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Compliance Audit

Chapter-III

Compliance Audit

Municipal Administration and Urban Development Department Revenue Department; Water Resources Department and Panchayat Raj and Rural Development Department

3.1 Preservation of Water Bodies in Andhra Pradesh

3.1.1 Introduction

Water bodies, whether man-made or natural, play a significant role in maintaining ecological balance in addition to catering to the domestic and irrigation water requirements of the people. The water bodies, especially those in and around urban areas, face a threat from rapid urbanization without adequate attention to ecology.

The Honorable Supreme Court of India in a Judgment¹⁷³ (July 2001) had held that “It is important to note that material resources of the community like forests, tanks, ponds, hillocks, mountains etc. are nature’s bounty. They maintain delicate ecological balance. They need to be protected for proper and healthy environments which enable people to enjoy a quality of life which is essence of the guaranteed right under Article 21 of the Constitution”.

The Andhra Pradesh State Water Policy (July 2008), inter alia, aims to maintain and sustain ecological balance by (i) conserving and protecting water bodies and wet lands; (ii) regulating the use of land around water bodies; and (iii) enforcing the recycling of industrial effluents and waste water for secondary uses.

3.1.2 Audit objective, scope and methodology

Audit made an assessment of the status of water bodies in and around urban areas in the State and the adequacy and effectiveness of the existing mechanism in preservation of water bodies. Out of the 110 urban local bodies (ULBs) in the State, Audit shortlisted 37 ULBs having more than 20 *per cent* growth in population (during 1981 to 2011). Out of these, Audit selected six ULBs¹⁷⁴ on random sampling method after stratifying them in to three regions¹⁷⁵. In the selected ULBs, Audit selected 37 (out of the 128) water bodies for detailed study. In addition, 37 (out of 55) water bodies in the villages adjacent to selected ULBs were also covered in audit. Audit conducted joint physical verification of all the 74 selected water bodies¹⁷⁶ and examined (August -

¹⁷³ In Hinch Lal Tiwari Vs Kamala Devi and others – Case No. Appeal (Civil) 4787 of 2001.

¹⁷⁴ North Andhra: Srikakulam Municipal Corporation and Vizianagaram Municipality; Coastal Andhra: Vijayawada Municipal Corporation and Markapur Municipality; and Rayalaseema: Nagari and Pulivendula municipalities.

¹⁷⁵ North Andhra, Coastal Andhra and Rayalaseema.

¹⁷⁶ Vijayawada Town-5, adjacent villages-5; Vizianagaram Town-8, villages-10; Srikakulam Town-13, villages-14; Markapur Town-1, villages-2; Pulivendula Town-1, villages-4; Nagari Town-9, villages-2.

September 2018) the relevant records in the Revenue, Municipal Administration, Stamps & Registration and Water Resources Departments covering the activities of the five year period from 2013-14 to 2017-18. Records of the AP Pollution Control Board were also examined.

Audit findings are detailed below:

Audit findings

3.1.3 Encroachments of water bodies

During the joint physical verification of the selected water bodies, Audit observed the following:

- Out of the 74 tanks¹⁷⁷ taken as sample, it was noted in 34 tanks that the areas marked as tank bed as per the respective Revenue/Town survey records were encroached. As per the Revenue records, the total extent of these 34 tanks was 1466.94 acres. As per the visual assessment of the officials of the ULBs/Revenue Department during the joint physical verification, an approximate area of 132.03 acres was encroached in these 34 tanks (details in *Annexure-11*). Of these, 25 tanks (out of 37 test checked) were under the five ULBs and 9 tanks (out of 37 test checked) were in villages adjacent to five ULBs.
- Out of these 34 encroached tanks, five tanks¹⁷⁸ (total extent of 25.21 acres) under two ULBs did not physically exist as the entire area over these tanks was fully encroached.



Encroachments/road in Kummari Cheruvu in Vijayawada city



Encroachments of the tank at Sy.No.149-1 in Srikakulam town

- Most of the encroachments of these tanks were in the form of unauthorised residential colonies/houses, shops, etc. by private individuals and the respective ULBs/government agencies had provided all infrastructure facilities like roads, water/electricity connections, sewerage drains, etc. to these areas.

¹⁷⁷ 37 tanks in the selected ULBs and 37 tanks in the adjacent villages.

¹⁷⁸ Kummari Cheruvu (6.79 acres), Gunadala Cheruvu (3.04 acres) & Nalla Cheruvu (Patamata) (5.30 acres) in Vijayawada city; Budamaiah tank (4.79 acres) & tank in Choudary Satyanaraya Colony (Sy.No.149-1) (5.29 acres) in Srikakulam town.

