.35</b>	<b>409.11</b>	

*Source: Consolidated from information furnished to Audit*

\* Includes other receipts/transfers– ₹ 38.99 crore; # excludes transfer/reappropriations– ₹ 66.61 crore.

- Though Government released (2015-20) nearly fifty per cent (₹ 457.36 crore) of the budget sought (₹ 920.06 crore), the Implementing Agencies were not able to utilise the funds so released. The Implementing Agencies could not spend the amount equivalent to the opening balance in four out of five years. Though funds were released on a quarterly basis, the Department failed to ascertain the requirement considering the trend in utilisation which had resulted in parking of funds in bank deposits. For instance, under Startup Policy the unspent balance of 2017-18 was ₹ 52.48 crore. The budget allocation of ₹ 44.04 crore for 2018-19 was released in four equal instalments of ₹ 11.01 crore each during the year. The entire grant remained unutilised at the end of the year.
- As per GO No. FD 53:BG 2003 dated 03 July 2003 issued by the Finance Department, the interest earned in bank accounts should be remitted to Government account 0049-04-110-0-01. The Department utilised ₹ 4.60 crore from the interest earned and had retained interest income of ₹ 22.05 crore as of March 2020 in violation of the FD's instructions. While ₹ 3.53 crore was utilised based on the approval of the Principal Secretary, Department of E, IT, BT and S&T, the remaining amount of interest utilised to the extent of ₹ 1.07 crore was without approval.
- Several instances of reappropriation of funds of ₹ 66.61 crore, from one policy to another policy were also noticed which not only indicated lacuna in planning but also were unnecessary in certain cases. For instance, a sum of ₹ 8.85 crore was reappropriated (2018-19) from Rural Wi-Fi to Startup policy. This was unnecessary as the unspent balance of 2017-18 pertaining to Startup Policy was ₹ 52.48 crore with ₹ 67.10 crore of grants remained unutilised by the end of the year (2018-19) and ₹ 35.60 crore remaining unutilised by the end of next year (2019-20).

Further, Para 162 of Karnataka Financial Code, inter-alia prescribes maintenance of Register of Grants by the sanctioning authority to monitor utilisation and to oversee whether unspent amount has been surrendered. The department, which releases the grants, had not maintained any control record for watching the utilisation of the grants. By the end of March 2020, Utilisation

Certificates to the extent of ₹ 55.73 crore from KITS and ₹ 3.05 crore from KEONICS were pending. The details are shown in **Appendix-8 and 8A**.

In reply (August 2021), the Government stated that the funds were parked in banks as Implementation Agencies were not able to utilise the funds due to the reasons beyond the control of KITS. The interest was utilised after the approval of the competent authority as there was dearth in funds in each of the financial years. Utilisation Certificates (UCs) have been submitted by KEONICS and KITS up to 31 March 2021.

The reply is not acceptable as powers were not delegated by the Government to utilise revenue earned from interest. The dearth of funds as stated is not clear as there were surplus/unutilised funds every year.

Further, the UCs submitted reflected unutilised balances from 2015 were not observed/noted through a Register of Grants. A cumulative balance of such unutilised balances was still not prepared by the Department (November 2021).

### ***Delay in development of IT Parks in Tier-2 Cities***

**2.1.6.** As per GO No. MTE 38 MDA 2008, Bangalore, dated 25 February 2009, GoK agreed to infuse equity contribution of ₹ 10 crore to KEONICS subject to the conditions that

- KEONICS should take an equity stake in the Joint Venture to be formed with a private partner who should be selected through a competitive and transparent process;
- The equity support provided to KEONICS is to enable them to borrow more funds for taking up large IT infrastructure projects and not for subsidising the IT units; and
- An appropriate debt and equity financing model which avails the benefit of the tax-shield and which enhances the project viability should be considered.

The GoK in the budget announcement for the year 2008-09 had proposed to set up IT Parks in six tier-2 cities<sup>11</sup> by KEONICS through Joint Ventures with private participation.

Audit scrutiny showed that ₹ 22.80 crore<sup>12</sup> was released by GoK between 2008-09 and 2019-2020 towards equity for the development of IT infrastructure in tier-2 cities. However, KEONICS established (2012) two IT Parks in only two tier-2 cities (Kalaburagi and Shivamogga) with a built-up area of 1.27 lakh sq. ft. and that too without private sector participation.

The Government replied (August 2021) that KEONICS had proposed to establish IT parks in tier-2 cities, but the proposals could not be taken forward

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<sup>11</sup> Hubli-Dharwad, Belgaum, Kalaburagi, Shivamogga, Davanagere and Mangalore.

<sup>12</sup> Against an amount of ₹ 28.00 crore invested by KEONICS for two IT Parks at Shivamogga and Kalaburagi.

as the land required for the purpose was not allotted by the Revenue Department and additional budgetary support was not extended. Company had invited expression of interest *five* times from May 2009 to July 2011 for establishment of IT Parks at Mysore and Mangalore on Public Private Partnership (PPP) mode, but the response was poor. The Company has however now proposed (2021) to take up IT Parks at Mangalore and Shivamogga (Phase 2). It was also replied that occupancy in IT parks was not encouraging.

The reply is not tenable as the Departmental support to KEONICS in obtaining the land, a primary requirement, for taking the programme forward was lacking. Besides, the conditions of release of equity were not adhered to by KEONICS. KEONICS utilised the entire equity amount for establishing only two IT parks against six IT Parks planned and the condition relating to ensuring private sector participation was also violated. Therefore, utilisation of equity amount was irregular. Further the average occupancy of the IT parks at Kalaburagi and Shivamogga was about 90 *per cent* by the end of March 2020 which did not support the Government's reply of poor occupancy of IT parks already established.

### **Financial support to Startups**

**2.1.7.** Startups are companies or ventures focused on a products or services, innovative in nature and leveraging technology. They do not have a fully developed business model and more crucially lack adequate capital to move onto the next phase of business. Incidentally, the failure rate is high, a risk factor associated with such ventures. Government which plans to support these startups should be more objective in critically evaluating the project business models as that will be crucial in deciding the success of these startups. Thus, the success largely hinges on critical evaluation of project proposals which poses a major challenge as the project proposals more often paint a rosy picture.

The Department brought out different strategies like Grant-in-aid to early-stage startups, funding projects with a solution for social problems, New Age Incubation, *etc.*, with the core common objective of commercialisation of the ventures so supported.

### ***Proof of Concept initiative (Idea2PoC)***

**2.1.8.** Idea2PoC (Proof of Concept), a multi-sector initiative was launched (2016) to encourage innovators who require early-stage funding to stimulate commercialisation of their inventions and to help in validating proof of concept. The grant-in-aid of up to ₹ 50 lakh would be extended to selected startups for a project duration not exceeding two years.

M/s. KPMG was engaged (September 2017) as the Implementing Partner for evaluation, recommendation for selection, and monitoring of the scheme for ₹ 16.48 lakh per month and this process was taken over by KITS from March 2019 and onwards. By the end of December 2019, 357 startups were selected for financial assistance (₹ 87.38 crore) and ₹ 73.62 crore was released by May 2020. KITS had conducted surveys during 2018, 2020 and 2021 and shared the latest survey report with Audit.

Audit scrutiny revealed the following:

- Implementing Partner had been furnishing periodical returns with details of grant-in-aid released and to be released, without showing the progress of each startup. KITS should not have released the grant of ₹ 6.51 crore to 28 startups as the Implementing Partner did not make available the evaluation reports. Thus, the release of funds was irregular.
- As per the survey report of August 2021, 232 out of 357 startups had responded to the survey conducted by KITS during August 2021 and 67 startups had raised funds. The Department had no clue about 125 startups which had not responded. The survey questionnaire did not contain critical information like the product/service for which the grant was sanctioned. The list also contained 54 startups which had not achieved their milestones but were shown to be in commercialised/growth stage.

Further, Audit could not validate the data furnished as contact details (address of the startup, email address, website details, registration *etc.*) were not available in the survey report. Thus, the Department did not have any idea as to whether its intervention through funding had yielded the desired results or not.

The Government replied (August 2021) that,

- the details of the 28 startups were not available from the reports submitted by KPMG.
- Startup cell in KITS had put a system in place for continuous monitoring of Startups and has conducted three surveys to get feedback from the Startups to ascertain the status of their projects.

The reply is not acceptable

- as the accountability was not fixed for irregular release of funds to the 28 startups.
- the audited annual accounts of the startups would give better insight into the actual performance of the startup rather than an unverified survey report.

***Grand Challenge Initiative (Channelising Innovation for Social Impact through contests – Solutions failed to culminate in successful ventures)***

**2.1.9.** The Department in August 2016 launched “Grand Challenge Initiative” seeking innovative solutions in sectors having a social impact. Each challenge was to identify a host department around which the Challenge was to be framed and targeted to support 25 winners in a five-year period. M/s IKP was appointed as the Implementing Partner.

Phase I involved identification of around five innovative projects having potential for adaptation by the host Department and under Phase II one shortlisted innovation was to receive funding of up to a maximum of ₹ 50 lakh

in a period of 12-15 months for pilot implementation. Between August 2016 and August 2017, six calls were invited. KITS shortlisted six solutions and ₹ 3.13 crore was released as grants.

Audit scrutiny revealed that KITS did not release the balance funding of ₹ 1.37 crore to six startups under Phase II (₹ 1.08 crore released against the committed amount of ₹ 2.45 crore). The programme was practically abandoned after pilot rollout as none of the innovative solutions were scaled up for adoption by the host department. The expenditure of ₹ 4.13 crore<sup>13</sup> towards Grand Challenge Initiative did not yield the intended results. The details of the product/service, host department and their status are shown in **Appendix-9**.

The Department replied (August 2021) that startups had scaled up their solutions and raised external funding and that most of the solutions could be scaled up and used for commercialisation outside the Government Departments.

The reply was not accepted as the objective of the programme was to provide a solution that was to be adopted by the concerned department(s) and six solutions that had been selected and funded were disbanded. Thus, the expenditure of ₹ 4.13 crore became unfruitful.

#### ***New Age Incubation Scheme Network (NAIN)***

**2.1.10.** As per the Policy, NAIN is implemented to create an ecosystem that promotes innovation in engineering colleges. It was expected that mentors assigned to the students would help them to formulate a business model and encourage them to think like entrepreneurs. The Policy contemplated selection of Engineering Colleges as incubation centres. Each centre would select 10 projects for incubation. This would facilitate mentorship and financial support to the engineering college students with the objective of fostering entrepreneurship<sup>14</sup> and developing business models with the active support of Industry, Academia and Government. Top ten ideas/projects in each year, proposed by students in 50 engineering colleges were to be provided seed money of up to ₹ 3 lakh for each project. An Incubation Centre (NAIN) was to be established in each college which was to get financial support of ₹ 10 lakh per year towards operational expenditure.

A Central Steering Committee constituted (December 2014) under the Chairmanship of Secretary, IT, BT & S&T was responsible to review the projects for funding. As per Operating Procedure and Guidelines for Startup Policy 2015, performance of each centre would be based on KPIs like number of companies incorporated, conduct of actual business by student innovator teams, Angel/Venture funding received, *etc.*

KITS released ₹ 4.80 crore<sup>15</sup> (April 15 to February 19) for 374 projects to *nine* colleges for Phase I of the programme and out of this, ₹ 3.92 crore was spent. Against 374 projects, 151 projects were reported to have been completed.

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<sup>13</sup> ₹ 100 lakh to IKP; ₹ 204.84 lakh to phase-1 awardees and ₹ 108 lakh to phase-2 awardees

<sup>14</sup> Is the ability and readiness to develop, organise and run a new business to make profit.

<sup>15</sup> ₹ 2.40 crore for CAPEX and ₹ 2.40 crore for OPEX.



Audit scrutiny revealed the following.

- As per data made available to Audit, 18 companies were reported to have been registered. The details of products developed and marketed by these 18 companies were however not available with the Department.
- Department did not have any mechanism to assess the business potential of completed projects and scale up the prototypes developed.
- As the projects were college projects, the risk factor involved would be whether the students would continue with the business ventures after completion of their academic course. This risk was not factored in at the scheme formulation stage. This is evident from the fact that 61 projects were abandoned.

Thus, the scheme focussing on making students as entrepreneurs was erroneous/defective which was required to be reviewed periodically. In the Exit meeting, the Department accepted that Phase I of the programme was a matter of concern and corrective measures would be taken in subsequent phases. However, the corrective measures contemplated were not furnished to Audit.

## **Policy implementation**

### ***Incubation programmes***

**2.1.11.** All the Policies intended to provide incubation facilities across sectors to nurture the growth of Startups. Incubation is a business development processes encompassing infrastructure and mentoring which plays a very important role in nurturing and growth of new and small businesses by supporting them in their early stage of development. The objective is to facilitate the creation of ideas and inventions that benefit society and also make them commercially ready by the end of the incubation programme which is a key indicator of a positive outcome of a programme/scheme. Considering the importance of incubation facilities, the four policies intended to provide incubation centres.

### ***Technology Business Incubators***

**2.1.12.** The Startup Policy 2015, contemplated establishment of Technology Business Incubators (TBI)<sup>16</sup> at Institutes of higher learning to foster strong links between research and development (R&D) and commercialisation of technologies by the technology/innovation-based startups for the technologies so developed. As per the Startup Policy, GoK was to provide grant-in-aid towards the initial capital cost for equipment and facilities as well as recurring costs of management of the TBI for a period of three years (extendable for another two years by the end of which they were supposed to become self-sufficient) while the built-up space was to be provided by the Host Institutes (HIs).

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<sup>16</sup> TBIs to be established by HI were to be registered societies under the Societies Act.

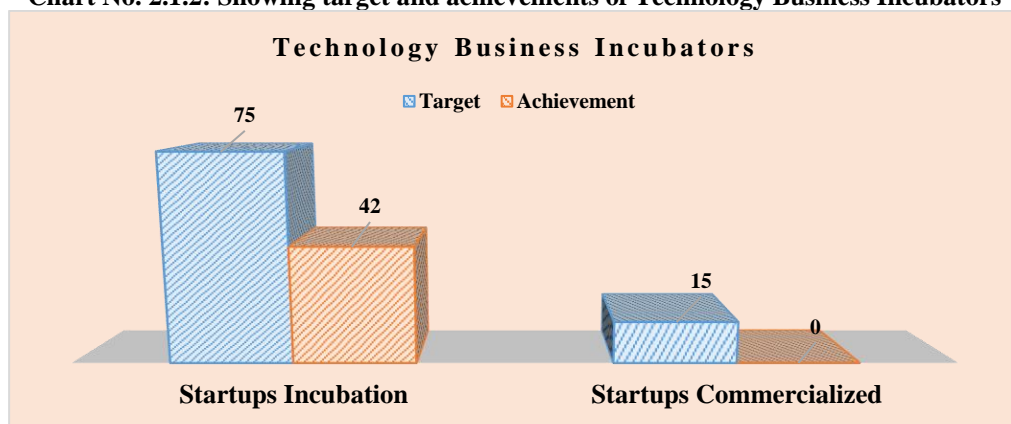
KITS signed MoAs (January 2018) with five short-listed Host Institutes after inviting applications from institutions having a strong R&D focus as a criterion. As per *clause 11.1.3* of the MoA, KITS shall bear 70 per cent and the Host Institute shall bear 30 per cent of the annual operational costs (OPEX) subject to a maximum of ₹ 50 lakh<sup>17</sup> per year and excess, if any, shall be borne by the HI. The TBIs were to be operationalised within 120 days (*Clause 8.2*) of the execution of the MoA. The following were the key milestones (*Clause 11.1.4*) as per the MoAs:

- Selection of a minimum of five startups each year;
- Successful incubation and graduation of a minimum of two startups each year;
- Commercialisation of a minimum of one new product, technology or innovation.

The MoA fixed a target enrollment of 75 startups and commercialisation of 15 new technologies in the three-year period. The performance of the TBI was to be monitored on a qualitative and quantitative basis by the State Expert Advisory Committee<sup>18</sup>.

KITS released (February 2018 and March 2021) ₹ 17.22 crore towards CAPEX<sup>19</sup> and ₹ 3.15 crore towards OPEX<sup>20</sup>. As of October 2020, 42 startups had reported as enrolled for incubation and none were commercialised.

**Chart No. 2.1.2: Showing target and achievements of Technology Business Incubators**



Audit scrutiny showed that

- the projections of the commercialisation<sup>21</sup> of the new products/innovations/ technologies developed by these 42 startups were

<sup>17</sup> ₹ 35 lakh as KITS share and ₹15 lakh as HI share.

<sup>18</sup> The State Expert Advisory Committee was constituted in January 2017. The Committee is chaired by the Principal Secretary, IT, BT and S&T, Government of Karnataka and is responsible for screening and selection of institutions to establish TBI. The SEAC is also responsible to review the performance of TBIs.

<sup>19</sup> CAPEX – Capital Expenditure.

<sup>20</sup> OPEX – Operational Expenditure.

<sup>21</sup> A process of bringing a new product or service into the market to achieve commercial success.

not done though it was important to avoid deployment of resources on non-viable ventures.

- the TBIs were to become self-sufficient by the end of the fifth year. The Department did not chalk out proposals for self-sustainability of the TBIs after the completion of the period of support of GoK grants. The monitoring should have been oriented towards successful commercialisation of each startup but was only confined to the release of funds.

Thus, the expenditure of ₹ 20.37 crore incurred towards establishment of five TBIs had largely remained unfruitful as none of incubated startups were commercialised as per the targets set in MoA.

The Government replied (August 2021) that efforts would be made to achieve the target within the project period and TBI would become self-sustainable from rentals and support from GoI and Host Institute. The reply is not tenable as the policy period of 2015-20 had already lapsed and there was a significant shortfall in the performance of TBIs in terms of the number of enrolments of startups and 'nil' achievement in commercialisation of startups. Therefore, the sustainability plan was also not supported by the funds from GoI/Host Institutes.

### ***Establishment of Common Instrumentation Facilities (CIF) under the Startup Policy***

**2.1.13.** Startup Policy 2015-20 envisioned setting up of incubators in association with industry bodies, trade associations, think tanks or similar non-profit organisations. Government approved (December 2016) establishment of five<sup>22</sup> CIFs equipped with required instruments and equipment for hardware-based startups at a cost of ₹ 22.68 crore<sup>23</sup> in association with M/s IKP Knowledge Park<sup>24</sup> (IKP), a non-profit organisation. The project was fully funded by GOK and these CIFs were expected to be self-sustaining out of rentals from incubatees after the fifth year. The MoA concluded (July 2017) with M/s IKP stipulated procurement of appropriate instrumentation facilities for the industries concerned and listing out milestones to be achieved during the tenure of the MoA. Four CIFs had become operational between July 2018 and November 2018 while the fifth CIF at Shivamogga commenced in June 2020.

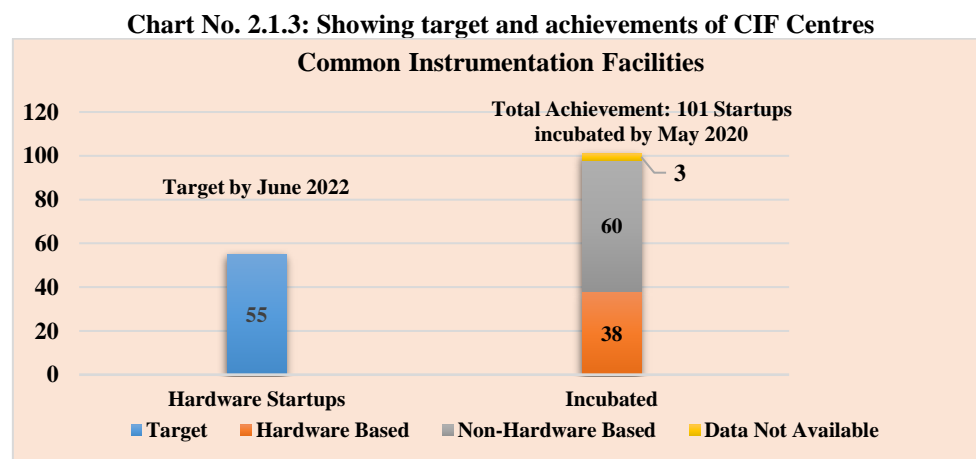
As per the MoA, the cumulative target of enrolment and successful exit was 55 startups by the end of the fifth year (July 2022). As per the progress report till the end of May 2020, the four CIFs had enrolled 101 startups since inception and 49 startups were under incubation which meant that 52 startups had exited.

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<sup>22</sup> Jalahalli (Bengaluru), Mangaluru, Belagavi, Mysuru and Shivamogga.

<sup>23</sup> CAPEX – ₹ 10 crore, OPEX – ₹ 10.68 core & Hub Support – ₹ 2 crore.

<sup>24</sup> IKP Knowledge Park (IKP) a Section 8 Company is a not-for-profit Science Park and Technology Business Incubator (having operations in Hyderabad and Bangalore). Government vide order dated 19 December 2016 had also granted 4(g) exemption under KTPP Act to IKP for direct entrustment of five CIFs for ₹ 22.68 crore for five years.