- The encroachments included structures constructed by the ULBs/ Government agencies. For example, in Nalla Cheruvu in Patamata area of Vijayawada city, an indoor stadium and a Rythu Bazaar were constructed. Similarly, a Zilla Parishad High School, a Gram Panchayat Building, an Anganwadi Kendra, an overhead tank and an Effluent Treatment Plant in Gundrajakuppam area of Nagari Municipality were constructed on the water body areas.



Indoor stadium built in Nalla Cheruvu in Patamata area of Vijayawada city



Rythu Bazaar in Nalla Cheruvu in Patamata area of Vijayawada city



Anganwadi Kendra built in a tank in Gundrajakuppam area of Nagari town



Panchayat office in a tank in Gundrajakuppam area of Nagari town

- The encroachments in the above 34 tanks took place over a period of time and the ULBs/Revenue Department did not have any record of the period of encroachments.
- The total extent of encroachments in these tanks has not been assessed, as the Revenue Department had not undertaken any physical survey in the recent times. The last physical surveys/measurements in different ULBs and villages were conducted long back during 1906 to 1956.

It was observed that in the absence of a strategy and institutional mechanism in the State to protect the water bodies there was laxity on the part of the stake holder departments/agencies, which had led to encroachments of water bodies. No initiatives were taken to protect these water bodies for maintaining the ecological balance. These issues are detailed in the following paragraphs:

3.1.4 Absence of a strategy and effective institutional mechanism for protection of water bodies

The growing urbanisation brings with it the inherent risk of encroachments and degradation of water bodies in and around the urban areas. In order to counter such a risk, it was essential for the State Government to formulate a comprehensive strategy for protection of water bodies and implement it effectively by putting in place an appropriate institutional mechanism clearly demarcating the roles/responsibilities of the various stake holding departments and organisations.

It was, however, noted that the State did not have a strategic plan for protection of water bodies from encroachments and degradation. The test checked ULBs stated that no guidelines on protection of water bodies had been issued so far by the Government.

It was also observed that the existing institutional mechanism in the State is inadequate and ineffective in protecting water bodies, as detailed below:

3.1.4.1 Role of Revenue Department

The Revenue Department was responsible for protection of all Government lands including water bodies and maintenance of land records in the State.

(i) Failure to prevent/evict encroachments/encroachers: Preventing encroachment and eviction of encroachers is the responsibility of the Revenue department (S.No.27 of the Job Chart of Tahsildars). While the encroachments occurred in the test checked water bodies over long period, the Revenue Department had failed to take note of the issue and prevent/evict the encroachments/encroachers. The last physical surveys/measurements of the test checked tanks were conducted by Revenue Department decades ago during the years 1906 to 1956¹⁷⁹. The test checked Mandal Revenue Officers (MROs) replied that action would be taken/notices would be issued for eviction of encroachments. The fact remains that the Department had not even made any efforts to identify the extent of encroachments and for protection of the water bodies from encroachers.

¹⁷⁹ Last survey was conducted - Vijayawada Urban in the year 1935; Vijayawada Rural in 1927 (Ramavarappadu), 1928 (Jakkampudi) & 1956 (Nunna); Markapur in 1907; Nagari in 1906; and Pulivendula in 1906. The Mandal Revenue Officers of Vizianagaram and Srikakulam did not furnish the years of last survey conducted.

(ii) **Issue of pattas to encroachers:** Instead of evicting the encroachments, the Revenue Department on the contrary had issued D-Form Pattas¹⁸⁰ for a total extent of 28.52 acres to the weaker sections of the society in four test checked water bodies¹⁸¹. The Department, however, had not furnished the details as to how many pattas were issued and when they were issued.

Government did not furnish any reply on the above audit observations.

3.1.4.2 Role of the Municipal Administration Department

The Urban Local Bodies (ULBs), i.e., the Municipalities and Municipal Corporations are responsible for regulation of land use under their jurisdiction. Rule-11 of the AP Land Development (Layout and Sub-division) Rules¹⁸² stipulated that no building/land development shall be approved in the bed of the water bodies and in the Full Tank Level (FTL) of any lake, pond, cheruvu, kunta, etc. It further stipulated that the water bodies shall be maintained as Green Buffer Zones and no building activity or land development shall be carried out within 30 meters from the FTL boundary of lakes/tanks if the FTL area of the lake/pond is 10 Ha and above and 9 meters if the FTL boundary of Lakes/tanks area is less than 10Ha. Further, as per Section 405 of the Hyderabad Municipal Corporation Act, the Municipal Commissioner may without notice, cause to be removed any fixture erected or set up in or upon or over any street, open channel, drain, well or tank contrary to the provisions of the Act. Thus, the ULBs were required to regulate/control the encroachments/misuse of water bodies falling under their jurisdiction.

It was however observed that:

- Encroachments were found in 25 out of the 37 test checked water bodies in the six selected ULBs. Three out of the five tanks under Vijayawada ULB and two out of ten test checked tanks under Srikakulam ULB were fully encroached. It was observed that no action for prevention/eviction of encroachments/encroachers of water bodies under their jurisdiction was taken by any of these ULBs.
- The ULBs had also provided/allowed public utilities like roads, community halls, Anganwadi Kendra, etc. in the encroached tank areas under Vijayawada, Srikakulam, Vizianagaram and Nagari ULBs. When the encroachments of water bodies was pointed out in audit, the Municipal Commissioners (MC) of Vijayawada and Srikakulam accepted and stated that the encroachments had taken place long time ago. MC, Vizianagaram stated that public utilities were provided as per Municipal Council resolutions/Government decisions. The reply was contrary to the AP Land

¹⁸⁰ DKT or Darakastu Patta is issued, on application, to landless poor at free of cost.

¹⁸¹ An extent of 6.79 acres in Kummari Cheruvu in Gunadala of Vijayawada; 5.00 acres in Pedda tank in Alikam village near Srikakulam; 0.10 acre in Chinna Cheruvu in Srikakulam town; 16.63 acres in the tank in Achhavelli village near Pulivendula.

¹⁸² Issued vide GO. Ms No. 275 of MA&UD (H) Department, dated 18.7.2017.

Development Rules which stipulated that no building/land development shall be approved in the bed/FTL of the water bodies.

- The encroachments in the above mentioned 25 tanks were not only within the FTL boundaries but also in the buffer zones of the tanks. It was observed that a multi storied building close to the Buditi tank in Vizianagaram town limits was constructed which indicated that the ULB had failed to maintain the green buffer zone stipulated in the AP Land Development Rules.
- GoAP, on the directions of the Honourable High Court of Andhra Pradesh¹⁸³, had constituted Watchdog Committees at the District level vide orders¹⁸⁴ dated March 2007 to protect the water bodies and tank beds from encroachments. The Committees consist of the Joint Collector as Member/Convener and Regional Director of Municipal Administration, District Panchayat Officer and others as members. The Committees were to identify the water bodies and tank beds in the district and review the status/position of each water body/tank bed every month and submit quarterly report to the Government. There was, however, no evidence/record of functioning of Watchdog Committees found in the test checked offices.

As per the AP State Water Policy (2008), the State was to ensure that appropriate modern technology is utilized in development and management of water resources. This included development of modern knowledge base using GIS, Remote Sensing MIS Tools, etc. The Water Resources Department geo-tagged water tanks in the State under its control. In the test checked ULBs, however, no such geo-tagging or geo-mapping was done of the water bodies under the jurisdiction of these ULBs. The details of water bodies were also not put in the public domain for creating awareness among general public. Thus, there was no evidence of use of modern technology for protection of water sources in ULBs. Government did not furnish any reply on this observation. In August 2013, the Ministry of Urban Development, Government of India had issued an advisory¹⁸⁵ on Conservation and Restoration of Water Bodies in Urban Areas for use/guidance of State Governments/ULBs. Audit observed that the test checked ULBs did not take any action on the suggestions made in the GoI advisory, as detailed below:

- As per the advisory the ULBs should notify the water bodies in the municipal land use records as municipal assets showing the location, extent of area of the water body, etc. None of the test checked ULBs had,

¹⁸³ In WP No.2493 of 2006.

¹⁸⁴ GO Rt. No. 386, dated 21.3.2007 of Municipal Administration & Urban Development Department.

¹⁸⁵ Prepared by the Central Public Health and Environmental Engineering Organisation (CPHEEO), the technical wing of the Ministry of Urban Development, GoI.

however, notified the water bodies under their jurisdiction as municipal assets so far.

- As per the advisory, shoreline fencing is to be erected to prevent encroachment of water bodies. No action was, however, taken by the ULBs for fencing around the test checked water bodies. Non-erection of fencing around the water bodies was one of the main reasons for their encroachments.



Payakapuram tank without bund/fencing and filled with plants



Encroachments in Payakapuram tank in Vijayawada

- GoI advisory stipulates that a Storm Water Management plan of each city should be prepared and water bodies around should be taken into consideration to receive such storm water. No such plans were, however, prepared in any of the test checked ULBs.

The above observations indicate that the Municipal Administration Department/ULBs did not make any efforts to implement the advisory issued by GoI and to protect the water bodies under their jurisdiction.

Government replied (March 2019) that measures were being taken for preservation of water bodies in various ULBs in the State, but did not furnish the details of measures being taken. Further, the reply was silent on the above-mentioned audit observations which indicate absence of any action taken by the Municipal Administration Department/ULBs for protection of water bodies from encroachments.