Audit scrutiny revealed the following:

- It was not clear as to whether the 52 startups had exited successfully as no details were made available to Audit regarding raising of funds by these startups. Hence it can be construed that these startups had not exited successfully. No post analysis was conducted by KITS to ascertain the reasons for unsuccessful cases, if any, to take remedial measures;
- Non-hardware-based startups (60 cases) were also enrolled as seen from the data in respect of 98 enrolments furnished to Audit. The MD, KITS after inspection of CIF at Mysuru opined (September 2019) that the core idea of CIF was not realised due to low equipment usage as a majority of the startups that enrolled were non-hardware-based which used the CIF more as a co-working space. As the MoA did not specifically stipulate that the enrolments were only for hardware-based startups, this led to admission of non-hardware-based startups too. This not only defeated the purpose of establishing a sector-specific CIF but also led to the investment of ₹ 13.26 crore not fully being utilised for the specific purpose. The Advisory Committee (earlier Executive Committee) which was to be constituted for drawing the selection criteria was not notified by KITS which led to these ineligible enrolments;
- Out of the ₹ 13.26 crore released, IKP diverted ₹ 3.52 crore for other projects like IKP US aid, IKP Big Project, IKP Bio nest *etc.*, which were not sponsored by GoK. However, no action was taken by KITS despite being aware of such diversion.

The Government replied (August 2021) that:

- the MoA (*Clauses 3.1 and 3.2.3(F)*) was designed to emphasise hardware startups but startups from other domains and sectors were also accommodated to make CIFs viable. It was also replied that the Department would also be engaging with the Skill Development Entrepreneurship & Livelihood Department and with Government Tool Room & Training Centre (GTTC) for maximum utilisation of CIF facilities.

- KITS had given instruction to M/s IKP that future expenditure should be booked from dedicated Bank account only.
- As per the latest feedback, 52 startups had exited, 30 were operational and rest were potential startups still at exploration or development stage.

The reply of Government is not tenable as the reply did not provide any explicit provision for accommodating non-hardware startups. Further, the status of commercialisation of 52 Startups left without furnish details of their products to ascertain the success of the CIFs.

### ***Establishment of two similar ESDM facilities in Hubli***

**2.1.14.1.** GoK approved (July 2017) the proposal made by KITS for the establishment of an ESDM cluster along with a Common Facility Centre at Deshpande Foundation in Hubli (firm had offered 5000 square feet of office space with plug & play facility) involving a outlay of ₹ 4.00 crore<sup>25</sup> to benefit MSMEs. An MoA was signed (July 2017) for a period of three years with India Electronics and Semiconductor Association (IESA)<sup>26</sup> as the Implementing Partner for the establishment of the brownfield ESDM cluster. Out of 5000 sq ft, 1000 sq ft was for common instrumental facilities for development of prototypes and remaining 4000 sq. ft space was to house 75-100 workstations for incubation purpose. The grants of ₹ 4.00 crore were fully released (August 2017 and July 2018) and the facility was reported to be completed in July 2018.

As per the MoA, the first year operational expenses (₹ 60 lakh) were to be released by KITS and the centre was to be self sustainable from revenue generated from pay-and-use model from the second year onwards.

At the end of the project period (July 2020), more than 35 startups and MSMEs were stated to be using the facility. Deshpande Foundation sought (August 2020) assistance for operational costs for one more year to make the ESDM Centre self sustaining but the request was not considered on the ground that the project term had ended. Audit scrutiny revealed that neither a demand survey nor a review of financial viability for ESDM was conducted before seeking approval of the project. The sustainable operations of the ESDM centre were therefore doubtful due to poor response.

In reply it was stated that objective was to support ESDM entrepreneurs and MSMEs from surrounding area to use the facilities. The reply is not tenable as the centre was able to incubate (July 2018 to June 2020) only 10 startups and only 22 other startups used the facility within the project period.

**2.1.14.2.** In the other case, GoK simultaneously approved (July 2017) setting up of a Very Large-Scale Integration (VLSI)<sup>27</sup> Incubation Centre (IC) at KLE Technological University, Hubli for the purpose of developing ESDM chip

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<sup>25</sup> CAPEX – ₹ 3.40 crore and OPEX – ₹ 0.60 crore.

<sup>26</sup> IESA is an industry trade body for development of Indian ESDM ecosystem and works with the Government at various levels.

<sup>27</sup> Very Large Scale Integration (VLSI) is a process of creating an integrated circuit by combining millions of MOS (Metal Oxide Silicon) transistors onto a single chip, enabling complex semiconductor and telecommunication technologies to be developed.

design ecosystem at an estimated cost of ₹ 4.00 crore, out of which ₹ 3.20 crore was released (September 2017 and November 2018). IESA which prepared the DPR was made the Implementation Partner. The target was to enroll 10 to 15 VLSI/ESDM startups with a successful exit of five or more startups in the three-year period.

Audit scrutiny revealed that the centre could utilise only ₹ 1.54 crore by the end of October 2020 out of which ₹ 0.33 crore was the operational expenditure. Only *six* startups could be enrolled against the target of 10-15 enrolments and none exited successfully (March 2020). The reason for under utilisation of the facilities was attributed to a similar facility available at Deshpande Foundation, Hubli. The DPR had ignored the incubation and laboratory facilities already available with Deshpande Foundation, Hubli which had resulted in duplication of facility, which was avoidable.

In reply (August 2021) the Government stated that during the DPR submission, the new facility of Deshpande Foundation was not in existence. The reply is not tenable as both the centres were approved simultaneously by GoK during July 2017 and proposal by DF was already known to the Department.

### **Infrastructural facilities**

**2.1.15.** KITS was tasked with the implementation of initiatives like CFCs, ESDM cluster *etc.*, in locations outside Bengaluru by equipping the centres with testing equipment to help the hardware based MSME units.

#### ***Setting up of Common Facilities Centres***

**2.1.15.1.** The brownfield project estimated to cost ₹ 29.53 crore (GOI – ₹ 21.31 crore, GoK – ₹ 3.49 crore and SPV comprising of *seven* companies – ₹ 4.73 crore) was proposed to be set up at Mysuru to benefit 30 MSME units. It was reported to be nearing completion (expected by August 2021) against the original date of completion in September 2016. The delay had led to cost escalation, with the revised cost pegged at ₹ 48.53 crore (GOI – ₹ 32.31 crore, GoK – ₹ 8.49 crore and SPV comprising of *seven* companies – ₹ 7.73 crore) while grants released was ₹ 31.92 crore<sup>28</sup>.

Audit scrutiny revealed that:

- the delay was mainly attributable to the inability of the Industry Partner to mobilise funds to meet their share of project contribution, delay in opening an escrow account, providing bank guarantee *etc.*, as envisaged in GOI guidelines (April 2013).
- there was a shortfall of ₹ 16.61 crore to complete the project and release of grants was pending (August 2021). The project completion period, a critical factor in project management to realise the intended benefits, had not been fixed.

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<sup>28</sup> GOI ₹ 16.32 crore; GOK ₹ 8.49 crore and SPV ₹ 7.11 crore.

Thus, the ESDM facility had not fructified (August 2021) though it was sanctioned six years ago, leading to locking up of ₹ 31.92 crore on incomplete work.

In reply (August 2021), the Government stated that installation of equipment could not be completed due to the pandemic and would be made functional with additional support from GOI/GOK.

The reply is not tenable as the reasons for cost escalation was due to underestimation and omission of certain components/equipment in the DPR, incorrect assumption of waiver of taxes and duties, project management being deficient *etc.* Also, no timelines were fixed for completion of the project.

### ***Wasteful expenditure on ill-conceived project***

**2.1.15.2.** GoK approved a proposal by KEONICS for providing Wi-Fi hotspot<sup>29</sup> facility in 2500 Gram Panchayats (GPs) with GoK contributing ₹ 79.50 crore<sup>30</sup> as Viability Gap Funding (VGF) for three years. The project cost was worked out to be ₹ 62.50 crore annually which was to be offset gradually by the revenue realised, thereby achieving self-sustainability by the fourth year based on the increase in the subscriber base.

A total of 2650<sup>31</sup> GPs were proposed to be covered under the scheme by KEONICS (500 GPs) and ICT Skill Development Society (2150 GPs) which later merged with KITS during June 2018. KEONICS engaged BSNL, who in turn had engaged a Channel partner, viz., Wireless Solutions Inc. for implementing the scheme and ICTSD Society engaged CSC e-Governance Services India Limited (CSC)<sup>32</sup> as its Service Provider. However, in both cases the Wi-Fi scheme was abandoned after the first year of operation. In the case of BSNL, the infrastructure laid was reported (January 2019) to be removed. Though BSNL had claimed (28 January 2019) an amount of ₹ 14.75 crore as per agreement towards the execution of this project, ₹ 10.10 crore was paid. While in the case of CSC, as on 5<sup>th</sup> September 2018, though it was claimed that 1782 GPs were live, the number of live GPs sharply dropped to 930 on 4<sup>th</sup> July 2019. Further, the status of the live GPs was not available in files. The total payments made to CSC was ₹ 19.48 crore (December 2017 to February 2019).

Audit observed that the GPs were selected without ascertaining their financial viability. Besides, a detailed Service Level Agreement (SLA) was not entered into with both BSNL and CSC, though stipulated by the Government, which resulted in no clarity regarding milestones, payment schedules, monitoring reports, penal clauses, security, *etc.* There was a series of correspondences and disputes which could not be amicably settled. Lack of SLA culminated in a

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<sup>29</sup> The connectivity envisaged through 'Wi-Fi Hotspots' by tapping the National Fiber Optic Network (NOFN) was taken up (October 2011) by GoI and was later known as BharatNet, as per GoI mission under Digital India.

<sup>30</sup> The budgetary support from GoK contemplated was ₹ 50.50 crore for the 1<sup>st</sup> year, ₹ 26.50 crore for the second year and ₹ 2.50 crore for the 3<sup>rd</sup> year.

<sup>31</sup> An additional 150 GPs were further proposed out of grant of ₹ 3.00 crore earlier vide G.O dated 03 August 2017.

<sup>32</sup> A GoI (SPV) initiative to oversee the implementation of (Common Service Centres) CSC scheme.

frictional relationship with the service providers who closed their operations due to lack of business viability. One of the service providers was KEONICS which mooted the proposal in the first instance but whether they had conducted any pilot programme or not was not clarified to Audit. The Government too, did not insist upon conducting a pilot study before giving its approval.

Thus, the ill-conceived scheme of providing Wi-Fi in Gram Panchayats without proper feasibility studies and detailed agreement conditions had resulted in wasteful expenditure of ₹ 29.58 crore to the exchequer.

In reply (August 2021) the Government stated that KEONICS had conducted a feasibility study (November 2016) before placing the service order on BSNL. The reply is not acceptable as the results of the feasibility study were not on record. Besides, KEONICS was made responsible to ensure financial viability in selection of GPs which was also not on record. Hence, attributing the failure to non-viability at a later stage lacked justification. It was not clear as to how KEONICS could conclude that the program was feasible within one year of pilot operations, the results of which were not reported. Therefore, it can be concluded that the program failed due to lack of proper survey and feasibility studies. The reply was also silent about the status of program implemented by ICTSDS (KITS).

### **Skilling and Centres of Excellence**

#### ***Unfruitful expenditure of ₹ 1.42 crore due to deficiencies in planning and implementation of Skilling Program***

**2.1.16.** The GoK announced (2017) the Yuva Yuga programme to train 1.10 lakh persons by KITS (43,000) and KEONICS (67,000) to address the skill gap and for assured placements in IT/ITES sector. The guidelines (June 2017) envisaged accreditation of centers for imparting training. KITS appointed 18 training/industry partners while KEONICS brought on board the existing franchisees for imparting training. The MoA between KITS and training partners included staggered payments on course fee (10 per cent at enrolment, 70 per cent on completion of training and balance 20 per cent on providing placement). The Department allocated ₹ 11.81 crore<sup>33</sup> (2017-18) against which ₹ 1.42 crore<sup>34</sup> was incurred. The balance amount of ₹ 10.39 crore was held in a savings bank account by KITS as of March 2021.

The Department reported completion of training to 23,235<sup>35</sup> persons (2017-18) without providing the job placement details. The shortfall was attributed to difficulty in identifying unemployed youth and the programme was discontinued thereafter.

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<sup>33</sup> ₹ 10.81 crore was re-appropriated from KESDM Policy and ₹ 1.00 crore was released (2017-18) by GoK.

<sup>34</sup> Total expenditure includes payment of ₹ 48.11 lakh towards training by KEONICS, ₹ 39.55 lakh towards training program by ICTSDS; and other expenses towards Advertisements - ₹ 24.40 lakh and Web Portal ₹ 30.00 lakh.

<sup>35</sup> KEONICS – 21,337 against a target of 67,000 and ICTSDS – 1,898 against a target of 43,000.



Audit scrutiny revealed the following lapses:

- None of the training centres/franchisees obtained accreditation from National Skill Development Corporation (NSDC)/Sector Skill Council (SSC) and this was also not enforced by KITS/KEONICS. The lack of recognition for these courses made certificates issued by the training partners of little value. The Skill Development Authority (KSDA)<sup>36</sup>, commented (March 2018) that several of these training programmes were just add-on courses<sup>37</sup> for college students and were not specifically directed towards placement;
- The training partners of KITS were paid 80 *per cent* of the course fees (₹ 39.55 lakh) and they chose to forgo the balance 20 *per cent* payable after placement. Thus, persons undergone training were deprived of placement which was the prime objective of the scheme;
- The balance amount of ₹ 10.39 crore was held in a savings bank account by KITS even as of March 2021 without surrendering to the Government as per the extant provisions.

The departmental lapses had thus led to infructuous expenditure of ₹ 1.42 crore as the objective of providing placement was not realised.

Government stated (August 2021) that accreditation involved additional cost to the training partners and no placements were reported as most of the students went for higher education, self-employed *etc.* However, these claims of the Department were not backed by data.

The reply is not tenable as the guidelines prescribed imparting training in accredited centres and engaging unaccredited training centres was incorrect. Due to these lapses the expenditure of ₹ 1.42 crore became infructuous.

### ***Poor progress of Centres of Excellence (CoE)***

**2.1.17.** The Department proposed to set up CoEs keeping in mind the emerging technologies and to create the necessary technical resources through skill development in collaboration with industries/entrepreneurs to give thrust to capacity building. The CoEs were operated by Major Industry Partners like NASSCOM, DASSAULT, IIT-Bangalore and Association of Bangalore Animation Industry (ABAI). Five<sup>38</sup> CoEs *viz.*, had been established (March 2020) in Bengaluru at a cost of ₹ 74.04 crore. The outcome from CoEs in terms of the training imparted was poor as compared to the originally planned targets as detailed below.

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<sup>36</sup> Karnataka Skill Development Authority is responsible for monitoring and regulating skilling in Karnataka.

<sup>37</sup> *viz.*, basic courses like MS Office, Tally, Data Entry Operations, Desktop Publishing, Office Management *etc.*

<sup>38</sup> CoE – Artificial Intelligence and Data Science; CoE – Aerospace and Defence; CoE – Cyber Security; CoE – AVGC and CoE – Machine Intelligence and Robotics.

**2.1.17.1. CoE for Artificial Intelligence and Data Science****Table No. 2.1.2: Showing target and achievement of CoE for Artificial Intelligence and Data Science**

Industry partner	Commencement date; project cost and expenditure	Annual target – Number of persons to be trained	Achieved 2018-19	Achieved 2019-20
NASSCOM	July 2018; Project Cost: ₹ 14.80 crore Expenditure: ₹ 5.40 crore	1000 for first year, cumulative of 4000 for the second year and 35000 by the end of the fifth year	1000 (Shortfall nil)	400 (shortfall – 65 per cent)

KITS did not finalise the template (*Clause 12.1.5 of MoA*) to capture training details by the CoE. Though 1400 professionals were claimed as trained, audit scrutiny revealed that as many 11 sessions out of 12 sessions were just one day training sessions to different candidates and hence cannot be construed as regular training courses. Further, industry recognised certificates for successful completion of training were not issued.

In reply (August 2021) the Government stated that these were not industry recognised training programmes but capacity building workshops and that programmes were conducted virtually from October 2020. The reply is not tenable as it does not satisfy the MoA requirement of training 35,000 professionals. Moreover, these details of the additional skilled resources were to be added to the data base of the Skilling Department of GoK which was also not done. Hence, a proper monitoring system based on KPIs needs to be put in place to ensure the objectives are met.

**2.1.17.2. CoE for Aerospace and Defence****Table No. 2.1.3: Showing target and achievement of CoE for Aerospace and Defence**

Industry partner	Commencement date; project cost and expenditure	Annual target	Achieved 2018-19	Achieved 2019-20
Dassault Systemes (DS)	July 2017 Project Cost: ₹ 33.46 crore Expenditure: ₹ 31.05 crore	As per GO No ITD 291 ADM 2016 dated 22 February 2017 about 1600 engineers per annum should be provided with high-end training and skill development	2017-18: 12 (Advanced), 90 (Basic) and 27 (Project Based) 2018-19: 13 (Advanced), 90 (Basic), 1 (Project based) and 186 embedded courses Total 419	73 (Basic); 262 (Embedded courses); 13 (train the trainer); 1 (value stream). Total 349

Initially, GoK procured 27 licenses<sup>39</sup> at a cost of ₹ 16.68 crore from M/s. Dassault Systemes with a target to provide training to 1344 candidates. Immediately after the commencement of the operations (July 2017), GoK procured (September 2017) 15<sup>40</sup> additional licenses at a cost of ₹ 9.04 crore. Audit scrutiny showed that procurement of additional licenses was unwarranted for the following reasons:

<sup>39</sup> The initial package consisted of 25 main licenses and 2 base licenses sufficient to train 1344 candidates per year.

<sup>40</sup> The additional procurement package consisted of 13 main licenses and 2 base licenses.

- The CoE could provide training to only 768 candidates cumulatively in a three-year period (2017-2020).
- The MoA was renewed (February 2021) and the training targets were reduced to 750<sup>41</sup> candidates for the three-year period in various courses. As the overall targets for training were reduced considerably, the hasty decision in the procurement of additional licenses resulted in a wasteful expenditure of ₹ 9.04 crore. This could have been avoided had the Government assessed the demand before contemplating the training program.

In reply (August 2021) the Government stated that the additional licenses would be an asset. The reply is not tenable as the initial procurement of 27 licenses was sufficient to cater to the training courses for 1,344 candidates per year which itself was underutilised as candidates trained per year was 256. This shows that need analysis was not done and thus the additional expenditure of ₹ 9.04 crore was avoidable.

### 2.1.17.3. CoE for Cyber Security

**Table No. 2.1.4: Showing target and achievement of CoE for Cyber Security**

Industry partner	Commencement date; project cost and expenditure	Annual target – Number of persons to be trained	Achieved 2018-19	Achieved 2019-20
Karnataka State Council for Science and Technology (KSCST)	September 2018 Project Cost: ₹ 9.32 crore Expenditure: ₹ 4.93 crore.	4000 (by 2019-20)	310	1073 (2019-20) + 8272 (2020-21)

- The training was mainly done virtually through webinars and workshops of six hours to 16 hours duration. No assessments were conducted for these webinars and workshops. Only four courses (duration of five to nine days) conducted on Cyber Security were subject to assessment. Out of the 837 candidates who attended these four courses, only 73 cleared the assessment which was very poor as compared to the annual target of 4,000 candidates to be trained in Cyber Security.
- Details of curriculum and approval of course material, accreditation, recognition by Skill Council, etc., were not obtained by the Department. Thus, the trained persons might not be benefitted due to lack of accreditation which equates to a lack of recognition by the Industry.
- There was also no sustainability plan for the CoE to continue their operations on their own after the initial period of funding (three years) from GoK.
- The progress reports were not structured and did not have any proper format aligned to the MoA deliverables. The achievement of the MoA

<sup>41</sup> Target for three years: Advance Course – 20; Foundation Courses – 150; Train the Trainer – 20; Embedded Courses – 360; Nodal Centre – 150; Lecture Support – 50.

deliverables against internship, startups incubated, reports/newsletter, etc., were also not furnished.

In reply (August 2021) the Government stated that the key skill building activities were revised and curriculum for the trainings were prepared based on the guidance of the Technical Committee to include webinars, courses from top institutes, etc. The target for achieving sustainability would have to be reviewed in discussion with the Governing Council. The activities of the CoE would be reflected in the dashboard of KITS against each of the tracks.

The reply is not tenable as there was a complete revision of the framework agreed upon in the MoA signed during 2019 after Audit had raised the observations (February 2020 and October 2020). The replies were not supported by relevant documents like revised MoA, deliverables, minutes of the proceedings of the Technical Committee, curriculum finalised, annual targets, etc. Hence Audit could not ascertain the performance of the CoE against the benchmarks.

#### 2.1.17.4. CoE for AVGC sector

Table No. 2.1.5: Showing target and achievement of CoE for AVGC Sector

Industry partner	Commencement date; project cost and expenditure	Annual target	Achieved 2018-19	Achieved 2019-20
Association of Bangalore Animation Industry (ABAI)	2019-20: Project Cost: ₹ 48.85 crore Expenditure: ₹ 24.14 crore	Finishing School: The first batch of 82 candidates was to be trained by December 2018 and cumulatively 318 candidates were to be trained by the 3 <sup>rd</sup> batch by December 2019	Nil	Not available

The CoE was to have state-of-the-art solutions and digital infrastructure at competitive price for a multitude of services required for AVGC companies. The scope of the CoE included a digital postproduction lab and a finishing school to bridge the gap in skilling to meet the industry requirement. An MoA was executed (January 2018) with Association of Bangalore Animation Industry (ABAI) at a project cost of ₹ 48.85 crore for completion by July 2018. The lab was targeted to generate revenues of ₹ 1.63 crore, ₹ 8.91 crore and ₹ 12.95 crore in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year of operations respectively from the facilities.

- The CoE was not completed even after a lapse of more than two years as procurement of equipment was delayed. This was due to a dispute between KITS and ABAI regarding the procurement norms to be adopted. This could have been avoided had the MoA been drafted incorporating the norms to be adopted for procurements.
- KITS had released ₹ 24.14 crore which included ₹ 7.53 crore towards operational expenses for the CoE which had commenced operations partially. The facility was being used by four startup companies occupying 53 seats. No details were available regarding procurement of balance equipment required to make the CoE fully operational. The prospects of financial viability of the CoE was hence doubtful

considering that the facility was being used by only four companies even after a lapse of more than two years from the due date of completion.

- Though finishing school was stated to be functional, the finalisation of curriculum and reasons for not conducting training programmes were not forthcoming.

Thus, the sector had not been benefitted from the CoE which had only been partially completed even after more than two years (March 2021) from its scheduled date of completion (July 2018).

In reply (August 2021) the Government stated that the facility had started its operation with its own revenue from the month of June 2019<sup>42</sup> and that ABAI had followed all procedures for procurement. It was also stated that ABAI had submitted the procurement list for the third set and fourth batch and that the payment was not released due to non-availability of funds. The facility was being used by *nine* startups occupying 176 seats. The finishing school had conducted webinar sessions for 348 students and was presently working on course curriculum.

The reply is not tenable as the revenue generated was less than 10 *per cent* (₹ 0.94 crore) of the expected revenue of ₹ 10.54 crore by the end of the second year. Further, the procurements had been delayed and equipment were yet to be installed. The curriculum for the finishing school was also inordinately delayed.

#### 2.1.17.5. CoE for Machine Intelligence and Robotics

**Table No. 2.1.6: Showing target and achievement of CoE for Machine Intelligence and Robotics**

Industry partner	Commencement date; project cost and expenditure	Annual target – Number of persons to be trained	Achieved 2018-19	Achieved 2019-20
International Institute of Information Technology (IIIT-B), Bengaluru	2018-19; Project Cost: ₹ 34.35 crore Expenditure: ₹ 8.52 crore	1,000	<i>Nil</i>	Not Available

The establishment of CoE was approved (February 2018) for ₹ 34.35 crore in association with IIIT, Bengaluru.

- There was a delay in the signing of the MoA which was signed only during August 2019 *i.e.*, after more than 18 months with deliverables from 2020-21.
- GoK had released ₹ 8.52 crore (June 2020) and slippages in training deliverables could not be ascertained as relevant reports were not available.
- In reply (August 2021) the Government stated that the primary mandate of the CoE was to set up a world class research capability for Karnataka in the areas of Machine Intelligence and Robotics. The COE was at a

<sup>42</sup> 2019-20 – ₹ 42.59 lakh and 2020-21 – ₹ 51.59 lakh.

steady state in its research initiatives and would further focus on capacity building programs. A total 92 research students had been benefited from MINRO research support and 624 beneficiaries had been benefitted from knowledge dissemination programs. The delay was because IIIT-B had not signed the agreements as it required the approval of its Governing Body.

The reply is not tenable as the CoE inter-alia was expected to annually train on an average 1,000 undergraduate students and make them job ready. The reply is silent about the key milestone of the number of undergraduates trained and placed.

Thus, the expenditure of ₹ 74.04 crore incurred on skilling through CoEs was largely infructuous as COEs could not be made functional to address the needs of the MSME sector operating in the emerging technologies which require availability of trained personnel. Though the Principal Secretary of the Department had directed (June 2018) KITS that all CoEs were to be monitored monthly, the monthly reviews of all CoEs did not happen. Thus, the Department neglected the important policy initiative of skilling and failed to fulfill the objective.

In reply (August 2021) the Government stated the expenditure of ₹ 74.04 crore incurred on skilling through CoE was not infructuous as CoEs were made functional to address the needs of the MSME sector operating in the emerging technologies. It was also stated that the CoE teams had highly trained staff and that the Department was developing a CoE Dashboard where all the CoEs would be monitored regularly.

The reply is not tenable as the CoEs were expected to generate trained professionals/job ready students for emerging technologies. One day/ short term training like webinars/workshops/mass exposure/ orientation/ foundation/ basic level courses may not achieve this objective. Moreover, the dashboard for monitoring the CoEs was yet to be developed.

### ***Digital Art Centres***

**2.1.18.** The AVGC Policy of 2017 envisaged the establishment of Digital Art Centres for conducting digital art courses in 50 Colleges of Fine Arts, in continuation of the previous policy (2012) programme. Under the programme, each college was allocated a total sum of ₹ 30 lakh in the form of grant-in-aid (₹ 10 lakh per year restricted to a three-year period) to equip the colleges with the required hardware and software<sup>43</sup> and KITS appointed ABAI as the Implementing Agency for the programme.

The Department had released ₹ 5.47 crore (2012 Policy – ₹ 1.47 crore and 2017 Policy – ₹ 4 crore) for the programme under which 267 students in seven colleges successfully completed (2012 Policy) the courses and 381 students (2017 Policy) were still undergoing the training (March 2021).

Audit scrutiny revealed the following lapses/deficiencies:

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<sup>43</sup> Like Adobe Photo shop software, Desktops, printers, projector, laptops, Graphic tablet, etc.

- KITS in a meeting in August 2016 had insisted that the course had to be certified by National Skill Development Corporation (NSDC). This criterion was also included in the AVGC policy 2017 which proposed to enter into an agreement or MoU with national and international institutes as well as associations such as NSDC, AVGC studios and institutes to bring the latest technology and develop a uniform curriculum for the benefit of traditional art colleges. But the training course was provided without any such recognition and in the absence of a proper accreditation, the programme may not yield the desired results in the form of suitable employment for the training provided.
- ABAI entered into agreements with the Fine Art Colleges with the condition (*Clause 4(d)*) that the ownership of the equipment supplied would remain with ABAI and allowed for the transfer of ownership at the end of three years for a nominal residual value. The Department did not object to the agreement made by ABAI with Fine Art Colleges even though no such stipulation was agreed upon by the Department in the MoA with ABAI. The rationale behind the return of equipment by the colleges to ABAI or purchase at residual value lacked justification as KITS had funded the equipment.

In reply (August 2021) the Government stated that ABAI itself was a recognised authority for issuing the certificates. The reply was silent about the faulty MoA clause for ownership of equipment provided to the colleges. Moreover, the placement details of 134 students were stated to be enclosed.

The reply is not tenable as KITS in a meeting in August 2016 had insisted that ABAI had to provide an endorsement to make the course certified by NSDC. However, the same was not followed up by KITS and the courses continued without proper certification. The list of placements only provided the name of the candidate and their designation without the details of companies (except for 21 candidates) which employed them.

Thus, all the skilling initiatives of the Department across various sectors have failed to give the desired results. Further, during the present times, the concept of imparting training itself has undergone a sea change with the advent of *Massive Open Online Courses (MOOC)*<sup>44</sup> which are cost effective, flexible learning modules which have gained wider acceptance. Moreover, training is provided by the technology-based companies to their new recruits after campus recruitment. In this context, unless the Departmental interventions in skilling raise the bar and adapt to the modern pedagogies, deployment of resources on non-focused training programmes would not give any benefit and would be rendered superfluous as the intended objectives would not be met. These were overlooked by the Department while framing the skilling initiatives leading to failure and stoppage of the schemes as no placements were reported. Moreover, lack of monitoring of the skilling activities by the Implementing Partners has made the funds spent on these programs redundant and unfruitful. The program

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<sup>44</sup> MOOCs are free online courses available for anyone to enrol and provide affordable and flexible way to learn new skills and deliver quality education experiences at scale.

therefore requires a thorough and critical review with focus on the relevance as well as the necessity for such initiatives.

### Monitoring

**2.1.19.** The Department had formed various Committees<sup>45</sup> to monitor the implementation of the programmes/schemes. Though 36 strategies were specifically spelt out to achieve the Policy targets, details/data of achievement in respect of 19 initiatives were not on record. The Committees did not meet periodically to review the hurdles for taking timely remedial measures. Annual Action Plans were limited to seeking grants without ascertaining the utilisation of the available funds.

The Committees set up at the Apex Level did not even meet periodically to assess the progress achieved. A High-Level Implementation Committee under the chairmanship of the Chief Secretary was constituted (January 2013) to push forth initiatives and monitor the implementation of the KIG recommendations in a definite timeframe. However, the details of the meeting and proceedings were not on record.

The Startup Policy Monitoring and Review Committee set up (March 2016) under the chairmanship of the Chief Secretary was non-functional as it did not meet even once. The Startup Council headed by the Chief Minister and comprising 10 industry experts as members constituted (March 2016) to review the implementation of the Startup Policy met only once in September 2016 so far (February 2021).

Further, Audit noticed that though the Government had instructed through circulars (May 2017), the Department had not submitted to the Government the monthly physical and financial reports.

Most of the policy initiatives witnessed slippages due to deficiency in monitoring and thus failed to contribute to the growth of the IT & ITES sectors for which specific Policies were brought out.

### ***Growth of the IT & ITES Sector***

**2.1.19.1.** The seeds sown three decades ago had yielded commendable results with global recognition and development of the ecosystem in at least Bengaluru (a Tier 1 city) in terms of infrastructure, availability of skilled manpower, connectivity, educational institutions, health infrastructure *etc.* The growth of the sector in Karnataka in the six-year period shown in **Table No.2.1.7** was largely driven by private sector companies within the State retaining the top position in export revenue from IT & ITES sector. And all this was achieved despite the majority of the Departmental interventions to supplement the growth still being in an implementation stage.

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<sup>45</sup> High-Level Implementation Committee, Startup Council, Startup Monitoring and Review Committee



Table No. 2.1.7: IT Sector- Economic Survey data

Indicator	2014-15	2019-20
No of Companies	2560	5500+
Export revenue (₹ lakh crore)	1.80	5.8
Share in country's IT export (in %)	38	40
Share in state GDP (in %)	25	25
Direct Employment (in lakh)	10	12
Indirect Employment (in lakh)	30	31
Karnataka SGDP (lakh crore)	3.44 (base year was 2004-05)	12.01 (base year changed to 2011-12)

Source: Economic Survey Reports of the State of Karnataka

In reply (August 2021) the Government stated that the Department has developed a dedicated dashboard for COEs, CIFs, TBIs, etc., with an objective to monitor them on a real time basis with respect to their deliverables/outcomes. Further it was stated that there was a Monthly Monitoring Review during which the Department schemes/programs were being monitored in respect of both physical progress and financial progress.

The reply was incomplete as it was not supported by the details of the dashboard and copies of the monthly progress reports.

### Conclusion

Detailed plans were not prepared by the Department for implementation of policy initiatives and thus, shortfall in achievement of targets was attributable to poor planning. The financial management was deficient as funds were released without ensuring utilisation of earlier releases. The Implementing Agencies parked the funds in bank accounts and also diverted these to other initiatives. The Key Performance Indicators were not framed to assess the outcome of the initiatives. Complete and adequate data was not available with the Department with regard to performance of the startups funded. The MSMEs were not benefited as initiatives like CIFs, CFCs, etc., were not completed as planned. Similarly, the CoEs did not address the skill gap in the field of emerging technologies to meet the requirement of the industries. The various training programmes conducted lacked accreditation. Additional training licenses costing ₹ 9.04 crore were procured without justification, which resulted in unwarranted expenditure. The initiatives under the four Policies did not contribute to the growth of the targeted sectors as many initiatives were still either under progress or were not completed within the stipulated period as monitoring was inadequate.

### Recommendations:

- **Planning process needs to be strengthened and performance indicators have to be fixed.**
- **The Department needs to study the industry requirements and complete the planned infrastructure facilities viz., Incubation Centres, CIFs and COEs without further delay.**
- **Training courses without accreditation have to be discontinued.**

- **Department should ensure proper documentation of progress of all activities and compile relevant data about the industries concerned for impact assessment, especially in respect of schemes granting financial assistance.**
- **The Department may fix accountability for irregular release of funds to startups without evaluation reports.**
- **The monitoring process should be strengthened for effective implementation of programmes to realise the intended benefits.**

## **Urban Development Department**

### **2.2. Execution and Mapping of Underground Utilities in Bengaluru urban agglomeration**

#### **Introduction**

**2.2.1.** The utility lines such as sewers, electric cables, telecoms cables, gas and water mains are commonly laid underground in urban areas. These lines are laid over different periods of time by different utility companies and organizations. Utility map shows the positioning and identification of buried pipes and cables beneath the ground. The authorities responsible for urban infrastructure development in Bengaluru city are

- Urban Development Department (UDD) of Government of Karnataka is the authority for regulating right of ways of utility lines
- Bruhat Bengaluru Mahanagar Palike (BBMP) is mandated under Karnataka Municipal Corporations (KMC) Act, 1976 and BBMP Act 2020 for construction and maintenance of public roads in Bengaluru city and for regulating the laying of utility lines in these roads like according permissions to the operators of various urban service providers for road cutting and their restoration *etc.* and thus functions as the road authority for Bengaluru city.

The Chief Engineer (Road Infrastructure) at BBMP is responsible for ensuring laying of these utility lines as per the laid down provisions, who reports to the Commissioner, BBMP. The Additional Chief Secretary, UDD, Government of Karnataka is at the apex level, to whom the Commissioner, BBMP reports.

#### **Guidelines for laying underground utilities and the currently existing system**

**2.2.2.** Paragraph 8 of Karnataka Public works Departmental (KPWD) Code 2014 specified that the design, construction and maintenance of roads shall be in accordance with Ministry of Road Transport and Highways, Karnataka Roads and Bridges Specifications, Bureau of Indian Standards and Indian Road Congress (IRC) standards. Among the above standards, the guidelines on accommodation of utility services on urban roads was issued (May 2011) by IRC (IRC:98-2011). The guidelines stipulated the urban road authorities to

maintain of a bank of reference plans (road or area-wise) showing all the existing utility lines with their location and depth.

To provide a single window solution to the road cutting requirements of various utilities/service providers and to ensure adequate coordination, Bruhat Bengaluru Mahanagara Palike (BBMP) established (September 2015) an online system called 'Multi Agency Road Cutting and Coordination System' (MARCCS) for according road cutting permissions. To keep the database in MARCCS updated, BBMP was to ensure periodical submission of the utility maps by the service providers.

### **Audit Framework**

**2.2.3.** Audit test checked (March 2019 to June 2021) the records of UDD, BBMP and five service providers, viz. Bangalore Electricity Supply Company Limited (BESCOM), Bangalore Water Supply and Sewerage Board (BWSSB), Karnataka Power Transmission Corporation Limited (KPTCL), Gas Authority of India Limited (GAIL) and GAIL Gas Ltd (GGL)<sup>46</sup> for the period 2015-16 to 2020-21. The objectives of the audit were to ascertain whether system existed in UDD/BBMP for mapping of various Underground Utilities (UGUs) in Bengaluru City and to assess if the mapping was complete, updated and assisted achieving synergy among service providers to minimise the risk of damage to the existing UGUs during excavation works.

Audit objectives and scope were discussed with BBMP and service providers responsible for laying and maintenance of underground utilities during the entry conference held on 30 March 2019. Audit also engaged domain experts from Indian Institute of Science (IISc), Bengaluru who conducted field survey of underground utilities along with audit team and studies on the impact of unplanned road excavation on traffic patterns, average vehicle speeds and fuel emissions along with the audit team. Exit meetings were held in August 2021 with BBMP and service providers and replies have been incorporated in the relevant para of the Report.

### **Audit findings**

**2.2.4.** Audit findings are discussed in the subsequent paragraphs.

#### ***Absence of regulatory framework***

**2.2.5.** A complete and accurate mapping of underground utilities is vital to plan new capital works, carry out repairs/maintenance and prevent damage to underground utilities while executing any excavation works. The mapping of underground utilities in Geographic Information System (GIS) format would facilitate the integration of the maps in common platform and be made accessible to various urban service providers for planning their capital and maintenance works. UDD and BBMP which were the authorities responsible for regulating right of way of utility lines were required to put in place

<sup>46</sup> GAIL maintains the main gas pipeline while GGL is responsible for distribution pipelines.

policy/regulations which facilitated orderly laying of UGUs and their mapping in prescribed format for the benefit of service providers.

Audit observed that neither the KMC/BBMP Act nor the Acts and Rules governing respective service providers (BESCOM, BWSSB, KPTCL, *etc.*) mandated the preparation, maintenance and updation of utility maps, except in case of gas pipelines where mapping of completed network was to be mandatorily carried out in GIS database within two years as per the Integrity Management System for Natural Gas Pipelines (IMSNGP), Regulation 2012 issued by Petroleum & Natural Gas Regulatory Board.

Audit also observed that UDD has not brought out any policy for regulating the laying and maintenance of underground utilities such as cables/pipes in urban areas. UDD had proposed (September 2015) a draft of Karnataka Municipal Corporations (Regulation of cable laying) Rules, 2015, which have not been notified yet (August 2021). UDD replied (August 2021) that instead of the above draft rules, the Government proposed to bring uniform rules for regulating the laying of optical fibres in Karnataka Municipal Corporations Model Building (Amendment) Byelaws 2021 which was yet to be notified. Thus, there was no regulatory mechanism mandating BBMP to maintain and update the mapped underground network of various service providers. Neither was there any regulation in place to ensure that the service providers share their maps/database with BBMP.

### ***Extent of underground utility network mapped***

**2.2.6.** The total utility network within Bengaluru City limits and the network mapped in GIS format as of 31 March 2021 in respect of the five test checked service providers is depicted in the table below:

**Table No. 2.2.1: Extent of mapping of Underground utilities in Bengaluru City as on 31 March 2021**

Sl. No.	Name of the service provider	Total length of utility network (in kms)	Utility network mapped (in kms)	Percentage of network mapped
1	BWSSB	21636	21636	100
2	BESCOM	7201	5997	83
3	KPTCL	440	385	88
4	GAIL	73	73	100
5	GGL	1561	778	71*

\*The length to be mapped was 1096 Kms considering two year grace period accorded in IMSNGP, Regulation 2012.

(Source: Information furnished by BESCOM, BWSSB, KPTCL, GGL and GAIL)

Though the entire underground assets of BWSSB and GAIL has been updated in GIS network, the percentage of GIS updation of other three service providers ranged from 71 to 88 *per cent*. In spite of progress made in GIS updation, audit noticed shortcomings in the mapped data of two<sup>47</sup> out of five test checked service providers such as adoption of outdated and inaccurate data base, non-capturing of GIS coordinates and vital attributes, absence of data validation, data mismatch *etc.* defeating the purpose of GIS mapping as discussed below:

<sup>47</sup> BWSSB and BESCOM.

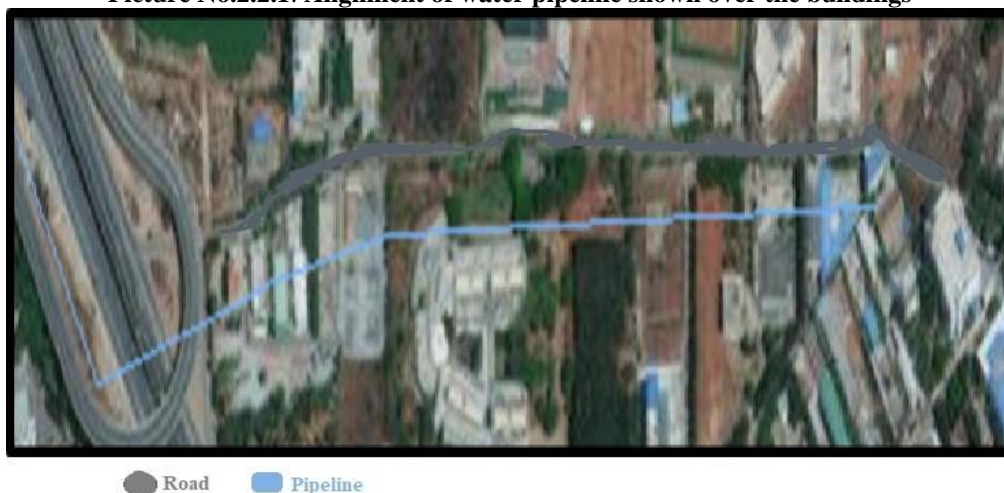
### 2.2.7. Shortcomings in GIS data base/mapping-

#### BWSSB - Base Maps

**2.2.7.1.** BWSSB had 11646.04 KMs of Water Supply Scheme (WSS) pipeline and 9,989.53 KMs of Under Ground Drainage (UGD) lines and had completed mapping of 100 *per cent* of its WSS and UGD assets as at the end of March 2021

Audit noticed that BWSSB adopted road shape files<sup>48</sup> dated back to 2002 for mapping its underground utilities. Due to the time gap<sup>49</sup> between the creation of road shape files and the actual mapping of utilities, there was the risk of datum shift<sup>50</sup> on mapping the underground utilities in such outdated shape files. BWSSB mapped its utilities in these road shape files without applying datum shift parameters<sup>51</sup> resulting in mismatch in the actual location of utilities in such maps. An illustration of such discrepancy is shown in the picture below where the alignment of water pipeline was shown over the buildings in the GIS map

**Picture No.2.2.1: Alignment of water pipeline shown over the buildings**



As such, the purpose of mapping of utilities was not served as they did not depict the true location. The Chairman, BWSSB replied (September 2021) that BWSSB was in the process of migrating its GIS network into Karnataka Geographical Information System (KGIS) framework of Karnataka State Remote Sensing Application Centre (KSRSAC) thereby resolving the issue of outdated base maps. However, the fact remains that no system existed in BWSSB for periodical correction of data shift which compromised the accuracy of mapping and may result in inaccurate identification of underground utilities while undertaking excavations.