3.1.4.3 Role of the Water, Land and Trees Authority in preservation of Water Bodies

For protection and conservation of water sources, land and environment, the GoAP had enacted (2002) the AP Water Land & Trees (APWALT) Act. Under this Act, GoAP had constituted (2002) the AP Water Land & Trees Authority at State level. The function of the Authority, *inter-alia*, was to take measures for

protection of water bodies in the State including prevention/eviction of encroachments in water bodies. It was observed that the Authority had largely been non-functional on these issues, as detailed below:

- The Authority consists of the Minister of Panchayat Raj & Rural Development as ex-officio Chairperson, Chief Secretary as Vice Chairperson, Secretary, Panchayat Raj & Rural Development as Member Secretary, three nominated members from State Legislative Assembly, seven ex-officio members (Secretaries of Agriculture, Water Resources, Municipal Administration, Rural Water Supply, Panchayat Raj and Environment, Forests, Science & Technology Departments, and Vice Chancellor of Acharya NG Ranga University) and other nominated members (three professors from Universities, three experts in the field of water & soil conservation and economics, and not more than five non-official members interested in conservation of natural resources). As per the APWALT Rules 2004, the term of office of the nominated members of the Authority shall be three years (except field experts whose term is two years) from the date of their appointment. As per the records produced to Audit, however, the Authority was last reconstituted in December 2004. Even after the State bifurcation (2014), the reconstituted Authority has not been notified. Thus, it can be concluded that the State Authority does not exist.
- As per the Act, the Authority shall meet at least once in three months. As the Government had not re-constituted the Authority, no meetings had taken place (as against 20 meetings required) during the period 2013-18.
- The District, Divisional and Mandal level authorities had not been formed as envisaged in the Act.
- The Act stipulated that the Authority shall take all measures (including issuing guidelines) to permanently demarcate the boundaries of water bodies through the Departments/Organizations concerned and shall take measures to prevent and evict encroachments. The Act also provided that the Designated Officers appointed by the Authority shall have powers to prevent and evict encroachments in the demarcated area of water bodies. Due to the non-existence of the Authority at State Level and also at District/Mandal level, none of these measures were taken to protect the water bodies in the State.

Thus, the stakeholder departments/organizations were lax in carrying out the mandate of protecting the water bodies in the State, and had failed to prevent/evict encroachment/encroachers of water bodies. Due to the inaction of all stakeholders, there is a continued risk of further encroachments/degradation of water bodies with consequential ecological imbalances.

Government did not furnish any reply on the above audit observations.

3.1.5 Pollution in water bodies

Para 3.5.3 of AP State Water Policy provided that adequate measures must be taken to ensure prevention of pollution of the water bodies. Efforts should be undertaken to control pollution from industrial, domestic and other sources that pose threat to public health and ecosystems.

Further, as per the APWALT Act, 2002, no undesirable waste including liquid waste shall be allowed to be dumped in the water bodies by any person or organization. It also stipulated that anyone who pollutes a water body shall be punishable with imprisonment of one to six months or with fine ranging from ₹2,000 to ₹50,000 or both. In addition to that, the cost of its repairs or remedying shall also be recovered as arrears of Land Revenue.

Following were the audit observations:

3.1.5.1 Pollution from domestic sewage

During joint physical verification, Audit observed that 14 test checked water bodies¹⁸⁶ were affected by pollution from domestic sewage generated in Vizianagaram, Srikakulam, Nagari, Markapur and Pulivendula municipal areas. Though the ULBs are responsible for laying the sewage lines/drains and treatment of sewage in the area under their jurisdiction, it was observed that Vizianagaram, Srikakulam, Nagari and Markapur municipalities did not have Sewage Treatment Plants (STPs). The untreated sewage in these ULBs was being let into the local tanks, thereby increasing the risk to the public health and the ecology. This indicates that the ULBs failed to adhere to the provisions of AP State Water Policy and the APWALT Act with regard to controlling pollution in these water bodies.

Government replied (March 2019) that construction of STPs had been taken up in 101 ULBs including Srikakulam, Vizianagaram, Markapur and Nagari ULBs and were expected to be completed by end of 2019/June 2020.

¹⁸⁶ Buditi Tank, Kittanna Koneru, Nalla Tank, Yerra Tank, Ayya Koneru, Big Tank, Dalayya Cheruvu in Vizianagaram municipal limits; and Mandal Tank, PN Colony Tank in Srikakulam municipal limits; Markapur Tank in Markapur municipal limits; Nagari tank in Nagari municipal limits and Ullimella Tank in Pulivendula municipal limits; Surapu Karra Cheruvu in Thandemvalasa village near Srikakulam; and Mangadu Tank in Mangadu village near Nagari town.