<sup>48</sup> Shape files are simple non-topological format for storing the geometric location and attribute information of geographical features.

<sup>49</sup> The actual mapping in BWSSB started from 2004 and is continuing based on the addition of incremental assets.

<sup>50</sup> The disparity on the ground between points having the same horizontal coordinates in two different datum wherein shift parameters needs to be applied to the data when it is synchronized between the databases.

<sup>51</sup> A correction factor applied to align points in two different datums so that there was no mismatch in the coordinate position of the object in the datums.

**BWSSB -Incomplete data and absence of data validation**

**2.2.7.2.** The Ministry of Housing and Urban Poverty Alleviation prescribed (August 2010) that the mapping of underground water lines had to capture additional attributes such as depth of the pipes below the ground level, pressure and flow direction. Audit, however, observed that GIS database of the BWSSB did not capture the above attributes. The GIS certificate, which was made mandatory for recording the completion of work, did not indicate either the GIS coordinates of WSS/UGD or the details of other utility departments.

Audit also noticed that there was no system in place for data validation before certification. Data inconsistencies were observed in 84,916 out of 2,02,788 records in the database (details *vide Appendix-10*). For instance, month of installation had invalid values such as '0' and between '17 and 3347' while the year of installation had values '0', '20141', *etc.*, and diameter of pipes which usually range from 80 mm to 2000 mm had incorrect values like '0' mm, 1.5 mm, 150150 mm, 300100 mm, *etc.*

**BWSSB – Data mismatch**

**2.2.7.3.** BWSSB took up (May 2003) a project called 'Unaccounted for Water' (UFW) to address the revenue losses on account of leakages and unbilled quantities of drinking water. The project covered a total area of about 305 square kilometers (sq.km), out of the total serving area of 570 sq.km of BWSSB. The project involved survey and field investigations with GPR techniques to map the assets of BWSSB. Audit observed mismatch in the data regarding water supply mains and valves mapped in the survey and the GIS data base of BWSSB in three out of six packages under the project as detailed in the table below:

**Table No. 2.2.2: Statement showing mismatch between BWSSB GIS data and survey data under UFW**

Package	Area surveyed (Sq. kms)	Length of Mains as per data base (lakh metres)	Length of Mains as per survey (lakh metres)	Percentage of variation	Valves as per data base (Nos)	Valves as per survey (Nos)	Percentage of variation
D1a	26.50	7.30	7.66	5	2,231	3,015	35
D2a	54.00	13.45	14.76	10	8,332	5,886	-29
D2b	52.00	11.28	15.58	38	2,912	5,192	78

(Source: Information furnished by BWSSB)

The variations in data ranged between 5 per cent and 78 per cent indicating that the GIS data was inaccurate to that extent due to absence of periodical updation of assets rendering the database incomplete and not capable of providing a true picture of underground utilities.

**BESCOM - Non-capturing of key attributes**

**2.2.7.4.** BESCOM issued (November 2010) circulars for implementation of GIS consumer survey and asset mapping which emphasized capturing location co-ordinates of various assets. GIS systems capturing all the three physical

dimensions of length, width and depth increases the accuracy and precision in locating the exact alignment of UGUs.

Audit review of the attribute data sheets utilized for network updation in BESCOM revealed that the GIS maps were prepared in two-dimensional format which captured only the length and size of underground (UG) cable, but there was no provision for capturing the depth at which UG cable was laid. The failure to capture the depth at which the utilities were laid decreased the efficacy of mapping.

### ***BESCOM -Implementation of GIS based asset mapping and consumer indexing module under RAPDRP***

**2.2.7.5.** BESCOM implemented Restructured Accelerated Power Development and Reforms Programme, sponsored by Government of India, wherein it had developed 17 integrated software modules among which GIS based consumer indexing and network asset mapping was one of the key modules. Under the programme, a total underground network of 5149 KMs was added to GIS platform. The updation of underground network was carried out through the tickets (requests) raised by BESCOM divisions on completion of capital/maintenance works undertaken.

Audit scrutiny of tickets received, processed and returned to divisions for clarification/correction during 2017-18 to 2020-21 revealed that, out of the total tickets returned to the subdivisions for corrections, only 24 per cent to 87 per cent of the corrected tickets were received within the stipulated seven days. The tickets which were not returned within seven days were auto closed and a new ticket number was generated. Further audit analysis of such tickets which were auto closed, revealed the following:

**Table No. 2.2.3: Information regarding tickets returned for correction**

Sl. No.	Year	Number of tickets				
		Total taken up for updation	Returned for correction	Received & updated during the year	Received & Updated in succeeding years	Pending for correction
1	2017-18	2,120	88	21	67	25
2	2018-19	3,407	658	431	227	24
3	2019-20	3,960	783	451	332	45
4	2020-21	3,886	1,486	1,290	196	45
5	<b>Total</b>	<b>13,373</b>	<b>3,015</b>	<b>2,193</b>	<b>822</b>	<b>139</b>

Source: Information received from GIS cell, BESCOM

It could be observed that 822 out of 3015 tickets (27 per cent) returned to subdivisions for correction were not returned to GIS cell during the same year indicating delay in updation of assets to Data Automation System. 139 out of 822 (16 per cent) such delayed tickets were pending for updation as of 31 March 2021. Further test check of records of 623 works in 12 sub-divisions<sup>52</sup> during 2015-16 to 2019-20 revealed delay in GIS updation in 218 works involving 165 KMs of network addition, ranging from 2 to 56 months from the date of completion of works.

<sup>52</sup> Hebbal, Indiranagar, Jalahalli, Jayanagar, Koramangala, Malleshwaram, Peenya, Rajajinagar, RR Nagar, Shivajinagar, Vidhanasoudha and Whitefield.

The General manager (ICT &MIS), BESCOB replied (August 2021) that since January 2019 all works were executed in WAMS application, tickets were raised and were being updated within three working days of receipt in GIS cell. The reply cannot be accepted as 27 *per cent* of such tickets raised were returned for correction and updated in succeeding years indicating delay in updation of assets.

### **Validation of GIS database by KRSAC**

**2.2.7.6.** The GoK notified (August 2001) Karnataka State Remote Sensing Application Centre (KSRAC) as the state nodal agency for remote sensing activities. Subsequently, KSRAC (June 2015) was entrusted with implementation of Karnataka Geographical Information System (KGIS) involving preparation of state-wide GIS database to meet the needs of government, citizens and enterprises. For the purpose of geo-tagging<sup>53</sup>, GoK issued orders (November 2017) directing all the departments to provide complete list of assets to KRSAC.

Audit observed that:

- KPTCL shared the data with KSRAC only in January 2021. The data of substations shared by KPTCL was validated and made available in KGIS but it did not match with the ground level data as per satellite images. The rectification of the discrepancy was under progress.
- The upgradation of GIS database of BWSSB and BESCOB to KGIS framework was completed. BBMP shared road/landmark data as web map service<sup>54</sup>, however, the complete road MIS data containing the details of utility network was yet to be integrated in KGIS;
- Data sharing of agencies such as Gail Gas and Gail India Ltd, optical fiber cable network, *etc.* was yet to be initiated.

Thus, the goal of the Government to create a central repository of standardized GIS data of all the urban service providers was not realised.

Thus, the extent of progress attained by the service providers in GIS mapping of underground utilities could not attain the intended results in view of the deficiencies such as inaccuracy in the database, non-capturing of key attributes, lack of periodical updation and absence of validation controls.

### **Implementation of MARCCS by BBMP**

**2.2.8.** BBMP attempted to obtain and integrate GIS data gathered from various service providers and utilize the same for according permissions through MARCCS online interface. Audit, however, observed several shortcomings in its functioning as discussed below:

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<sup>53</sup> Geo-tagging is the process of adding metadata that contain geographical information about a location to a digital map.

<sup>54</sup> Web map service is a standard protocol for providing geo-referenced map images over the internet.



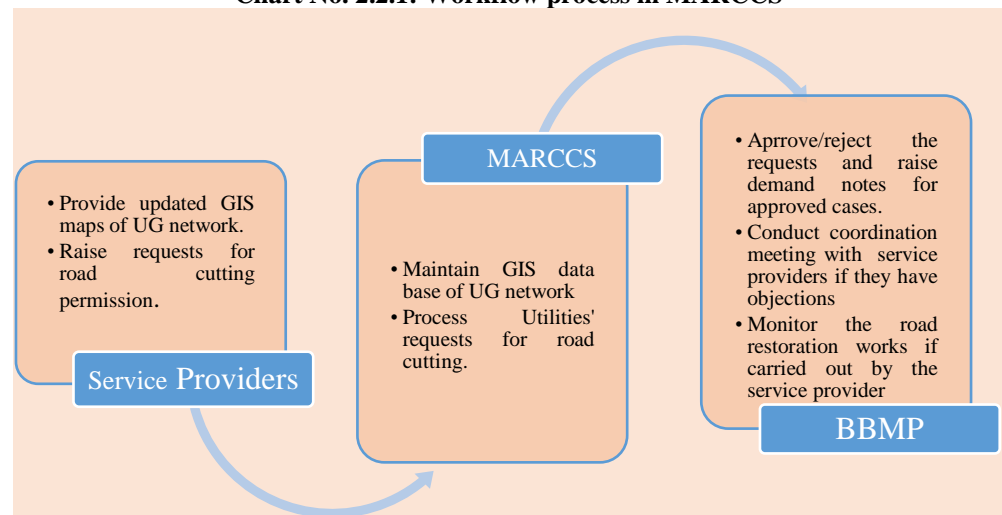
**Non-updation of data**

**2.2.8.1.** The data of UG network of various utilities was last updated in MARCCS during November 2016. Subsequently, no efforts were made to update the overlays even though there were network additions subsequently by BESCOM (2,145 KMs) and KPTCL (139 KMs), BWSSB (4,238 KMs) by the end of March 2021. Moreover, MARCCS database was incomplete as it did not include the assets of GAIL (73 KMs) and GGL (1,561 KMs) which were within BBMP limits. Despite utility maps being provided by GAIL during November 2018 and by GGL during February 2020, the same were not updated in MARCCS.

Further, the overlays did not indicate critical GIS attributes such as length of each utility network, depth of the utilities laid, material of ducts/pipes used, date of installation of such utilities, diameter of ducts/pipes, ground survey data and geo-tagged attributes. This was mainly because of non-availability of these attributes in GIS maps provided by the respective utilities.

**Delay in raising of demands and non-collection of dues related to road cutting permissions accorded**

**2.2.8.2.** As per the 'Standard Operating Procedure' (SOP) of MARCCS, the user department while applying for road cutting permission was to indicate the stretch of the road and update the details viz. length of utility to be laid, method of laying, date of commencement of work, probable date of completion and restoration, etc. BBMP approves or rejects the road cutting requests and raises demand note for applicable approved cases. The utility departments proceed with execution of works as per the approval and on payment of fees. A schematic diagram of process of MARCCS is given below:

**Chart No. 2.2.1: Workflow process in MARCCS**

Audit observed the following shortcomings:

- Out of 12,139 requests received in MARCCS for road cutting permissions, during 2015-21, 1,014 were pending as on 31 March 2021. Out of the pending requests, 482 requests were pending for more than one year, the reasons for which were not recorded in the database.
- As per the SOP, receipt of payment as per the demand note raised was a pre-requisite for according permission for road cutting. It did not prescribe

any time frame for the BBMP to communicate the approval or rejection of requests received from the user departments. A test check of 7,287 demand notes raised during 2015-21 for according permissions for road cutting revealed the following:

- Only 1,432 (20 per cent) demand notes were raised within 30 days
- In 3,625 cases (50 per cent) demand notes were raised with a delay between one month and one year
- In 1,785 cases (24 per cent) there the delay in raising demand notes was between one and two years.
- In 445 cases (6 per cent) the delay was more than two years

Further analysis revealed that 382 out of 445 (86 per cent) demand notes which were pending for more than two years, pertained to BESCOM. The delay in raising the demands necessitated the service providers to execute their prioritized works without permission, thereby defeating the purpose of co-ordination envisaged in MARCCS;

- iii. Utility departments did not remit the prescribed charges of ₹ 582.37 crore<sup>55</sup> against the demand notes raised as at the end of March 2021. The Chief Engineer and Nodal Officer, MARCCS, BBMP in his reply (January 2021) stated that discussions were being conducted at Government level for collection of pending dues from various departments.
- iv. Apart from the pending dues, utility departments executed 983 works<sup>56</sup> involving laying of underground network of 7,56,167 metres<sup>57</sup> for which permissions were rejected in MARCCS due to reasons such as newly laid roads and roads under defect liability period. The execution of unapproved works was a clear indication of failure in the monitoring system at different levels of management both at the utility level as well as BBMP. This also had caused non-collection of required permission charges to the tune of ₹ 119.45 crore<sup>58</sup>;
- v. Unauthorized road cuttings attract levy of penalty at the rate of ₹ 25.00 lakh as per the Government orders (December 2018) and to get the road restored by the defaulting departments. Audit, however, observed that the BESCOM (95) and BWSSB (2) executed 97 works after December 2018 which were either rejected by BBMP or permissions were not applied through MARCCS, but penalty of ₹ 24.25 crore attracted on these unauthorized works was not levied and collected by BBMP.

### **Results of survey of underground utilities conducted in collaboration with IISc team**

**2.2.9.** In order to physically verify the accuracy of maps of underground utilities (UGUs) in terms of their number, location and type, audit collaborated with

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<sup>55</sup> BWSSB - ₹ 455.14 crore; BESCOM - ₹ 101.41 crore; KPTCL - ₹ 12.29 crore; BMRCL - ₹ 9.92 crore; GGL - ₹ 1.87 crore and GAIL - ₹ 1.74 crore.

<sup>56</sup> BWSSB – 771 nos; BESCOM - 212 nos.

<sup>57</sup> BWSSB – 6,34,318 metres; BESCOM – 1,21,849 metres.

<sup>58</sup> BWSSB - ₹ 88.29 crore; BESCOM - ₹ 31.16 crore.

IISc team to use Ground Penetrating Radar (GPR) technology<sup>59</sup> in three selected locations<sup>60</sup>. The GPR survey offers the advantage of detecting the number, type, location and other allied details of UGUs without needing to dig roads to visualize the same. The schematic representation of method of GPR survey is given under:

Picture No. 2.2.2: Schematic representation of GPR survey



The results of the study are enumerated in paragraphs below:

**Mismatch between the number of utility lines as per the survey and utility databases**

2.2.9.1. The field data obtained through GPR survey<sup>61</sup> of the three locations was compared with the maps of the respective utility providers and the data available with BBMP. The results of survey are depicted in the chart below:

Chart No. 2.2.2: Results of GPR survey of UGUs

Name of location surveyed	Section of road	Sewer Lines as per			Water Lines as per			Electrical Lines as per		
		BWSSB	BBMP	Survey	BWSSB	BBMP	Survey	BESCOM	BBMP	Survey
Malleshwaram Circle	Service Road from Circle towards East	1	1	1	1	1	0	1	0	0
	5th Cross Road from Circle towards East	0	0	0	1	1	1	0	0	0
	Service Road from Circle towards West	0	1	1	0	0	0	0	0	0
	5th Cross Road from Circle towards West	1	1	1	1	1	0	0	0	0
Ideal Home Circle, Rajarajeswarinagar	8 <sup>th</sup> main Road from junction towards south	1	1	1	2	2	1	0	0	1
	12 <sup>th</sup> cross road from junction towards west	1	1	1	2	2	1	0	0	0
	8 <sup>th</sup> main road from junction towards north	1	1	1	2	2	0	0	0	0
	12 <sup>th</sup> cross road from junction towards East	1	1	1	2	2	1	0	0	0
Parvathi sametha Chandramouleshwar	26 <sup>th</sup> Main Road	1	2	2	2	2	2	1	0	1
	25 <sup>th</sup> Main Road	1	2	2	1	1	2	0	0	0
Temple Circle, Jayanagar	39 <sup>th</sup> Cross Road from central junction towards west	1	1	1	1	1	1	1	0	0
	39 <sup>th</sup> Cross Road from central junction towards east	1	1	1	2	2	1	1	0	0

	No variations observed with survey data
	Variations observed with BWSSB/BESCOM data but matched with BBMP data
	Utilities data did not match with survey data

<sup>59</sup> GPR system consists of an antenna, which houses the transmitter and receiver; and a profiling recorder, which processes the received signal and produces a graphic display of the data.

<sup>60</sup> i). Malleshwaram Circle, Sampige Road; ii). Ideal Home Circle, Rajarajeswari Nagar; iii). Parvathi Sametha Chandramouleshwara Temple Circle, Jayanagar 9th Block.

<sup>61</sup> Depth of investigation of the GPR signal is highly site specific and is limited by signal attenuation (absorption) of the subsurface materials. Signal attenuation was dependent upon the electrical conductivity of the subsurface materials. Alternately, the lines not detected in GPR could have been laid outside the defined survey area (as in under the foot path) which is not as per the maps available.

Audit observed that in 10 sections of the selected roads, the data of UGUs (8 out of 10 related to water lines of BWSSB) was found to be erratic as the actual numbers as per survey was less or more as compared to the GIS data of UGUs. This endorses the audit comment on incomplete and inaccurate GIS maps being maintained by the utilities which can lead to damages during excavation due to incorrect identification of utilities.

**Non-adherence to IRC standards**

**2.2.9.2.** IRC 98-2011 prescribes the location, design, installation and maintenance of public utility services within the right-of-way of urban roads. The objective was to provide a uniform approach which minimizes interference between the operations of various agencies and to ensure safe and smooth traffic flow by reinstating the trenches after completion of works. The GPR survey conducted at the selected locations revealed that service providers deviated the specifications prescribed by IRC as illustrated in the table below:

**Table No.2.2.4: Deviations of IRC specifications in the existing utility lines at study locations**

Sl. No.	Utility Type	Depth from Ground Level				Distance from edge of the road			
		IRC	Ideal Home	Jaya nagar	Malles waram	IRC	Ideal Home	Jaya nagar	Malles waram
1	Sewer Line	>1.5	0.655	0.65	0.73	3.5	2.71	2.75	1.5
2	Water Line	0.6-6	0.577	0.652	0.78	2.5	3.92	2.4	1.2
3	Optical Fiber Line	0.6-1	-	0.39	-	3.5	-	2.7	-
4	Electrical Line	0.6-1	-	0.415	-	4.6	-	6.5	-

(Source: Study report of IISc)

Audit observed that there was no uniformity in laying of various utilities at the study locations in contravention of the guidelines. While sewer lines were laid at less than minimum depth specified by IRC, water lines almost met the depth range given by IRC. It was also noticed that the water and sewer lines were very closely laid in the surveyed locations contravening IRC norms, posing risk of mixing of sewage with potable water during bursting of pipes and attendant health hazards. Similarly, IRC standards suggested multi utility ducts with separate enclosures for each type of service providers laying underground cable network which were not provided in the surveyed locations.

**Risks of not possessing complete map of underground utilities.**

**2.2.9.3.** The non-existence of utility maps may result in wider-than- required excavation of ground surface for maintenance of utilities. Utility maps are important as they show accurate positions of the buried utilities that prevent digging into or damaging any other utilities which can cause inconvenience to the public or workforce. IISc team conducted studies at four locations<sup>62</sup> in Bengaluru city where excavation works were being carried out to quantify the

<sup>62</sup> Four locations, viz. Avalahalli 50 feet main road (FFMR), Banerghatta main road (BGM), MS Ramaiah road (MSRR) and Thanisandra main road (TSMR) were considered for the study where the utility restoration works were ongoing as of December 2019/January 2020.

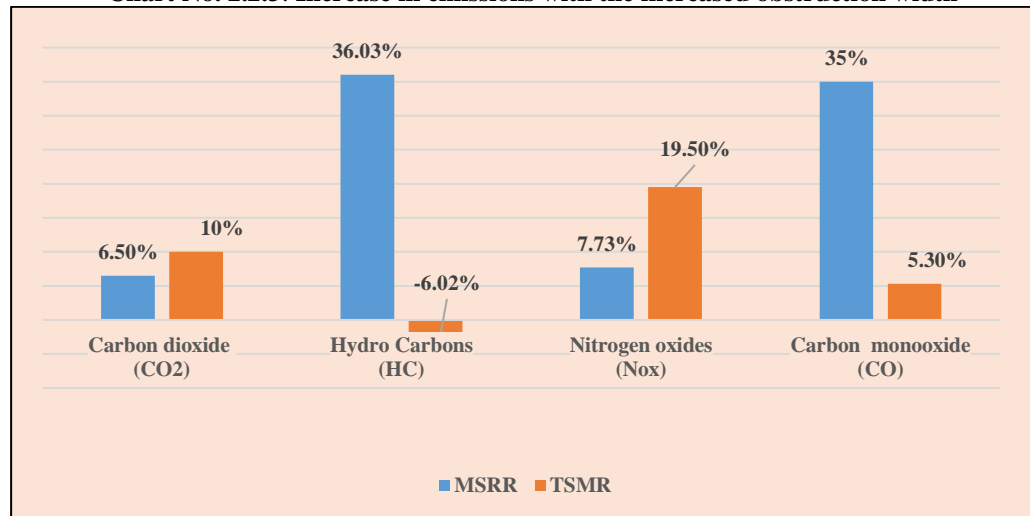
impact of enhanced digging of roads on average vehicle speed, pollutant emissions and fuel consumption. The results of the study are enumerated below:

***Increased emission levels and fuel consumption with increased obstruction***

**2.2.9.4.** The study found that the average vehicle speeds consistently and significantly drop with a decrease in the road width available to the traffic due to excavation for maintenance of utilities. In general, there was an increase in the emissions and fuel consumptions with an increase in obstruction width.

The following chart depicts the increased emission levels in one hour at peak-hour volumes with the increased obstruction road width in two out of four selected locations

**Chart No. 2.2.3: Increase in emissions with the increased obstruction width**

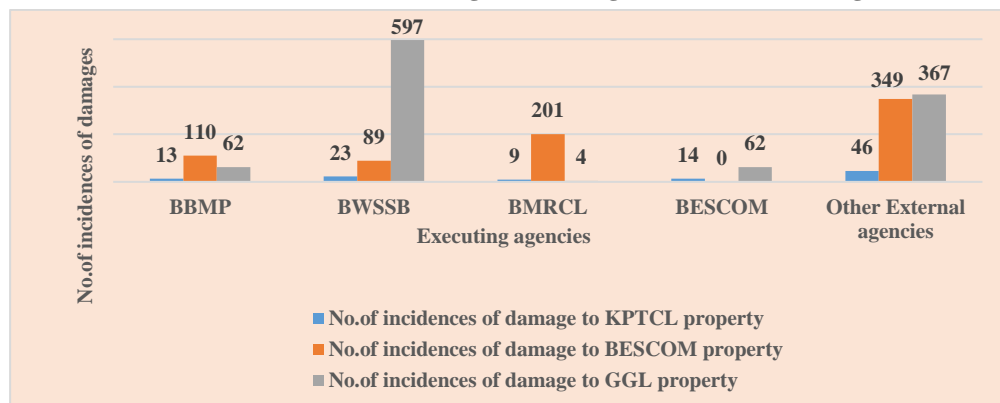


(**Note:** Negative (decrease) HC levels at TSMR could be attributed to the complexity of the vehicle interactions in a mixed traffic environment and to wide-ranging factors like vehicle technologies).

It was also noticed that fuel consumption increased by 16.8 litres and 3.97 litres at MS Ramaiah Road (MSRR) and Thanisandra main road (TSMR) respectively during peak hours. The lack of utility map led to larger size excavation as the workers were not aware of the exact location of the underground utilities. The wider excavation reduced the width of road available for vehicle movement and resultant increased travel time, fuel consumption and emission of pollutants leading to health hazards for road users.

***Incidences of damages to underground utilities***

**2.2.10.** Audit observed adoption of outdated and incomplete GIS data on underground utilities and absence of their periodical updation, undertaking of works without permissions, *etc.* resulting in frequent damages to the utility lines while carrying out road cutting/excavation. This had also resulted in unwarranted inconvenience to the vehicular traffic and avoidable expenditure for restoration of damaged property. The number of incidences of damages to underground utilities during 2015-21 is depicted in the following chart:

**Chart No. 2.2.4: Incidences of damages to underground utilities during 2015-21**

(Source: Information furnished by service providers)

It could be observed that the maximum number of incidences of damages occurred to GGL pipelines mainly on account of execution of works by BWSSB (597 nos) and by other external agencies<sup>63</sup> (367 nos). Also, underground cables of BESCOM were damaged by Bangalore Metro Rail Corporation Ltd (201 nos), other external agencies (349 nos), BWSSB (89 nos) and BBMP itself (110 nos). The reasons attributable to such occurrences were execution of works without permissions, non-availability of updated GIS data, absence of co-ordination between the service providers, *etc.* As a result, utilities incurred ₹ 18.38 crore (KPTCL - ₹.15.13 crore; BESCOM - ₹ 3.07 crore; BWSSB - ₹ 0.18 crore) for restoring the damaged assets. The cost of restoration of GAIL/GGL pipelines was not available.

### Conclusion

The State was not able to formulate a legal/regulatory framework for enforcing effective mapping of underground utility assets of various service providers. The mapping of utilities of service providers was incomplete except in BWSSB and GAIL (India) Limited and the mapped data was not accurate and reliable due to absence of periodical updation. The objective of MARCCS to serve as a single window platform for developing synergy between various utility departments during road excavation, though well intended, was defeated due to systemic deficiencies such as absence of updated UG network and lack of control over service providers excavating roads bypassing MARCCS. There was no adequate enforcement of penal provisions for violations. The absence of legal provisions to enforce mapping and inadequate co-ordination among BBMP and the urban service providers resulted in haphazard planning for mapping of underground utilities. The incomplete and non-updated maps were not capable of providing complete information regarding the underground utilities leading to their damage during road excavations causing avoidable cost and inconvenience to general public.

### Recommendations

- 1. The Urban Development department, Government of Karnataka should lay an adequate legal and regulatory framework mandating**

<sup>63</sup> KPTCL, BSNL, OFC service providers *etc.*

**effective and complete mapping of underground utilities by the service providers and their timely updation;**

- 2. The service providers should establish an appropriate mechanism for maintenance of complete and accurate data of underground utilities with finer details of alignment, depth, size and type and ensure their periodical updation;**
- 3. The service providers should ensure adherence to the relevant standards/norms prescribed for laying underground utilities;**
- 4. BBMP should ensure updation of utility maps in MARCCS and route all road cutting permissions through the system, with enforcement of provisions for levy of penalty for violations;**
- 5. BBMP may consider colour coding of different utility lines for their easy identification during repairs and maintenance.**
- 6. BBMP should establish adequate co-ordination mechanism among various urban service providers undertaking road excavations for upgrading their infrastructure and expansion of services, so as to avoid accidents, damages to assets and loss due to unplanned road excavations.**

## **Public Works Department**

### **2.3. Idle quality assurance equipment**

**Procurement of quality assurance equipment costing ₹ 20.82 crore resulted in unfruitful expenditure as requisite infrastructure was not created in advance.**

The Government of Karnataka (GoK) with the World Bank financial assistance took up Karnataka State Highways Improvement Project (KSHIP) II at a cost of ₹ 4,522 crore for implementation between 2011-12 and 2018-19. The project cost, *inter alia*, included “procurement of Quality Assurance/Quality Control (QA/QC) equipment” including domestically manufactured equipment as well as imported advanced equipment. The Quality Control (QC) Divisions were required to create infrastructure for installation and utilisation of the procured equipment.

Project Director (PD), Project Implementation Unit (PIU), Karnataka State Highways Improvement Project (KSHIP) entered into (February 2018) a contract with a Supplier<sup>64</sup> for supply and installation (by July 2018) of seven items (24 Nos) of advanced QA/QC equipment at the identified labs (nine labs of Public Works Department and three labs of National Highways) in the State at a cost of ₹ 20.98 crore. The equipment had a warranty of 38 months from the date of delivery. The Suppliers delivered all the 24 equipment between May

<sup>64</sup> M/s APS GmbH/ Wille Geotechnik, Germany.

2019 and January 2020 and ₹ 20.82 crore<sup>65</sup> was paid to the suppliers (March 2021).

Audit scrutiny (July 2019, August 2021) of records of the Project Director (PD), Project Implementation Unit, KSHIP revealed that equipment supplied were not put to use which are discussed below:

- The Schedule 1 of Section VI of the Agreement stipulated the period, number and type of equipment to be delivered to different QC labs by the Supplier. Further, the Supplier had given detailed infrastructure requirement (May 2018) for installation of these equipment *i.e.*, space, building, power, air-conditioning, Chiller and Air Compressor at Bengaluru, Hubballi and Chitradurga Divisions/Sub-divisions in addition to the vehicles for mounting of ROMDAS and FWD. The Agreement also mandated the Supplier to impart training.
- It was observed that none of the equipment (24 Nos.) supplied could be used till date (July 2021) due to non-installation/ non-availability of infrastructure/ non-imparting of training and the details are shown in Table:

**Table No. 2.3.1: Status of utilisation of different equipment**

Sl. No.	Equipment	Total quantity supplied	Number of equipment kept idle due to		
			Installation pending	Infrastructure not yet provided	Training not yet imparted
1	Dynamic Special Triaxial Testing Machine (DASTM)	3	1	2	3
2	Rolling Thin Film Oven (RTFO)	3	2	3	3
3	Static Dynamic Universal Asphalt Testing Machine (SDATM)	4	3	3	4
4	Digital Inclometers	9	6	Not required	9
5	ROMDAS Modular System for DATA acquisition and processing	2	0	1	2
6	Pavement Surface Texture Measurement	1		Not required	1
7	Falling Weight Deflectometer (FWD)	2	1	Provided	2
<b>Total</b>		<b>24</b>	<b>13</b>	<b>9</b>	<b>24</b>

- The Supplier reported (May 2019) that NH QC labs were refusing to take delivery of equipment due to inadequate infrastructure which was not addressed by the authorities on priority. The Supplier had communicated requirement of vehicles for installation of ROMDAS and FWD but the vehicles were procured only during December 2020 after the delivery of equipment (May 2019 and January 2020).

<sup>65</sup> ₹16.37 crore under World Bank assistance and balance amount out of State funds. The difference in the cost and payment was due to exchange fluctuations.



- The equipment pertaining to Hubballi was kept in a private workshop, the other pertaining to Chitradurga required three computers and training for putting it to use.
  - Two Falling Weight Deflectometers (FWD) costing ₹ 1.10 crore were to be installed at NH QC Sub-divisions at Bengaluru and Chitradurga by the end of July 2018 but these were supplied only between May 2019 and August 2019 after being kept exposed to harsh weather. Apart from the delay in commissioning the equipment, the expenditure towards their rectification to make these equipment functional should be borne by the Department as the warranty conditions/period had been violated/lapsed.
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- Picture No. 2.3.1: FWD equipment costing ₹ 0.55 crore (excluding vehicle cost) damaged due to keeping it exposed to harsh weather at QC Sub-Division, Bengaluru (4<sup>th</sup> August 2021)**
- As per Schedule 2, Section VI of the contract agreement, hands on training for conducting tests and maintenance of lab equipment was to be imparted one month after installation. However, identification of the officers/ officials for undergoing training for operation of all the 24 equipment (including ROMDAS) was yet to be finalized (July 2021).
  - It was also noticed that large number of vacancies<sup>66</sup> existed in the cadres of Assistant Engineer, Laboratory Technician and Laboratory Assistant in QC Divisions. Considering the large vacancy in the cadres of Laboratory Technician and Laboratory Assistants, crucial for conducting the tests, the utilisation of these equipment procured at a cost of ₹ 20.82 crore would be unlikely in the present circumstances.

Thus, delay in creating the requisite infrastructure had resulted in non-utilisation of quality assurance equipment procured at a cost of ₹ 20.82 crore resulting in unfruitful expenditure.

The Government replied (December 2021) that 11 out of 24 equipment were installed and installation of 13 equipment was pending for want of infrastructure, power, accessories *etc.* An amount of ₹ 1.78 crore had been sanctioned (November 2021) for providing the infrastructure. Further, Government stated that vacancies could not be filled up due to austerity measure

<sup>66</sup>

Details of sanctioned and working strength in QC Divisions as of March 2021				
Design	Sanctioned Strength	Working Strength	Vacancies	Percentage
Asst. Engineer	87	53	34	39
Lab. Technician	13	01	12	92
Lab. Assistant	26	01	25	96

imposed by the Finance Department and issue would be taken up with the Finance Department for seeking relaxation of austerity measure.

The infrastructure required in various locations and vacancy position in critical technical cadres were known to the Department before procurement, but no urgency was shown to address these issues before delivery of equipment. The utilisation of installed equipment was doubtful as trained personnel were not available. Hence, the audit objection is reiterated.

**Recommendation:**

**It is recommended that henceforth the Public Works Department should ensure availability of necessary infrastructure before supply of equipment.**

**2.4. Avoidable expenditure**

**Deviation from standards in the execution of low traffic village roads has resulted in avoidable extra expenditure of ₹ 18.50 crore.**

Village/Rural Roads are under the jurisdiction of Rural Development and Panchayat Raj (RDPR) Department and exclusive design standards<sup>67</sup> have been prescribed by Indian Road Congress (IRC) for the development of rural roads which should be followed as per Paragraph 8 of Karnataka Public Works Department Code 2014.

Audit noticed (2019-2020) that Public Works Department (PWD) had carried out (2017-2020) the improvement of village roads though this category of roads was not falling under their jurisdiction. During test check of records in 19<sup>68</sup> PW Divisions comprising 117 estimates costing ₹ 165.89 crore, Audit found that these works were devoid of proper authority, had deficiencies in estimation and were built by incorrect adoption of IRC standards which are brought out in the succeeding paragraphs.

***Devoid of sanction***

**2.4.1.** The village roads under the jurisdiction of RDPR are to be executed by the Panchayat Raj Engineering Department (PRED) and funds are allotted by the Government for their development and maintenance every year. Audit scrutiny revealed that the improvement of village roads was included in Appendix-E (Annual Action Plan of Works) for 2017-2020 by the PW Department as per the request of the elected representatives. The improvement of village roads costing ₹ 165.89 crore was included by the PWD in their Annual Action Plans which was irregular and unauthorised as the prior approval of competent authority (PRED) was not obtained.

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<sup>67</sup> IRC: SP:72- Guidelines for the Design of Flexible Pavement for Low Volume Rural Roads.

<sup>68</sup> Bagalkote, Belagavi, Chikkamagaluru, Chikkodi, Chitradurga, Davanagere, Dharwad, Hassan, Hunsur, Karwar, Madhugiri, Madikeri, Mysuru, Ramanagar, Shivamogga, Shivamogga Special Division, Sirsi, Tumakuru and Vijayapura.

### ***Deviation from standards***

**2.4.2.** The design catalogue specifies: (i) providing bituminous macadam layer (BM) for T9 traffic category (1.5 MSA to 2 MSA) (ii) two types of wearing courses – surface dressing (SD) (for traffic category up to T5) and Open Graded Premix Carpet (OGPC) (for traffic category from T6 and onwards). The design catalogues finalised were performance-based and after drawing on the extensive experiences (Clause 1.4.4).

Audit scrutiny (2020-21) of estimates revealed the following deficiencies:

- PW Divisions were required to obtain pavement thickness and traffic data from the respective PR Engineering Divisions for the preparation of estimates but this was not done. Also, there were no records regarding handing over of these roads by PRED to PWD for undertaking improvements. Further, the necessity and benefit of taking up improvement works by PWD were not forthcoming.
- Applicable design standards should be followed for preparation of estimates and deviations should be supported with proper justification. Further, Clause 2.2.3 of IRC SP:72-2007 specifies determination of causes of poor condition of the pavement first before undertaking strengthening measures. As per IRC, the bituminous surfacing shall consist of either a wearing course or binder course (BM) with a wearing course depending upon the traffic volume expressed in MSA and soil condition.

Scrutiny of estimates in audit revealed that incorrect values were adopted boosting the MSA and adopted binder course and higher grade layers *i.e.*, (i) the MSA had worked out to less than 1.5 but taken as 2 (ii) the values of Vehicle Damage Factor (VDF) and Lateral Damage Factor (LDF) were incorrectly adopted (VDF was taken as 3.5 instead of 1.5 and LDF was taken as 2 instead of 1). The details are shown in ***Appendix-11***.

The higher design standards were followed without any cost analysis or technical justification. The improvements were necessitated due to lack of maintenance and hence adoption of higher-grade layers was unwarranted. The deviation from standards had resulted in extra expenditure of ₹ 18.50 crore to the exchequer which could have been utilised for other roads requiring improvements.

The Government in their reply (December 2021) stated that;

- (i) the improvement to villages roads were included in Appendix 'E' or through Government letters
- (ii) these village roads were to be upgraded to design parameter of major district as per Government Order and hence IRC 37-2012 was followed
- (iii) traffic survey for 2 to 3 days was conducted wherever traffic census details were not available.

The reply is not tenable as;

- (i) the PRED under whose jurisdiction these roads falls was not consulted before execution of works as no road data was available with the PWD. Hence, inclusion of works relating to village roads in Appendix 'E' without consultation with PRED was irregular.
- (ii) Reference to Government Order to improve as or copy of the GO to upgrade to the MDR was not furnished in support of the statement.
- (iii) Traffic survey report was not enclosed to the sanctioned estimates and arbitrary data was adopted. Though total vehicular traffic in terms of MSA worked out to 1.5 but it was taken as 2 MSA and accordingly crust thickness and layers were provided without technical justification.

Thus, adoption of higher standards without justification resulted in extra expenditure of ₹ 18.50 crore.

### **2.5. Payment of compensation due to departmental lapses**

**Issue of work order by Executive Engineer despite non-availability of encumbrance free land and failure to foreclose the contract as envisaged in the contractual provisions in such exigencies resulted in award of compensation by the arbitrator aggregating to ₹ 9.10 crore.**

The work<sup>69</sup> of proposed Guest House in the Karnataka State Charities Premises (7.05 acres) at Tirumala, Andhra Pradesh was awarded (3 March 2010) by the Executive Engineer, PWD, Kolar to M/s Consolidated Construction Consortium for a contract price of ₹ 19.91 crore for completion in 15 months (June 2011). The guest house was to be constructed after demolition of 18 structures and clearing of site which was not part of the construction contract. Hence, the work of dismantling the 18 structures (₹ 20.90 lakh) after payment of salvage value (₹ 16.13 lakh) was awarded (26 May 2010) on tender basis to the same Agency for completion in one month. The Agency commenced the work (May 2010) and had to stop the work of demolition midway as the work was stayed (16 November 2010) by the Hon'ble High Court of Andhra Pradesh on account of a PIL seeking ban on new constructions in Tirumala hills on ecological grounds. The Agency had partly completed demolition of 11 structures against 18 structures. On account of the Stay Order, the Agency could not take up the construction of guest house.

The Department did not appoint any counsel to get the Stay vacated. The Executive Engineer (EE) too, did not terminate the contract even though there was no prospect of commencement of work due to legal impediment. Hence, the Agency terminated the contract (June 2011) in terms of Clause 49.3 of the contract and also claimed compensation, as a fundamental breach was caused. However, the EE disputed the contention and intimated (July 2011) that neither parties caused fundamental breach. The Agency did not accept the contention and referred (May 2015) the issue to arbitration for settlement of the

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<sup>69</sup> Deposit contribution works.

disputes<sup>70</sup> besides claiming compensation aggregating to ₹ 4.14 crore plus 18 *per cent* interest before the Arbitrator. The Arbitrator (May 2017) held that the onus of handing over the site free of any impediments lies with the Department and since the Department failed to do so, it had caused a fundamental breach of contract. Hence, the Arbitrator awarded ₹ 3.99 crore towards compensation and 18 *per cent* interest from 21 November 2013 till date of actual payment. The Department filed (September 2017) an appeal in the City Civil Court, Bengaluru, which was dismissed (December 2020) by the Hon'ble Court thereby upholding the Arbitrator's award. The decretal amount works out to ₹ 9.10 crore (December 2020).

Scrutiny of the records (October 2018), in the office of EE, PWP & IWTD Kolar showed mismanagement of contracts which are discussed below:

- The approval for building plan from the local planning authority was not obtained when work order was issued. Thus, work order was hastily issued ignoring the contractor's right to claim compensation for non-commencement/delay in commencement of work as envisaged in the agreement (Clause 21.1<sup>71</sup>).
- The Department could have terminated the contract by working out the dues after scrutiny of claims.
- The EE or the Controlling Officers did not take prompt action to engage Government Counsel to get the stay vacated. The Counsel was appointed only in June 2013 after a gap of nearly three years.
- Audit scrutiny showed that the contractor had not provided supporting details viz., numbers, period of idle labour/machinery to the Department and the Department too, did not have such details in the form of a Site Engineer's report/management meeting, proceedings about deployment of resources, idle resources *etc.* Since the same contractor was also awarded the contract for demolition of structures, the possibility of the contractor counting resources mobilized for demolition of structures against the construction work cannot be ruled out.
- As per extant procedure, clearance from Law Department has to be obtained to prefer an appeal against arbitral award. The Department had taken opinion from the private law agency, who incidentally represented the Department in Arbitration, to challenge the arbitral award. Thus, approval of the Competent Authority was not obtained before challenging the award and engagement of the private law agency was also unauthorized.

Therefore, serious lapses and mismanagement had resulted in payment of compensation of ₹ 9.10 crore (December 2020) with the liability increasing by

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<sup>70</sup> Compensation for losses due to overheads, machinery, insurance, safety measures, equipment, loss of profit and interest.