3.1.5.2 Industrial Pollution

(i) It was observed that two tanks (Nagari Tank under Nagari municipal limits and Mangadu Tank in Mangadu village near Nagari town) were also being polluted due to discharge of effluents of dyeing units existing in and around Nagari town flowing through municipal drains into these tanks. After several complaints raised by locals (during the years 1999, 2000 and 2001) about ground water pollution caused by the dyeing units, a Common Effluent Treatment Plant (CETP) was set up (in 2014) to treat the effluents generated by these dyeing units.



Effluents of dyeing units flowing through municipal drains into Nagari tank

Even after four years, however, the AP Pollution Control Board (APPCB) and the District/Municipal administration could not ensure that all the dyeing units were connected to the CETP. There is also no consistency between the Nagari Municipality and the APPCB regarding the data of the dyeing units operating and those connected/not connected to the CETP. As per the latest information furnished (August 2019) by the Nagari Municipality, there are 100 manual dyeing units in and around Nagari town out of which 63 were connected to CETP and the remaining 37 units were not connected to CETP and were causing water pollution. On the other hand, the APPCB stated (July 2019) that there are 93 manual dyeing units in the area out of which 80 units were connected to CETP and 13 were not connected.

It was also observed that there are 11 mechanical dyeing units in this area which were not connected to the CETP but have installed ETPs within their premises. These units, however, were releasing untreated effluents into the municipal drains. The APPCB issued (February 2018) directions to these mechanical dyeing industries to achieve zero liquid discharge (ZLD) within three months. Only four units have achieved ZLD so far.

APPCB replied that closure orders were issued to the manual dyeing units that were not connected to CETP. The ULB, on the other hand, replied that water/power supply was not disconnected to these units and licenses not cancelled and that the units were being persuaded to take connection to CETP. As regards ZLD requirement of the remaining mechanical dyeing units, the APPCB/ULB replied that work was in progress in the remaining industries.

The details of quantity of untreated effluents released by the manual/mechanical dyeing units were not furnished by the ULB/APPCB. As per the assessment made by the APPCB in the year 2015, the dyeing units in and around Nagari town generate about 3.80 million litres per day (MLD) of

effluents as against the 4 MLD capacity of the CETP constructed. As per the reply furnished by the APPCB (May 2019), however, the CETP was receiving only 1.2 MLD of effluents, indicating that large quantities of untreated effluents were being released into municipal drains. As a result, pollution in these two tanks was not arrested posing continued risk to the public and environment.

(ii) The Water (Prevention and Control of Pollution) Act, 1974 and the Environment (Protection) Act, 1986 and rules made thereunder give the APPCB a predominant role in monitoring compliance to the provisions of these laws and rules by industries, municipal authorities, hospitals, etc. As per the Advisory issued (August 2013) by the Ministry of Urban Development, GoI on Conservation and Restoration of Water Bodies in Urban Areas, the water quality of water body needs to be monitored on weekly basis by the ULBs. It was, however, observed that neither the ULBs nor the APPCB had conducted any tests on the quality of water in the test checked water bodies, except in case of Nagari and Mangadu tanks, during the period covered in audit. In fact, the Regional Offices of APPCB at Vijayawada and Vizianagaram did not even have the information about the water bodies existing under their jurisdiction. In the last five years, the APPCB had conducted water quality test only once in Nagari tank (in February 2017) and twice in Mangadu tank (in February and June 2017). In respect of Mangadu tank, the Water Resources Department had also got the water tested in April 2018. The test results were found to be beyond the permissible quality norms stipulated for drinking water in respect of parameters like pH, electro-conductivity, Total Dissolved Solids (TDS), Alkalinity, hardness, chloride, etc. From these test results, it was seen that the water quality in Mangadu tank had deteriorated further as compared to the results of tests conducted earlier by APPCB in February and June 2017, as shown below:

| Quality parameter | Norm as per BIS-10500 | Result as per the test report of | | |
|-------------------|-----------------------|----------------------------------|-------------------|----------------------------|
| | | APPCB - February 2017 | APPCB - June 2017 | WR Department - April 2018 |
| pH | 6.5 to 8.5 | 7.8 | 7.7 | 8.9(4.7%) |
| TDS | 500 to 2000 mg/ltr. | 3001 | 5586 | 11929(496.45%) |
| Alkalinity | 200 to 600 mg/ltr. | -- | -- | 1100(83.33%) |
| Hardness | 200 to 600 mg/ltr. | -- | -- | 950(58.33%) |
| Chloride | 200 to 1000 mg/ltr. | -- | 2050 | 4560(356%) |
| BOD | 2 to 3 mg/ltr. | -- | 72mg/ltr. | -- |

As seen from the above table, the pH has increased from 7.8 to 8.9, while the TDS increased abnormally from 3001 to 11929, during this period (February 2017 to April 2018). Further, out of the three tests conducted in Mangadu tank, the Biochemical Oxygen Demand (BOD) was tested only once (in June 2017 by APPCB). The test result showed that the BOD was 72 mg/ltr., which is way beyond the norm of 2 to 3 mg/ltr. prescribed by the Central Pollution Control Board for various water uses.