<sup>71</sup> Clause 21.1: Possession of all parts of the site to the contractor. If possession of a part is not given by the date stated in the contract data, the employer is deemed to have delayed the start of the relevant activities and this will be compensation event.

₹ 71.82 lakh *per year* due to payment of interest at 18 *per cent*. Thus, the payment of compensation is a loss to the public exchequer due to the Departmental lapses.

The Chief Engineer, C&B (South), PWD, Bengaluru replied (September 2021) that work order to commence the work was issued as per the oral instruction of the Muzurai Department and the arbitration award challenged in High Court for quashing the award.

The reply was not accepted as PWD was responsible for management of contract as the agreement was between PWD & contractor. When there was no prospect for commencement of work due to non-availability of land, which was a compensation event, the issue of work order was irregular which led to claiming compensation by the contractor and award of compensation by the arbitrator.

**Recommendation:**

**It is recommended that henceforth Government may ensure availability of land and also get all the building plan approved by the local authority before awarding the work to the contractor.**

**2.6. Inadmissible payment**

**The Service Tax of ₹ 3.14 crore paid by the Agency was reimbursed by the Government in contravention of the conditions of the contract.**

As per Clause 11.3 (Instructions to the Tenderers) and Clause 39 of the general condition of the standard bid documents, the rates quoted by the tenderer shall include all duties, taxes and other levies payable by the contractor. Item rate tenders are invited to quote unit rates for carrying out the work as per specification and rates are inclusive of all related inputs.

The work of construction of additional accommodation in Kumarakrupa Guest House<sup>72</sup> in Bengaluru was administratively approved (June 2013) and technically sanctioned (September 2014) for ₹ 80 crore. The building, being constructed for commercial purpose, attracted payment of Service Tax (ST) by the contractor as per GoI Exemption Notification No. 25/2012 dated 20<sup>th</sup> June 2012. The contract for the construction was entrusted (27<sup>th</sup> March 2015) to M/s. B G Shirke Construction Pvt. Ltd. for ₹ 70.49 crore (17.51 *per cent* above the Schedule of Rates of 2014-15) for completion within 18 months (September 2016). The work execution included additional items /extra quantities, therefore the cost of the work was revised to ₹ 99.45 crore<sup>73</sup> which was approved by the Government in July 2019. The revised cost *inter-alia* included ₹ 3.14 crore towards reimbursement of ST to the contractor. A Supplementary Agreement was signed (October 2019) for *nine* variation items including the ST reimbursement component. The final bill of the work for ₹ 76.97 crore was paid (2<sup>nd</sup> November 2019) to the contractor. For the reimbursement of ST, the

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<sup>72</sup> Commercial purpose building.

<sup>73</sup> Including the external development works, electrical works, extra items, reimbursement of ST, etc.

contractor preferred (23<sup>rd</sup> July 2019) a separate claim which was paid (20<sup>th</sup> November 2019) after the final bill was settled.

Scrutiny (October 2020) of records of the Executive Engineer (EE), No.1 Buildings Division, Bengaluru revealed that the reimbursement of Service Tax (₹ 3.14 crore) was irregular as the quoted rates were inclusive of all taxes, duties *etc.* This instruction was made amply clear to the bidder in the IFT (Invitation for Tender) which forms part of the Agreement. Further, the Department in the pre-bid meeting held (November 2014) with the bidders clarified that the reimbursement of increased taxes, levies, duties, cess and any new taxes imposed after submission of the tender would not be reimbursed. Thus, the rates quoted by the contractor were inclusive of all the applicable taxes. Hence, reimbursement of Service Tax to the contractor was not admissible as per the terms of the Agreement and reimbursement of ST violated contractual conditions.

On this being pointed out, the EE replied (October 2020) that while the work was exempted from Service Tax when the tenders were invited (October 2014) it was brought back under the purview of Service Tax vide Notification No. 6/2015 with effect from 1<sup>st</sup> March 2015 and exemption was applicable for contracts executed prior to 1<sup>st</sup> March 2015. Further, the EE stated that the Department had clarified to the Agency during the pre-bid meeting (November 2014) that the Service Tax would not be charged.

The Government in their reply (February 2021) while endorsing the EE's reply also stated that the amendment Notifications (No.6/2015<sup>74</sup> and No.9/2016<sup>75</sup>) were not issued when the contract was granted. The Government also stated that there was no provision to levy ST earlier to issue of the Work Order. Before the said notifications, the levy of Service Tax fell under the scope and ambit of exemption and therefore, the Department opined that the Agency would not have reckoned ST while quoting the rates.

As could be seen from the replies, the reimbursement was allowed based on the EE's clarification and changes in taxation policy disregarding the contract conditions. However, the contention is not correct for the following reasons:

- The clarification given by EE that ST would not be charged was incorrect as the project attracts payment of ST in terms of Notification No.12/2012. Audit scrutiny also showed that the contractor paid ST towards this project voluntarily despite the clarification by the EE. This indicates that the contractor had factored ST while quoting his rates.
- The liability towards payment of ST for this project existed from the stage of invitation of tenders (October 2014) till the submission of bids (November 2014) and also thereafter, notwithstanding the subsequent changes in taxation policy. The project continued to attract ST under Notifications of 2015 and 2016 *i.e.*, even during submission of bids and

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<sup>74</sup> Both commercial and non-commercial building contracts attract ST.

<sup>75</sup> ST is exempted to Government non-commercial buildings only.

date of work order. Thus, the reason adduced to reimburse the ST paid by the Agency was improper.

- The tenders were invited for finished items of work inclusive of all taxes, duties *etc.*, and accordingly accepted by the Department. Hence, it was not possible to ascertain from the quoted rates whether a particular component or tax element was factored in or not. Subsequently, the same could not be ascertained in item rate contracts.
- As there was no provision to reimburse in the Original Agreement, the reimbursement of ST was included in the Supplementary Agreement to pass it off as a legitimate payment. The process so adopted was thus tantamount to change in terms and conditions of the original agreement which was irregular.
- The ST was reimbursed by the Department despite Law Department's opinion (August 2017) that reimbursement of ST was not admissible.

Thus, reimbursement of ST paid was irregular for the aforementioned reasons, further ₹ 3.14 crore reimbursed were in violation of the Agreement was recoverable.

**Recommendation:**

**It is recommended that all due care should be taken in making payment as per the laid down provisions/clauses in the contract. The Supplementary Agreement so prepared to make ineligible payments legitimate requires further scrutiny and explanation.**

**2.7. Irregular payments**

**Government money to the extent of ₹ 3.09 crore was misappropriated by preparing fake work bills.**

The extant rules and regulations brought out in the Karnataka Public Works Departmental (KPWD) Code and the Karnataka Public Works Accounts (KPWA) Code lay down the detailed procedure for taking and recording of measurements, preparation and submission of Running Account of bills, scrutiny of bills at divisional office, maintenance of bill register. Further, the rules also prescribe maintenance of a Register of Works, a basic and important register to record full details of the sanctioned work together with payments/expenditure incurred in respect of a work including voucher details. The payment details should be noted in the Measurement Book concerned once the payment is made for compulsory check to avoid making double payment. For works costing more than ₹ 25 lakhs, the contractor must submit the electronic spreadsheets of measurements and a hard copy of the spreadsheets should be printed for taking countersignature of the contractor/his authorised person as an acceptance of these measurements and an Index Register should be maintained for each work. The various Codal provisions in this regard are enumerated in the *Appendix-12*.



The inspection of the accounts of the Executive Engineer (EE), PWD, Koppal was conducted during July/August 2019 and Audit scrutiny showed irregularities in drawal of bills in test checked cases. A detailed check of the transactions of four months<sup>76</sup> was undertaken covering an expenditure of ₹ 310.51 crore which revealed misappropriation of Government money to the extent of ₹ 3.09 crore through preparation of fake work bills as shown in Table below. The details are shown in *Appendix-13A, 13 B and 13 C*.

**Table No. 2.7.1: Details of fake work bills**

Sl. No.	Type of irregularity	Number of Cases	Amount involved (₹ in lakh)
01	Payment made to the same contractor twice – by referring to the same eMBs.	6	87.68
02	Payment made to the same contractor twice – by referring to different MBs/eMBs.	15	125.86
03	Payment made to two contractors by referring to the same Agreement and Work Indent number	7	95.34
<b>Total</b>		<b>28</b>	<b>308.88</b>

Following are the observations:

- In all cases, the work bills were again prepared and paid despite the fact that payments for the works were already made. In 21 out of the 28 vouchers, the SBR/DBR numbers were not mentioned which indicated laxity in control in recording and disposal of bills. The measurements were not crossed diagonally in Red ink at the time of preparation of the bill and voucher details were also not recorded which facilitated preparation of multiple bills.
- The detailed measurements of work done in CD ROM/diskette format was not submitted by the contractor in respect of works costing ₹ 25 lakh but hard copies of the measurements of spreadsheets were maintained. The countersignature of the contractor in hard copies was not obtained and the Index Register was also not maintained. A secured electronic platform was not put in place for computation of measurements electronically in the eMB system. This omission enabled taking print of more than one set of hard copies of measurements for preparation of bills for making payment. This practice of preparing the Running Account bills based on the hard copy of spreadsheets of measurement is prone for misuse as the mechanism of eMB could function only in an electronic environment which had not yet been established by the Government.
- The payments made to the contractor in respect of the work were not recorded in the Register of Works - a watch register to record payments made/expenditure incurred in respect of the work. Had the payments made were recorded in the Register of Works, the receipt of fake bills could have been detected in the Divisional Office. The lapse, thus, contributed to misappropriation of Government money.

<sup>76</sup> January 2018, March 2018, February 2019 and March 2019.

- Further, the collusion of Departmental officials/officers and contractors could not be ruled out and the matter requires a detailed investigation for recovery and fixing accountability.

The Government replied (November 2021) that ₹ 2.80 crore had been recovered and action being taken to recover the balance amount. The audit findings were based on the test checked months and hence Government is recommended to order for detailed investigation. Further, the action taken against the concerned officers/officials and contractors for fraudulent withdrawals of government money by preparing fake bills was not intimated.

**Recommendation:**

**It is recommended that since the audit findings were based on the test checked months, the Government may order for detailed investigation across all the divisions/sub-divisions. The action taken against the defaulting officers/officials and contractors for fraudulent withdrawals of Government may also be intimated.**

**URBAN DEVELOPMENT DEPARTMENT**

**Bangalore Development Authority**

**2.8. Huge financial burden on account of delay in payment of land compensation**

**Acquisition of private land without following due process resulted in allotment of developed sites of Bangalore Development Authority worth ₹ 44.47 crore as against the awarded compensation of ₹ 10.91 lakh. The land allotted was also more than the prescribed compensation resulting in excess allotment of sites worth ₹ 10.04 crore.**

Bangalore Development Authority (BDA) acquires land for development schemes under the powers vested under Section 17 (preliminary notification) and section 19 (final notification) of the BDA Act 1976. Section 36 of BDA Act states that provisions of Land Acquisition (LA) Act, 1894 would be applicable for all land acquisitions done by BDA other than by agreement with the landowners. The provisions in LA Act, 1894 in respect of awarding and payment of compensation for land acquired are as follows:

- Section 11 provides for the competent authority to make an award of compensation for the land acquired after hearing objection, if any, from all the persons interested in the land being acquired.
- Section 11(A) stipulates that the award should be made within a period of two years from the date of final notification and if no award is made within that period, the entire proceeding for the acquisition shall lapse.

- Section 31 prescribes that the compensation awarded should be either paid to the entitled persons or deposited in the court in cases of dispute

BDA carried out (March 1988) preliminary notification for acquiring land at Kothanur village, Uttarahalli hobli, Bengaluru South Taluk for formation of the layout JP Nagar 8<sup>th</sup> phase. The final notification (October 1999) provided for acquiring 92 acres out of which 4 acres 4 guntas<sup>77</sup> belonged to Sri. Nanjundappa. The Land Acquisition Officer, BDA awarded (May 2008) ₹ 10.91 lakh as compensation for the above parcel of land after more than 8 years of final notification. Further, the compensation amount awarded was neither paid to the landowner nor was deposited in court as per section 31 of LA Act, 1894.

The aggrieved landowner filed (August 2017) a writ petition in the High Court of Karnataka seeking that acquisition proceeding be declared lapsed and that the compensation be provided under Right to Fair Compensation and Transparency in Land Acquisition Act, 2013 (LA Act 2013). The High Court allowed the writ petition and directed (October 2017) BDA to grant him equal extent of land having similar potentiality as compensation within three months, treating the land as having been acquired that day in terms of provisions contained under LA Act 2013. Since directives of the High Court were not complied with by BDA within the three months period, the landowner filed (January 2018) contempt petition against BDA.

In response, BDA decided (April 2018) to compensate the landowner in the form of developed sites at 11,979 square feet (sq. ft.) per acre of acquired land, as per the norms<sup>78</sup> practiced. Accordingly, BDA allotted (July 2018) a total of 48277.51 sq. ft. of developed land comprising of 23 sites in different layouts. However, the landowner insisted for 21,780 sq. ft. of developed land per acre (*i.e.* 50 per cent of 43,560 sq. ft.) as compensation. The complainant in his memo requested (September 2018) the High Court for directive to allot 21,780 sq. ft. developed land per acre of land acquired. The Memo was taken on record by the Court and BDA was directed to comply with the same. Accordingly, BDA allotted (October 2018) another 20 sites measuring 50328.27 sq. ft. in different layouts.

In this connection audit observed the following:

- BDA took more than eight years to award compensation after the issue of final notification which was neither paid to the landowner nor deposited to the court in violation of provisions of the LA Act, 1894. In the land acquisition compensation register<sup>79</sup> entries were recorded only up to issue of final notification which indicates the lack of monitoring and follow up mechanism in BDA to ensure the completeness of procedures prescribed under LA Act, 1894. The arbitrary action of BDA in taking possession of land without paying compensation resulted in

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<sup>77</sup> Excluding 6 guntas of kharab land.

<sup>78</sup> One acre is 43,560 sq. ft. and 55 per cent *i.e.* 23,958 sq. ft. is considered as developed land since the balance is utilised for the providing civic amenities, roads and parks. As per the norms, BDA allots 50 per cent of developed land, *i.e.*, 11979 sq. ft. as compensation per acre.

<sup>79</sup> The register maintained for monitoring the compensation payments in respect of land acquired for BDA projects.

lapse of acquisition. The aggrieved landowners resorted to judicial remedy which resulted in award of developed sites with sale potential worth ₹ 44.47 crore<sup>80</sup> during 2018 in place of awarded compensation of ₹ 10.91 lakh in the year 2008.

- To comply with the contempt petition, BDA had agreed to provide compensation in the form of developed land measuring 89,298 sq. ft. (8,296 sq. mt.)<sup>81</sup> worth Rs. 34.43 crore<sup>82</sup>. However, BDA allotted 98605.77 sq. ft. (9160.70 sq. mt.) of developed land worth ₹ 44.47 crore which was more than quantum of land ordered to be allotted as compensation by the High Court. Based on the guidance value for the year 2017-18, the excess allotted developed land measuring 9307.77 sq. ft. (864.71 sq. mt.) was worth ₹ 10.04 crore<sup>83</sup>.

Thus, the failure of BDA to monitor and ensure payment of entitled compensation awarded as per LA Act, 1894 resulted in lapsing of the land acquisition and consequent judicial scrutiny. BDA was forced to pay compensation in the form of developed sites worth ₹ 44.47 crore as against the original award of ₹ 10.91 lakh. Further lack of due diligence in allotment of the above sites resulted in excess allotment of 864.71 sq. mt. of BDA land worth ₹ 10.04 crore.

**Recommendation:**

**BDA should fix responsibility for the huge delay in payment of land compensation and consequent financial loss to BDA.**

The matter was referred to Government in August 2021 and the reply was awaited (December 2021).

**2.9. Execution of absolute sale deed based on suspected fake documents**

**Manipulation of records and failure of internal control mechanism to verify the genuineness of documents facilitated the applicants to submit fabricated and fictitious documents based on which BDA executed sale deeds for land worth ₹ 10.05 crore.**

Bangalore Development Authority (BDA) was set up under the BDA Act, 1976 to promote and facilitate the development of the Bangalore Metropolitan Area. The activities undertaken by BDA *inter-alia* involved acquisition and development of land and allotment of sites for various purposes, *viz.* residential, commercial, *etc.* The process of allotment of sites as per the BDA (Allotment of Sites) Rules, 1984 is depicted in the chart below:

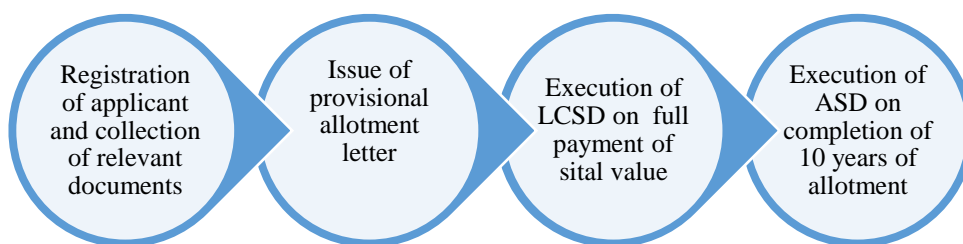
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<sup>80</sup> Based on guidance value of 2017-18 for immovable properties under the jurisdiction of Sub Registrar, JP Nagar.

<sup>81</sup> 1 square metre (sq. mt.) = 10.764 square feet (sq. ft.).

<sup>82</sup> Calculated based on guidance value of ₹ 41500/ sq.mt. at Kothanur Village during 2017-18.

<sup>83</sup> ₹ 44.47 crore – ₹ 34.43 crore = ₹ 10.04 crore.

**Chart No. 2.9.1: Process flow for allotment of sites for BDA**

**(LCSD – Lease Cum Sale Deed; ASD – Absolute Sale Deed)**

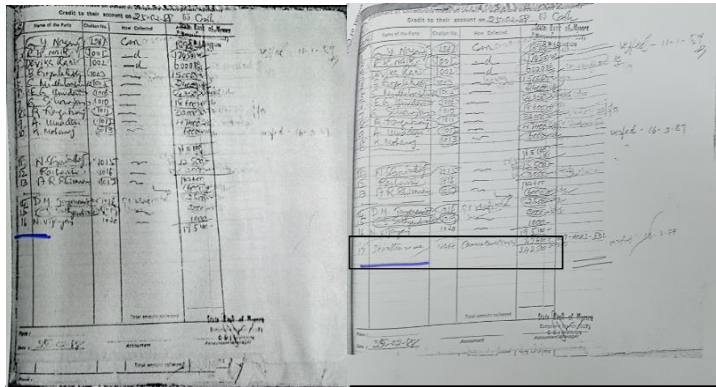
The powers to execute the Absolute Sale Deed (ASD) with the allottees, which was to be executed after completion of 10 years of provisional allotment and fulfilment of attached conditions of Lease Cum Sale Deed (LCSD), were vested with the Deputy Secretaries of BDA. The authenticity and genuineness of original documents, such as allotment letter, original challan (proof of payment of sital value), LCSD *etc.* was required to be ensured at the time of executing ASD.

BDA executed a total of 12,771 ASDs during the period 2017-18 to 2018-19. Of which, Audit selected 131 ASDs for a detailed review. However, BDA furnished the records only in respect of 19 ASDs and the records relevant to the remaining 112 ASDs were not made available to audit for verification in spite of audit requisition. Audit observed the following irregularities in 14 out of 19 ASDs whose sale value as per the guidance value (2018-19) fixed by the Stamps and Registration was ₹ 13.75 crore. Specific observations on each of these 14 cases are given in **Appendix 14**.

#### ***Recording of fictitious entries in the Cash Abstract (CA) register***

**2.9.1.** Based on the provisional allotment letter, applicants were required to make full payment of sital value and thereafter execute the LCSD with BDA. Such payments made by the applicants were recorded in the Cash Abstract register maintained at BDA. In seven out of 14 cases (Sl. No 1 to 5, 12 and 14 of **Appendix-14**), an amount of ₹ 2,13,596 was depicted in the CA register as paid by the allottees against the allotment of 13,200 square feet (seven sites of different dimensions) during the period between March 1983 and February 1988.

Audit could not trace the above payments with the supporting documents such as bank statements as the respective banks did not share the documents with audit citing their policy on retention and preservation of documents. Hence, Audit relied on the scanned copies of original CA register (scanned during 2010-12 and



**Picture No. 2.9.1:** Scanned copy of CA register showing entries upto Sl. No.16 and total of ₹ 1,91,500.

**Picture No. 2.9.2:** Manipulated CA register through fictitious entry No. 17 and total of ₹ 2,42,500.

maintained by BDA) to cross verify the physical CA register in which the receipt entries (₹ 2,13,596) were made for the above seven cases. Audit noticed that these entries, which were recorded in the physical CA register, were not available in the corresponding pages of scanned copies of CA register. This suggested that the CA register was manipulated through fictitious entries, without the amount actually being received from the allottees. It was further noticed that the page-wise totals of the CA register were also altered to match the fictitious entries.