In Nagari tank also, the test results (February 2017) showed TDS of 3370 mg/ltr., which is beyond the prescribed water quality norms.

Thus, while non-conducting of water quality in majority of water bodies by the ULBs/APPCB indicate poor monitoring, the test results of Nagari and Mangadu tanks indicate that the action taken by the Nagari Municipality and the APPCB to prevent pollution in these two tanks was not adequate.

After the above issue was brought to notice by Audit, the APPCB conducted (January/March 2019) water quality tests in seven tanks in Vizianagaram ULB and one tank in Srikakulam ULB and confirmed that water in these tanks was contaminated and was not fit for drinking/bathing purposes. The Municipal Administration Department and the APPCB did not furnish any reply on non-conducting of periodical water quality tests in various water bodies under the ULBs.

(iii) As per GoI Advisory on Conservation and Restoration of Water Bodies in Urban Areas, solid waste dumping should be made punishable offence. For collection of solid waste, collection bins need to be placed around the water body and regular cleaning of solid waste should be undertaken. It was, however, observed that garbage/solid waste was being dumped and burnt on the bunds of five water bodies¹⁸⁷. In the case of Markapur tank under Markapur municipality, dumping of solid wastes generated by industrial units on the bund of the water body was observed. Dumping of solid waste not only results in environmental pollution but also causes degradation of water body.



The Srikakulam and Vizianagaram ULBs replied that they did not receive any instructions to comply with the GoI's advisory. The other ULBs did not furnish the details of action taken to implement the GoI's advisory.

The above observations indicate that no efforts were made by the Municipal Administration Department to implement the advisory issued by GoI on protection of water bodies. Further, adequate measures were not taken by the ULBs/APPCB to monitor and control the pollution in the water bodies, posing health risk to the general public.

¹⁸⁷ Kundavari Kandrika under Vijayawada ULB; Sri Srinivasa Nagar tank (Sy.No. 396) under Srikakulam ULB; Burgula tank, Jangamvani Cheruvu and Pulliah tank in Nunna area near Vijayawada.

Government did not furnish any reply on the above audit observation.

3.1.6 Conclusion

The State did not have any comprehensive strategy for protection of water bodies from encroachments and degradation. Encroachments were observed in 34 out of the 74 test checked tanks. Of these, five tanks did not physically exist as the entire area under these tanks was fully encroached. The encroachments included structures constructed by the ULBs/Government agencies. The institutional mechanism existing in the State for preventing and evicting encroachments was inadequate and ineffective as the stakeholder departments /organizations, viz., the Revenue Department, the ULBs and the APWALT Authority, were found to be lax in protecting the water bodies in the State, and had failed to prevent/evict encroachment of water bodies. The ULBs/AP Pollution Control Board did not take adequate measures to monitor and control the pollution in the water bodies, posing health risk to the general public and environment. Due to the inaction of these stakeholders, there is a continued risk of further encroachments/degradation of water bodies with consequential ecological imbalances.

Water Resources Department

3.2 Avoidable extra expenditure

The standards of financial propriety enunciated in Article-3 of the AP Financial Code (APFC) (Volume-I) stipulate that every Government servant is expected to exercise the same diligence and care in respect of all expenditure of public moneys as a person of ordinary prudence would exercise in respect of expenditure of his own money. Further, Article 4 of APFC stipulates that it is the duty of every Government servant to be constantly watchful to see that the best possible value is obtained for all public funds spent and to guard against every kind of wasteful expenditure.

Audit¹⁸⁸ of two Divisions¹⁸⁹ of Handri Niva Sujala Sravanthi (HNSS) project, revealed cases of non-observance of the above principles of financial wisdom resulting in avoidable/unwarranted extra expenditure from public funds, as detailed below:

(a) Unwarranted extra expenditure of ₹6.19 crore

By failing to incorporate the tender conditions in the terms and conditions of the Agreement, the Department made additional payment of ₹6.19 crore to the contractor and gave him undue benefit, for tunnel excavation work in the Pungunur Branch Canal work (Package 59A) under HNSS Project (Phase-II).

¹⁸⁸ During August - October 2018.

¹⁸⁹ Offices of Executive Engineers, HNSS Division No.12, Kuppam (Chittoor District) and HNSS Division No.8, Penukonda (Ananthapuramu District).

As part of the HNSS Project Phase-II, the Water Resources Department had entrusted (December 2015) the balance work¹⁹⁰ of 'Excavation of Pungunur Branch Canal from Km 150.00 to Km 173.00 including construction of structures and tunnel and formation of summer storage tank at Chipili and Guntivaripalli villages for drinking water supply to Madanapalle Municipality in Chittoor District' (Package 59 A) to a contractor¹⁹¹ for ₹ 160.52 crore. The work was scheduled to be completed within 12 months, i.e. by December 2016. The work was delayed due to delays in land acquisition, finalization of designs, etc. and the Department granted extension of time on four occasions, the last extension was up to 31 December 2018. The Department later entrusted (November 2017) some additional works costing ₹ 42.12 crore to the contractor due to increase in scope of work. As of September 2018, the work was in progress and an amount of ₹ 152.80 crore was paid to the contractor.

During audit (September 2018) of the HNSS Division No.12, Kuppam, it was observed that:

The work involved (i) excavation of open canal of about four kilometers¹⁹² including cross masonry/drainage structures, (ii) excavation of tunnel (including adit¹⁹³) for a length of 2.78 kilometres¹⁹⁴; and (iii) Construction of two summer storage tanks at Chipili and Guntivaripalli. As per the construction programme included in the agreement, the contractor had agreed to complete the excavation of tunnel in the first two quarters (in 180 days) i.e., by June 2016 and cement concrete lining to the tunnel was to be completed during second to fourth quarter (i.e. by December 2016). Within six days of signing the agreement, the contractor represented (05 January 2016) to the Department stating that the rate worked out by the Department was for tunnel excavation using drilling jumbo¹⁹⁵ and that the total time required for tunnel excavation with drilling jumbo would be 330 days as against agreed time of 180 days. The contractor further stated that unless boomers¹⁹⁶ are deployed, it was not possible to complete the tunnel within the stipulated period of six months (180 days) and sought higher rates for tunnel excavation work. Concurrently, the contractor had started the adit excavation in January 2016 and the tunnel excavation in March 2016 by deploying boomers and completed the excavation work by September 2016.

¹⁹⁰ Originally the work was entrusted to another contractor for ₹69.91 crore in August 2007 for completion in three years. Due to delays in land acquisition the agency had backed out of the contract after executing 48 *per cent* work. The balance work is now entrusted.

¹⁹¹ M/s Rithwik Projects Pvt. Ltd.

¹⁹² The original work entrusted to the first contractor consisted of 24 Km canal which included tunnel portion. The balance work entrusted to this contractor consisted of the unfinished portion of about 4 Km canal and also the tunnel which was not taken up by the first contractor.

¹⁹³ Adit is a horizontal or near horizontal passageway from the ground surface into an underground tunnel. Adit is used as an auxiliary entry to the main tunnel and for ventilation, dewatering, etc.

¹⁹⁴ As per the agreement, tunnel was to be excavated from Km 152.000 to Km 155.000 (i.e., three kilometers) was contemplated. After finalization of the canal/tunnel alignments, the actual length of tunnel excavated was 2.511 Km and the length of adit excavated was 0.267 Km.

¹⁹⁵ A Drilling jumbo or drill jumbo is a rock drilling machine. Drilling jumbos are usually used in underground mining, if mining is done by drilling and blasting. They are also used in tunneling, if rock hardness prevents use of tunneling machines.

¹⁹⁶ Drilling rig for tunneling and mining applications.

The contractor, however, gave further representations to the Department in July 2016 and April 2017 seeking higher rates. In January 2018, the Chief Engineer, NTR TGP, Tirupati (CE) submitted the proposal to Government recommending for acceptance of the contractor's request for additional payment towards the differential cost of excavation with Boomer as against that of Jumbo Jack Hammer¹⁹⁷. Government accepted (July 2018) the proposal and accordingly, the Department paid (September 2018) an additional amount of ₹ 6.19 crore to the contractor.

It was observed that while calling for tenders, the Department stipulated a pre-condition that the bidders should possess three Boomers/Jumbo drillers and the contractor also gave an undertaking to this effect. In the terms and conditions of the agreement, however, the Department did not specify the use of these and instead the description of this item was mentioned as 'excavation of tunnel by tunneling methods', without indicating if the drilling was to be done using Boomers or Jumbo drillers. Notwithstanding this by signing the agreement, the contractor had agreed to complete the tunnel excavation in six months. Thus, there was a legal obligation on part of the contractor to complete the work within the agreed timeframe. Therefore, accepting the contractor's request for additional payment on account of usage of boomers for completing the work within 180 days, instead of insisting the contractor to abide by the agreement conditions, was unjustified and resulted in avoidable additional payment of ₹ 6.19 crore to contractor and undue favour to him.