***Payments not reflected in the CA register***

**2.9.2.** In the balance seven cases (Sl. No. 6 to 11 and 13 of **Appendix-14**) an amount of ₹ 1,27,345 pertaining to allotment of 9,700 square feet for seven sites during the period between February 1976 and February 1988 was not traced to the CA register indicating that the amounts were not remitted to BDA account.

***Fabricated LCSDs***

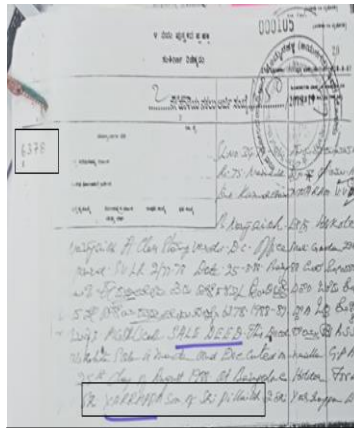
**2.9.3.** Audit further verified the LCSDs of the 14 allottees, which have been submitted by the applicants for executing ASDs, with the certified copies of LCSDs and Encumbrance Certificates<sup>84</sup>(ECs) obtained from the respective Sub-Registrar Office (SRO) concerned. It was observed that the unique document number<sup>85</sup> mentioned in LCSDs submitted by 11<sup>86</sup> applicants were not registered in the names of those applicants, and in two cases (Sl. No 6 and 11 of **Appendix-14**), the unique document number did not feature in SRO records. In the remaining one case (Sl. No. 12 of **Appendix-14**), execution of LCSD

<sup>84</sup> Encumbrance Certificate issued by SRO indicates all registered transactions pertaining to a property.

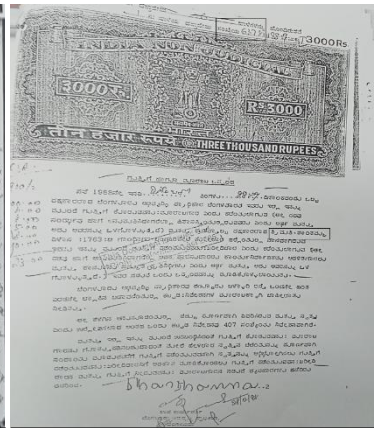
<sup>85</sup> According to Section 52 and 53 of Registration Act 1908, every document admitted to registration shall be numbered in a consecutive series and copied in the register maintained for the purpose.

<sup>86</sup> Sl. No. 1 to 5, 7 to 10, 13 and 14 of **Appendix-14**.

(September 1988) was, though, confirmed by SRO, the transaction was not recorded in the EC. Further, in all 14 cases, certified ECs obtained from SRO did not record LCSD transactions. Thus, the LCSDs (stated to have been executed during February 1976 to February 1988) submitted by the applicants for concluding the ASDs were fabricated and the allotment of sites to these 14 applicants was irregular.



**Picture No. 2.9.3:** LCSD No.6378 in the name of Sri. Yerrappaa certified by SRO.



**Picture No. 2.9.4:** LCSD No.6378 in the name of Smt. Shantamma, not found in SRO records /EC.

**Duplicate allotment**

**2.9.4.** The above fact of manipulation of CA register and fabrication of LCSDs is further established by the following three instances (out of 14 cases) wherein the sites, which were previously allotted, were re-allotted to other applicants based on fabricated LCSDs. The following table indicates the allotment of same sites to two applicants, the second allotment was made based on fabricated LCSDs.

**Table No. 2.9.1: Allotment of same sites twice to the different applicants**

Sl. No.	Details of site allotted	Applicant to whom site was originally allotted		Applicant to whom site was allotted subsequently with fake LCSD	
		Name of allottee	Date of ASD	Name of allottee	Date of ASD
(a)	(b)	(c)	(d)	(e)	(f)
1	Site No. 895/A, HBR Layout, I stage, IV Block (2,400 sq.ft)	Sri. M. Channakeshava Nayak	15.7.2004	Sri. B. Hanumappa	21.12.2017
2	Site No. 1625, HBR Layout, I stage, IV Block (1,200 sq.ft.)	Shri. Muniraj and Shri. Manjunath	21.01.2016	Smt. C.S. Rukmini	26.2.2016
3	Site No.407, HBR Layout, I Stage, II Block (2,400 sq.ft).	Sri. D.N. Vasanthkumar	03.04.2003	Smt. Shanthamma	13.6.2018

It is evident from the above that the previously allotted sites were again re-allotted to the applicants (Column (e) of table) by executing ASDs based on fabricated LCSDs. It was observed that one of the above three original allottees (Sl. No.1 of column (c) of table) approached the High Court of Karnataka against BDA challenging the re-allotment.

### ***Allotment of alternative sites***

**2.9.5.** BDA (Allotment of sites) Rules 1984 prescribed that alternative sites can be allotted only where mistake in allotment was on the part of the authority and/or the possession of the sites originally allotted could not be given to the allottees due to stay orders/disputes. Audit observed that in two cases (Sl. No. 10 and 11 of **Appendix-14**), ASDs were executed for an alternate site in lieu of site allotted against fabricated LCSD based on the request of the allottees in violation of allotment rules.

### ***Loss to the exchequer***

**2.9.6.** Audit also observed from the latest ECs that 13 out of 14 allottees had sold the sites (except Sl. No.10 of **Appendix-14**) within two to twelve months from the date of registration of ASD, indicating that the intention of the applicants was to make quick money through deception. The guidance value of 11 sites (Sl. No.12, 13 and 14 of **Appendix- 14** excluded as these were the cases of re-allotment) worked out to ₹ 10.05 crore which the BDA had to forego as these sites were appropriated by creating fabricated documents.

### ***Absence of internal controls***

**2.9.7.** The following lapses in internal control mechanism were noticed in audit:

- The entries of site numbers in allotment register were not made serially, which facilitated manipulation through insertion of fictitious/duplicate entries.
- The Deputy Secretaries who were vested with the powers to execute the ASD failed to ensure correctness of LCSDs submitted by allottees. There was no system in place to cross verify LCSDs with that of records maintained at SROs, thereby there was no means to verify the correctness of LCSDs at the time of executing ASDs.
- The watch register for unallotted/stray sites was not maintained and monitored, facilitating execution of fake ASDs by creating fabricated LCSDs.

The matter was referred to the State Government in October 2021 and reply is awaited.

### ***Conclusion***

BDA executed the 14 Absolute Sale Deeds by manipulating CA register through fictitious entries and fabricated LCSDs facilitating the allottees to make undue gains. The minimum loss to BDA was ₹ 10.05 crore in 11 cases and the remaining three cases was fraught with legal complications as BDA allotted these sites to multiple beneficiaries.

#### **Recommendations:**

- **BDA may take action to fix responsibility and enforce accountability for the irregularities pointed out;**
- **BDA may internally examine omissions in other allotments to ensure that they were being carried out as per requirement and rules.**



**2.10. Avoidable financial burden on account of non-observance of statutory provisions for Service tax payment**

**Delay in payment of service tax along with failure to claim input tax credit within validity time resulted in avoidable financial burden of ₹ 6.26 crore.**

Government of India brought services related to 'Construction of complex' under the ambit of service tax with effect 16 June 2005. The 'Construction of Complex' has been defined as any service provided for construction of complex or building intended for sale to a buyer, wholly or partly, except where the entire consideration was received after issuance of completion certificate by the competent authority.

Further, as per Section 75 of the Finance Act, every person liable to pay service tax who fails to credit the tax or any part thereof to the account of Central Government within the period prescribed, shall pay simple interest at such rate not below ten *per cent* and not exceeding thirty-six *per cent* per annum. Rule 3 of the Cenvat Credit Rules 2004, specified that the provider of taxable services shall be allowed to take credit of any input services received for provision of output services. The time limit for availing the above credit was fixed as one year from the date of issue invoice by the service provider with effect from 1 March 2015.

Bangalore Development Authority (BDA) undertakes construction of housing units in Bangalore which are allotted to the public after issuing notifications from time to time. The authority collected service tax from the allottees along with payment towards housing units. In addition, BDA collected service tax on lease amount of the Civic Amenity (CA) sites and also on rent charges collected from telecom operators to lay Optic Fiber Cable (OFC)

On the review of related records relating to service tax collection and remittance by BDA, audit made the following observations on three cases.

- BDA collected service tax from allottees at the rate of 12.36 *per cent* on the labour portion of value of flats on provisional basis. The above service tax collected from the allottees during 2011-17 amounting to ₹ 10.15 crore was not remitted to the Government account as there was no clarity regarding applicability of service tax on the above transactions. BDA also failed to account the service tax separately and the entire amount remitted by the allottee was accounted as cost of flats. Based on demand (June 2016) from Directorate General of Central Excise intelligence, BDA remitted (March 2017) an amount of ₹ 8.22 crore to the Department under protest and requested the department to refund the same considering the transaction as sale of immovable property. The balance amount was also remitted to the Government account during the period from May 2017 to December 2017. Since there was delay in payment of service tax, BDA had to pay (December 2017) interest amounting to ₹ 2.62 crore as per the provisions of Section 75 of the Finance Act.

- Similarly, BDA delayed payment of service tax collected (2013-2017) amounting to ₹ 1.34 crore on service charges levied on telecom operators to lay and maintain OFC and ₹ 2.87 crore collected on lease rent of civic amenity sites respectively. On demand from the service tax department, BDA belatedly remitted (September 2018) the service tax which attracted a penal interest of ₹ 2.26 crore.
- During 2017-18, BDA claimed ₹ 15.40 crore as input tax credit accumulated on the service tax component of payments made to housing project contractors. This included an amount of ₹ 1.14 crore pertaining to the year 2015-16 which was disallowed as per the provisions of Rule 4(7) of Cenvat Credit Rules as the claim was made after one year from the date of invoice. Thus, delay by BDA in claiming cenvat credit resulted in loss of input credit of ₹ 1.14 crore, besides payment of penal interest of ₹ 0.24 crore on the disallowed amount

In the above illustrated cases, BDA paid an avoidable interest of ₹ 5.12 crore to service tax authorities due to the delay in remittance of service tax collected from the allottees. BDA also lost opportunity to claim service tax input credit to the tune of ₹ 1.14 crore, as the claims were not made within the stipulated time frame as per the relevant provisions.

The State Government replied (June 2021) that the delay in remittance of service tax and claiming input tax credit was due to the ambiguity regarding applicability of service tax on BDA housing projects. Reply cannot be accepted for the following reasons:

- Despite the ambiguity, BDA collected service tax provisionally from the allottees;
- the tax receipts were not accounted separately, but kept in common account along with sale proceeds which has been utilised for BDA activities from time to time;
- The sale proceeds were received before the grant of completion certificate of the flats which attracted service tax as per the extant provisions.

**Recommendation:**

**BDA should ensure compliance to various provisions of Finance Act and ensure mechanism to obtain expert opinion regarding the implication of the provisions of the Act in its transactions, which has a substantial bearing on its finances.**

**2.11. Undue benefit to the contractor on reimbursement of Service Tax**

**Bangalore Development Authority (BDA) reimbursed service tax amounting to ₹ 4.34 crore for three housing projects which were exempted from payment of service tax resulting in undue financial accommodation to the contractors.**

The housing projects of Bangalore Development Authority (BDA) were taken up under lump sum and turnkey basis. Clause 8 of special conditions of contract of the tender document provided that the lump sum amount for which the tender was approved shall be inclusive of all taxes and the tenderer may consider taxes, duties, royalties, *etc.* prevailing one month earlier to the date of submission of the tender for quoting the prices. The clause further provided BDA to reimburse increases in taxes due to subsequent changes effected by State/Central Governments.

Government of India (GoI) exempted (June 2012) services provided to Government, local authority or a governmental authority by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alteration of a civil structure or any other original works meant predominantly for use other than for commerce, industry, or any other business or profession from service tax (SI No.12(a) of Notification No.25/2012-Service Tax)

GoI withdrew (March 2015) the above exemption with effect 1 April 2015. Audit observed that in three<sup>87</sup> housing projects, the contractor requested (October 2015) BDA to reimburse applicable service tax from 1 April 2015 referring to the withdrawal of exemptions under Section 12 (a). The contractor's argument was that service tax was not applicable at the time of tender<sup>88</sup> and was made liable from 1 April 2015. Based on the request of the contractor, BDA reimbursed (March 2016 to May 2016) the service tax applicable (for the works executed from April 2015 to March 2016) on the above three projects amounting to ₹ 4.34 crore<sup>89</sup> calculated on percentage basis on the work bill payments for the period.

GoI in Financial bill 2016 re-introduced the withdrawn exemption under Section 12(a) with retrospective effect from 1 April 2015 upto 29 February 2016 and provided for refund from service tax department any service tax collected for the services rendered during the above period. The exemption under 12(a) was further extended (March 2016) up to 31 March 2020 and applicable only for contracts entered before 1 March 2015.

Audit observed that the contracts of the above three projects were entered before 1 March 2015 and hence service tax exemption under clause 12 (a) was available for these projects. In spite of the above, BDA compensated the contractor an amount of ₹ 4.34 crore as reimbursement of service tax for the above three exempted projects resulting in undue financial accommodation to

<sup>87</sup> Kaniminike Phase II and III and Kommaghatta Phase I (Survey No.30).

<sup>88</sup> The tenders for the four projects were submitted during August 2013 to October 2014.

<sup>89</sup> Kaniminike Housing Project Phase II – ₹ 1,64,20,425, Kaniminike housing Project Phase III – ₹ 1,62,98,162, Kommaghatta housing project Phase I- (Survey no.30) – ₹ 1,07,30,267.

the contractor. The BDA had not taken any action to recover the amount even after the above works were completed and final bill were paid (June 2017)

The matter was referred to the State Government in October 2021 and the reply was awaited.

**Recommendation:**

**BDA should take action to recover the payments made for service tax reimbursements for exempted projects and fix responsibility for lack of due diligence in authorising the payments.**

**2.12. Unintended benefit to the contractor on execution of variation item**

**Bangalore Development Authority approved item of work already existing in the scope of contract as variations resulting in undue benefit to the contractor to the tune of ₹ 2.34 crore.**

Paragraph 152 and 159 of Karnataka Public Works Code states that in a lumpsum contract, the contractor was responsible for carrying out all the works as per the approved drawings and specification, for a fixed price within a stipulated time. The payments were to be made in fixed instalments prescribed for stages of completion of work.

The housing projects of Bangalore Development Authority (BDA) were taken up under lump sum and turnkey basis. The construction of housing project at Alur Village Phase-II<sup>90</sup>, Bengaluru North was awarded (July 2014) on lump sum turnkey basis to M/s. Gowri Infra Engineer Private Ltd. at their quoted price of ₹ 158.38 crore. The work was under progress (January 2021) and the contractor was paid (June 2020) an amount of ₹ 165.15 crore. As per drawings and specifications put to tender the scope of work inter-alia included construction of 252 type three houses with three toilets per house and the contractor was required to quote his prices considering the drawings and specifications attached with the tender document.

Audit observed that BDA approved (December 2018) variations amounting to ₹ 12.81 crore in respect of the above project which included construction of additional toilet (third toilet) to the type three houses at an extra cost of ₹ 3.91 crore. BDA also entered into a supplementary agreement (February 2019) with the contractor for executing the variations. The approval of additional toilet was made based on the report furnished by Extra Financial Committee<sup>91</sup> constituted to examine extra financial implications in respect of works executed by BDA. However, the committee did not exercise due diligence as the additional toilets were included under variation items without taking into consideration the original estimates and drawings which already had provision of three toilets for each house. Audit also conducted (September 2021) joint physical verification with BDA officials and ascertained that the completed houses had three toilets

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<sup>90</sup> 252 Type 3 two BHK, 96 Type 2 two BHK and 104 Type 1 three BHK units.

<sup>91</sup> Consisting of Engineering Member BDA, two retired chief engineers and a retired professor in civil engineering.

only. Out of ₹ 3.91 crore provisioned for extra toilet in the variation agreement, BDA paid (March 2019) an amount of ₹ 2.34 crore to the contractor.

Thus, entrustment of an item of work already existing in the original scope of contract as variation was irregular and resulted in undue benefit to contractor to the tune of ₹ 2.34 crore.

The matter was referred to the State Government in October 2021 and reply was awaited.

**Recommendation:**

**BDA should recover excess payments made and fix responsibility for approval and payment for items of works executed under variations which were already covered under original scope of the contract.**

**Karnataka Urban Water Supply and Drainage Board**

**2.13. Improper planning and execution of UGD works**

**Lack of planning and disorderly execution of underground drainage works resulted in non-completion of the works amounting to ₹ 198.75 crore, depriving the urban population the intended benefits, apart from causing environmental damages.**

**Introduction**

**2.13.1.** Increasing urbanization has resulted in greater pressure on the existing urban water supply and sanitation systems leading to increasing demand to augment water source and improve distribution on the one hand and on the other hand to increase the coverage of underground drainage (UGD). The Karnataka Urban Drinking Water and Sanitation Policy (UDWSP), 2003 also aimed at universal coverage of water and sanitation services to all residents of urban areas of the state in partnership with Urban Local Bodies (ULBs), Karnataka Urban Water Supply and Drainage Board (Board) and Bangalore Water Supply and Sewerage Board (BWSSB). The Board was responsible for capacity creations and augmentation of infrastructure for providing adequate and safe water supply and also proper sanitation to all the Urban areas. The Board was an implementing body for drinking water supply and UGD schemes in all urban areas of the State except Bengaluru city<sup>92</sup>.

There were 51<sup>93</sup> UGD projects under taken by the Board between August 2007 to March 2020, which were incomplete as of March 2020. Of these 51 ongoing projects, Audit test checked (January 2021 to March 2021) 14 projects, which were lingering for more than two years from their scheduled dates of completion (**Appendix-15**). The works in these projects involved construction of 18 STPs, 31 wet-wells, 17 septic tanks, 705.18 KMs of sewer lines and 25,807 numbers (Nos) of manholes. These works whose total estimated cost was ₹ 394.97 crore

<sup>92</sup> Bangalore Water Supply and Sewerage Board was responsible for Bangalore city.

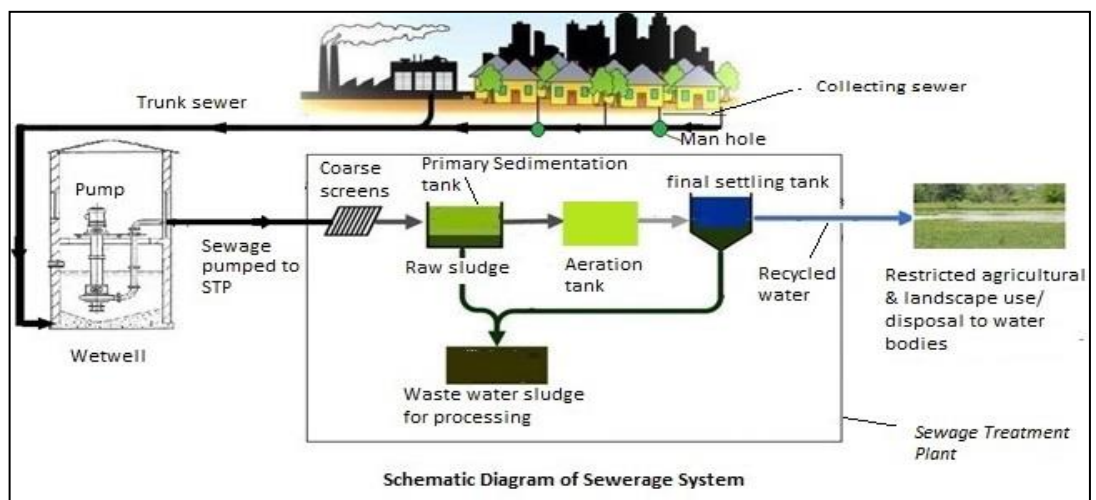
<sup>93</sup> Four projects taken up under Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) of GoI and 47 projects under the schemes of GoK.

were scheduled to be completed between April 2009 and November 2018. As of March 2021, the Board incurred an expenditure of ₹ 198.75 crore on these 14 projects. Audit also conducted Joint Physical Verification (JPV) of the projects along with the Board officials.

### **Working of UGD system**

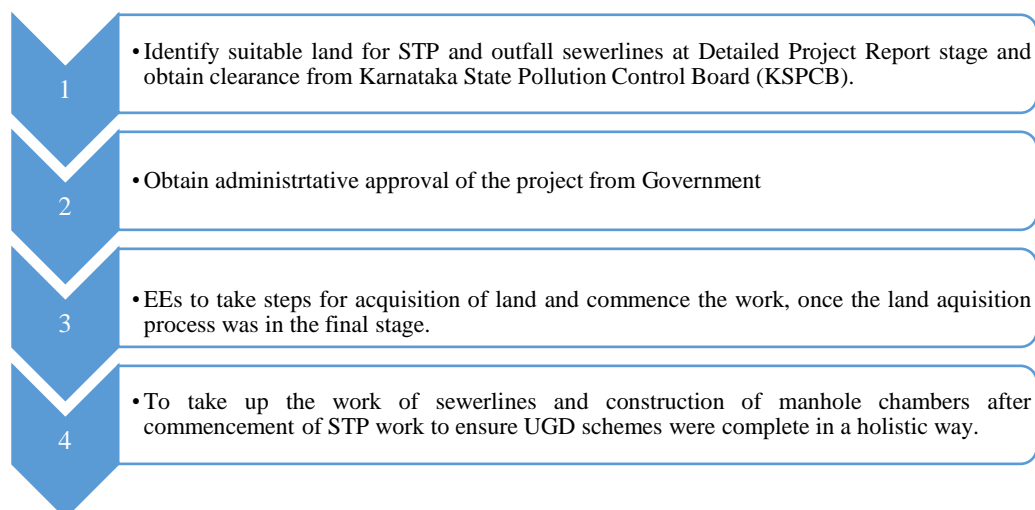
**2.13.2.** UGD is a system of pipes laid to a self-cleansing gradient which conveys liquid sewage away from the households in the speediest and efficient way possible to the sewer without any risk of danger to health and safety. The sewage collected through the network of sewer lines is stored in wet well and finally pumped to Sewage Treatment Plant (STP) for treatment and ultimate disposal to natural water bodies. In the absence of STP, the raw sewage is collected in septic tanks/soak pits and drained to the natural water bodies thereby causing pollution. The processes involved in an ideal UGD system is indicated in **Chart No.2.13.1**

**Chart No. 2.13.1: Ideal UGD System**



### **Laid down procedure for UGD works**

**2.13.3.** Karnataka Public Works Departmental Code stipulates that no works shall be taken up or tenders invited for a work without ensuring availability of land. The UGD works executed by the Board involved acquisition of land for construction of wet wells and STPs. In order to avoid delays in completion of STP works under UGD schemes due to non-acquisition of land, the Board issued (May 2005) instructions according to which the Executive Engineers (EEs) concerned were required to adhere to the procedure as indicated below:

**Chart No. 2.13.2: Prescribed sequencing of works for UGD schemes****Audit findings*****Non-ensuring availability of land***

**2.13.4.** A total of 85 acres and 38.50 guntas of land was the estimated requirement for construction of 18 STPs and 31 wet wells in the test checked 14 projects. Audit observed that ULBs handed over (March 2021) 45 acres and 36.50 guntas relating to eight out of 14 projects to the Board as of March 2021, *i.e.* after lapse of 5 to 14 years of initiation of works. The land for the remaining six projects<sup>94</sup> was not handed over yet (March 2021).

Audit further observed that works have not been completed even in eight projects where the land was acquired due to the following reasons:

- In four<sup>95</sup> projects where land was handed over by ULBs, work had not commenced due to public protests/court cases. This indicated the fact that the public consent was not obtained before land was taken over by ULBs;
- In two projects (Bagepalli and Hirekeruru), the land was handed over (May 2020 and January 2018)) after completion (June 2015 and May 2017) of the sewer network. The work of construction of STP, wet-well and allied works were withdrawn from the original contract and the works were foreclosed (July 2016 and July 2019). The work of STP and wet-well were yet to commence (March 2021) in the allotted land.
- In one project (Kumta), though land was handed over as early as November 2010, construction of STP has not commenced due to lack of clearance from Karnataka Coastal Management Authority and KSPCB.
- In one project (Nanjanagudu), one STP and two out of three wet-wells planned were completed. The land required for remaining one wet-well has not been acquired (March 2021).

<sup>94</sup> Arkalgudu, Bantwala, Chintamani, Kaup, Kundapura and Madikeri.

<sup>95</sup> Honnavara, Pandavapura, Saundatti and Ullala

- Only four out of 31 planned wet-wells and one<sup>96</sup> out of 17 planned STPs were completed, and all the 17 septic tanks planned have not been taken up.

Thus, the Board had taken up the UGD works without ensuring the availability of land in violation of KPWD code and its own instructions. It was observed that specific clauses stipulating the ULBs concerned to ensure handing over of land for STP works were incorporated in the administrative approvals of only four<sup>97</sup> out of 14 projects. Thus, the Board took up majority of UGD works without obtaining assurance from the ULBs regarding land for STP and wetwells. Also, the Board had failed to complete the works even in the cases where the land was handed over due to non-obtaining public consent, clearances from KSPCB *etc.*

### ***Completion of sewer line network without completing STPs***

**2.13.5.** As per the instructions issued by the Board, the works for sewer lines and construction of manhole chambers had to be taken up after commencement of STP works. Audit however observed that without ensuring commencement of STPs, the Board had completed 530.82 KMs out of 705.18 KMs of sewer lines (*75 per cent*) and 19,875 Nos (*77 per cent*) out of 25,807 numbers (Nos) of manholes as of March 2021. The physical progress in respect of 14 test checked projects is indicated in **Appendix-16**. These assets were created during the period between October 2010 and November 2018 incurring significant expenditure of ₹ 198.75 crore.

Audit further observed that the Board and ULBs planned to provide 78,094 House Service Connections (HSCs) under these 14 projects. Of which, only 21,286 HSCs (*27 per cent*) were provided as of March 2021. The Board made provision for HSCs in seven out of 14 projects, while in the remaining seven projects<sup>98</sup> where ULBs were responsible, audit observed that two<sup>99</sup> ULBs did not have even a plan of action for providing the HSCs.

Thus, in the absence of creation of STPs and wet-wells corresponding to the above sewer line network (530.82 KMs) and non-provision of adequate HSCs, the expenditure of ₹ 198.75 crore incurred on creation of these assets remained unfruitful, defeating the purpose. More importantly, non-completion of STPs had greater impact on environment as discussed below.

### ***Pollution of natural water bodies***

**2.13.6.** Audit observed that the test checked local bodies were discharging 53.113<sup>100</sup> Millions of Litres per Day (MLD) of untreated sewage into natural water bodies (rivers, lakes, *etc.*). The details of sewage generated by each local body per day, mode of disposal of sewage and the water body polluted is

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<sup>96</sup> At Nanjanagudu.

<sup>97</sup> Arkalgudu, Bagepalli, Hirekeruru, Madikeri.

<sup>98</sup> **UIDSSMT scheme:** Kundapura, Nanajangudu, Pandavapura and Soundatti; **State Plan scheme:** Bantwal, Chintamani and Ullala.

<sup>99</sup> Bantwal and Ullal.

<sup>100</sup> Excluding 11.920 MLD generated in Nanjanagudu town where construction of STP has been partially completed.



illustrated in **Appendix-17**. Non-completion of STPs resulted in untreated sewage being let out to the water bodies causing pollution and endangering the lives. The important observations from the JPV conducted along with Board officials are detailed in **Appendix-18**. It could be observed that in the absence of STPs, the untreated sewage water was directly let into the rivers, which were source for drinking and other purposes thereby causing environmental hazards and endangering the human lives.

***Idling of pipes costing ₹ 3.68 crore***

**2.13.7.** The Board made (April 2016 to August 2020) payment<sup>101</sup> amounting to ₹ 6.63 crore for procurement of 96 KMs of various classes of pipes to the contractor in connection with the UGD works at Kundapura. Of which, 41 KMs of pipes was utilised (August 2020) and the remaining 55 KMs of pipe worth ₹ 3.68 crore was lying unutilised with the contractor for more than four years as the site for construction of STPs and wet wells were yet to be finalised.

***Conclusion***

1. The Board failed to complete the STPs in spite of availability of land in 7 projects and non-ensuring of availability of land in six projects. The absence of STPs had a debilitating impact on the environment as well as human lives as the untreated sewage was let out to water bodies which serve as drinking water source for the people living in the project areas.
2. The expenditure of ₹ 198.75 crore incurred for creating sewer network remained unfruitful due to non-completion of corresponding STPs and not ensuring HSCs.
3. Non-utilisation and non-maintenance of sewer network created over a period of more than 10 years, is fraught with risk of assets becoming obsolete.

Thereby the stated objective of augmentation of infrastructure for providing adequate and proper sanitation to the urban population as envisaged in the Karnataka Urban Drinking Water and Sanitation Policy remained unachieved in 13 ULBs.

The matter was referred to the State Government in October 2021 and the reply was awaited (November 2021).

**Recommendation:**

**The Board should ensure the availability of land for STPs and wet wells before executing UGD works to ensure that the UGD system was completed holistically for providing adequate sanitation facilities to the public and prevent environmental damages.**

<sup>101</sup> 75 per cent of tendered cost.

**2.14. Non-adherence to codal provisions resulted in loss of ₹ 1.61 crore**

**The failure of Karnataka Urban Water Supply and Drainage Board to follow the procedure prescribed in Karnataka Public Works Departmental code for approval and regulation of payments for variation items resulted in financial loss of ₹ 1.61 crore.**

Paragraph 184 of Karnataka Public Works Departmental (KPWD) Code prescribes that no extra item of work shall be ordered by the Executive Engineer (EE) without obtaining approval of the Superintending Engineer (SE) or Chief Engineer (CE) who originally accorded technical sanction to the estimate. As a corollary, EE should not offer any specified rates to contractors for such items until approval of technical sanctioning authority is obtained. The contractor as well as the engineer in charge of the work shall proceed only after written approval from the competent authority before the execution of extra or additional work.

Government of Karnataka administratively approved (September 2012) the work of Under Ground Drainage (UGD) scheme to Nanjangudu town under the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) at an estimated cost of ₹ 25.00 crore. Under the above estimate, the Managing Director (MD) of Karnataka Urban Water Supply and Drainage Board (Board) approved (March 2014) detailed technical sanction for the work of “Providing sewer network in Halladakeri, providing DI rising mains, construction of primary treatment unit, wet wells and 7 MLD capacity Sewage Treatment Plant (STP) and allied works” amounting to ₹ 8.21 crore. The work was entrusted (June 2015) to a contractor at his tendered cost of ₹ 10.75 crore. The work was completed (July 2017) except the item “construction of wet well” which was not tackled as the site was not handed over by the urban local body. The contract was foreclosed (August 2017) excluding the above component after incurring an expenditure of ₹ 9.42 crore.

Audit observed that during work inspection, the Selection Grade Executive Engineer, Mysuru issued (February 2016) instructions to excavate the hard rock at the STP site by controlled blasting, since it was close to national highway, a temple and a poultry farm and to regulate the payments for the above item of work at the rates quoted by the agency for other similar works. Since the rate for excavation in hard rock by controlled blasting for STP was not available in Bill of Quantities (BoQ), rates for excavation in hard rock by controlled blasting for wet well available in BoQ was adopted for regulating the payments.

The following observations are made during audit:

- The BoQ had provision only for “excavation in hard rock for STP”, the rates for which was adopted from Minor Irrigation Schedule of Rates (MISR). Since the item of “excavation in hard rock by controlled blasting for STP” was not available in BoQ, it should have been treated

as extra item and payments regulated as per the tender clause 35.3<sup>102</sup>, ie, MISR 2014-15 + tender premium. However, EE Mysuru made the payment at the rates applicable for “hard rock excavation by controlled blasting for wet well” which was a different item in BoQ, resulting in excess payment as detailed below:

**Table No. 2.14.1: Excess rate paid for excavation in hard rock for STP**

Sl. No.	Depth (metre)	Quantity executed (CuM)	Rate adopted for payment as applicable for wet well (₹/CuM)	Rate to be adopted treating as EIRL item (₹/CuM)	Excess rate paid (₹)	Excess payment made (₹)
1	0-2m	12,550.28	1,688.34	671	1,017.34	1,27,67,901.86
2	2-4m	2,202.72	1,782.14	671	1,111.14	24,47,530.30
3	4-6m	735.26	1,875.93	671	1,204.93	8,85,936.83
<b>4</b>	<b>Total</b>					<b>1,61,01,36.99</b>

- As per provisions of KPWD code, payments pertaining to the variation items needs to be made only after approval of the authority who accorded technical sanction to the estimates. This condition was reiterated by the Board in its circular dated 07 January 1996. However, EE Mysuru made payments for variation items at the above higher rates without the approval of the MD of the Board who had technically sanctioned the estimates. EE Mysuru submitted (March 2018) the variation proposals to the Board for approval only after making payment (November 2016) to the contractor.
- The Schedule of rates prescribe that, if the financial implication for controlled blasting exceeds ₹ two lakh, the CE should undertake random check of the measurements made. Though the financial implication was around ₹ 1.61 crore, the CE did not conduct the mandatory random check and inspection.

The Board on realising the mistake and based on audit observation, revised the variation statement (July 2018) and ordered to recover the excess payment of ₹ 1,61,01,369/- from the contractor. The Board encashed (September 2019) the bank guarantee submitted as security deposit amounting to ₹ 53,75,000 However, the balance amount of ₹ 1,07,26,369 was yet to be recovered from the contractor.

The contractor aggrieved by the Board’s decision refused to sign the variation proposal and filed an application in the High court for appointing arbitrator which was allowed (February 2020). The Arbitration Court in its verdict (March 2021) agreed to the request of the contractor for quashing the recovery proceedings and ordered to refund the encashed bank guarantee with 9 per cent annual interest for the following reasons:

<sup>102</sup> Tender clause 35.3 prescribe that if there is no rate for the additional/substitution or altered item of the work in the BoQ, efforts should be made to derive the rates from those given in the BoQ or the SR applicable for the area of the work and current at the time of award of contract and if found feasible payment would be made at the derived rate for the item plus or minus the overall percentage of the original tendered rates over the Current Schedule of Rate (CSR) prevalent at the time of award of contract.

- The Board should have rectified the mistakes at appropriate time and should have recovered the excess payment before foreclosing the contract.
- The Board has no power to revise the rates unilaterally after the foreclosure of the contract, as the contractor stood discharged from the conditions of the contract and fresh liability cannot be imposed upon him.

Thus, the failure of the Board in adhering to the KPWD code and its circulars for regulating variation payments resulted in excess payment to the contractor. The lapses of the Board in following due procedure worked against the Board's arguments in the arbitration case leading to the rejection of recovery claim against the contractor and consequential financial loss of ₹ 1.61 crore to the Board.

The State Government replied (September 2021) that payment for variation item at higher rate without the approval of competent authority was made to ensure the progress of the work and that the Board had filed (June 2021) appeal against the arbitration court judgement. The reply was not acceptable as the Board failed in adhering to the codal provisions regulating payment for the variation item which resulted in excess payment to the contractor and rejection of Board's arguments in arbitration case.

**Recommendation:**

**The Board should fix responsibility for the lapses leading to the financial loss and should initiate action to strictly enforce the codal provisions regulating payments for items of work executed under variation.**

**Housing Department**

**2.15. Undue benefit to the contractors due to non-recovery of mobilisation advances for works which were not commenced and under slow progress**

**Payment of mobilisation advances without any need based analysis and non-recovery of the advances in a time bound manner resulted in blocking up of Karnataka Slum Development Board's fund with contractors and loss of interest income amounting to ₹ 1.73 crore**

Section 200 of Karnataka Public Works Departmental (KPWD) code stipulated payment of mobilisation advance to the extent of 5% of the agreement amount within 15 days of the issue of work order against production of bank guarantee obtained from scheduled banks. Central Vigilance Commission (CVC) prescribed (April 2007) that payment of mobilisation advance should be need based and that recovery of the advances should be time based and not linked with the progress of work.

Karnataka Slum Development Board (Board) has taken up development of the notified slums across the State under various schemes funded by central and

state Governments. These works were executed through contractors selected following due tender procedure and as per the agreed terms and conditions of standard tender document. Clause 42 of the agreement regulated the sanction and recovery of mobilisation advances under the following conditions:

- The contractor was required to produce copies of invoices or other documents to the employer in support of utilisation of advance;
- The recovery of advance was to commence from the next interim payment certificate or three months from the date of payment of first instalment of advance, whichever was earlier;
- The advances shall be completely repaid prior to the expiry of original or extended time for completion.

Audit conducted (September 2020 to November 2020) a review of mobilisation advances made by the Board in respect of 50 works taken up during 2017-20 and observed the following:

- In respect of 4 works (*Sl. No. 1 to 4 of Appendix-19*) though the Board released an amount of ₹ 9.91 crore as mobilisation advance, the works had not commenced even after two to three years from the date of release of the advance. The reasons for non-commencement of works were change in scope and location of the project, ownership disputes and delay in clearing of sites. The sanction of interest free mobilisation advances for the above works when there was little prospect of commencement lacked justification. The Board also did not initiate action to recover unutilised advances either through rescinding the contract or operating the agreement clause which provided for recovery of advances after three months from the date of payment.
- The Board did not ensure that advances were utilised for actual procurement of materials related to execution of works as the contractors submitted only proforma invoices as proof of utilisation.
- The Board provided mobilisation advance at 10 *per cent* of the tendered cost in respect of the work for “Construction of 252 dwelling units at M R Jayanagar slum, Malleshwaram” (*Sl. No. 1 of Appendix-19*) as against five *per cent* prescribed under KPWD code.
- Audit also observed that in respect of five works (*Sl. No. 5 to 9 of Appendix-19*), the Board did not take action to grant extension of time even though they were delayed beyond the stipulated date of completion. Against a total of ₹ 16.51 crore released as mobilisation advance for these works, recovery of ₹ 12.54 crore (76 *per cent*) was pending as of 31 March 2021. The Board failed to recover the unutilised advances as per the agreement clause which stipulated their recovery prior to the expiry of original or extended time for completion.

Audit calculated the loss of interest<sup>103</sup> to the Board on account of delayed recovery of advances which worked out to ₹ 1.73 crore. The lack of due diligence by the Board while making advance payments and failure to operate agreement clause related to time-based recovery of mobilisation advances resulted in undue financial accommodation to the contractors and loss of interest income to the Board.

The matter was referred to the Government in September 2021 and reply was awaited.

**Recommendation:**

**The Board should take action to enforce the tender agreement clauses related to time-based recovery of mobilisation advances in respect of works which have not started or under poor progress.**

**HOME DEPARTMENT**

**2.16. Embezzlement of Government Money**

**Lax supervision and lack of internal control mechanism resulted in embezzlement of ₹ 4.68 lakh in the Office of Superintendent of Police, Tumakuru**

Article 328 of the Karnataka Financial Code prescribes that all sums of money which a Government servant receives in his official capacity must immediately be paid in full into the nearest treasury/bank. In addition, article 329 (v) of KFC prescribe that when Government moneys in the custody of a Government officer are paid into the treasury or the bank, the DDO/head of the office should compare the entry in the cash book with treasury/bank records to satisfy himself that the amounts have been actually credited into the treasury or bank. The code also prescribes monthly reconciliation of all remittances with the consolidated schedule of remittances obtained from treasury.

Audit scrutiny (January 2021) of the cash book and remittance register of Superintendent of Police (SP), Tumakuru revealed that the department received an amount of ₹ 22.88 lakh during the period from April 2018 to March 2020 on account of receipts from auction, RTI fees, arms training *etc.* which were shown as remitted to the Government accounts. Audit verification of the correctness of the remittances with the of treasury records revealed that 17 items of receipts during the period from April 2018 to April 2019 amounting to ₹ 4,68,412 were not reflected in KTC 25<sup>104</sup> document of treasury. Audit also verified the bank scrolls of SBI, Treasury Branch, Tumakuru which confirmed that these transactions were not reflected in the bank statements. The Chief Manager of the bank also endorsed non-receipt of these amounts in the bank. All of the above, conclusively proved that an amount of ₹ 4.68 lakh was not remitted to Government account and was embezzled.

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<sup>103</sup> Audit has worked out interest loss on conservative basis at simple interest of three *per cent* per annum.

<sup>104</sup> KTC 25 is the DDO wise consolidated schedule of receipts maintained in treasury.

On further scrutiny, audit observed that the work related to remittance was entrusted to a police constable, under the oral instructions of the Superintendent of Police, Tumakuru. The office cashier received the departmental receipts, generated the challans under Khajane-2<sup>105</sup> software of the treasury and handed over the amounts along with generated challan to the constable for remittance to the bank. However, the official, instead of remitting the amount in the bank, tampered with the challans by affixing round seal of the bank instead of rectangular seal used for financial transactions. The above tampered challans were submitted to the department as proof of remittance and were taken to cash book and remittance register.

#### Seals used in bank

**Round Seal:** used as acknowledgement for general documents or letters received from customers and not used for financial transactions

**Rectangular Seal:** used in financial transactions and contain details of the teller executing the transaction, date of transaction, branch code *etc.*

The misappropriation by the official remained undetected as the following control procedures prescribed in Article 329 (v) of KFC were not followed in the office:

- Comparison of entries in the cash book related to remittances with treasury/bank records to verify the correctness of transactions.
- Monthly reconciliation of departmental remittances with consolidated schedule of receipts (KTC 25) obtained from treasury.

The failure in carrying out the above control procedures prescribed in KFC and slack supervision resulted in embezzlement of Government money to the extent of ₹ 4.68 lakh. Based on audit observation, SP Tumakuru called for explanation from the delinquent official who confessed to the act of embezzlement and remitted (January 2021) the defalcated amount of ₹ 4,68,412 to the Government account.

The State Government in its reply (June 2021) accepted the audit observation and stated that the police constable who misappropriated Government money was suspended and departmental enquiry was under progress against the official. The reply also stated that all offices were instructed to carry out monthly reconciliation of departmental receipts with treasury records. However, action against other officials who were responsible for the internal control lapses in the department was yet to be initiated (November 2021).

#### Recommendation:

**The department should ensure that all offices carry out the prescribed internal control procedures such as verification of treasury remittances with original records and monthly reconciliation of receipts with treasury statements to prevent defalcation of Government money.**

<sup>105</sup> Khajane-2 is the integrated financial management system of Government of Karnataka.