Government replied (March 2019) that in the estimates prepared for the work while tendering, the rate for tunnel excavation was worked out considering conventional method (i.e. using Jumbo jack hammer). Excavation with this method would require 330 days for completing the tunnel excavation as against the stipulated period of 180 days. To complete the tunnel in six months, the contractor deployed boomers as instructed by the department and hence the differential cost was paid to contractor. The fact, however, remains that while calling for tenders, possession of Boomers (drilling rig for tunnel/mining)/Jumbo drillers (rock driller) was a pre-condition. This contradicts the Government reply that the rates envisaged use of a conventional Jack hammer (pneumatic drill) for excavating the tunnel.

The contractor had quoted his price for execution of tunnel work within six months as already stipulated in the agreement. Hence, allowing the higher rates was unwarranted and contrary to the principles of financial propriety. This resulted in additional burden of ₹ 6.19 crore on the public exchequer and undue favour to contractor.

¹⁹⁷ A jack hammer (Pneumatic drill) is a pneumatic or electro-mechanical tool that combines a hammer directly with a chisel. It is generally used like a hammer to break the hard surface or rock.

(b) Avoidable extra financial burden of ₹4.87 crore due to rejection of discount offer of contractor on supplemental work

In the work of Pungunur Branch Canal from Km 20.00 to Km 30.00 (Package No.25 - Balance work) under HNSS project (Phase-II), rejection of the beneficial offer of existing contractor to execute the supplemental work with 12.69 per cent discount and award of the work through tenders at a premium had resulted in avoidable extra financial burden of ₹4.87 crore on the Government.

The Water Resources Department entrusted (February 2016) part of work¹⁹⁸ of 'Excavation of Punganuru Branch Canal from Km 20.00 to Km 30.00 including formation of Cherlopally Reservoir under HNSS Project Phase-II in Anantapuramu district' (Package No.25 - balance work) to a contractor¹⁹⁹ for ₹69.78 crore with tender discount of 12.69 per cent.

Audit examination (September 2018) of the records of the above work in the HNSS Division No.8, Penukonda, Anantapuramu District revealed the following:

During the course of execution, the Department noticed (August 2016) that an existing road²⁰⁰ was passing through the area of the newly proposed Cherlopalli Reservoir. The bund work of the reservoir at the crossing point (300 M gap) could not be started unless a permanent diversion road was taken up and completed to provide connectivity to 17 nearby villages. As the road work was not included in the scope of original agreement, the Department proposed to take up the diversion road work as an additional item. The agreement conditions (Item II of 'Addendum to Schedule-A') stipulated that 'the contractor was bound to execute all supplemental works that are found essential, incidental and inevitable during the execution of work'. The contractor also had expressed (July 2016) willingness to execute the proposed diversion road work with the same tender discount of 12.69 per cent on the departmentally estimated value. Accordingly, the Department submitted (August 2016) proposals to Government for entrustment this road work to the existing contractor as per his offer, as it would be advantageous to entrust at the tender discount of 12.69 per cent. Government, however, while according administrative approval, rejected (February 2017) the proposal to entrust the additional work to the existing contractor referring to the earlier orders²⁰¹ issued (February 2012) by the Finance Department which, *inter alia*, stipulated that additional works which are to be independently executed should not be entrusted to the existing agency. Consequently, the Department invited (April 2017) tenders for the road work

¹⁹⁸ Originally the work was entrusted to another contractor for ₹74.70 crore in April 2007. As the contractor did not show progress of work, part of the work was deleted from the contract and entrusted to the new contractor.

¹⁹⁹ M/s S.R.Constructions, Anantapuramu.

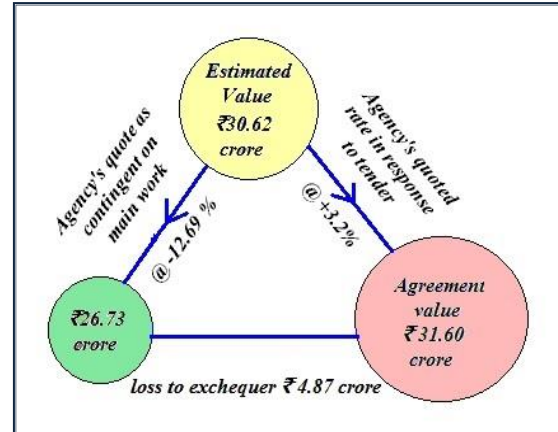
²⁰⁰ From Diguva Cherlopalli to Tatimakulapalli for a length of 3.500 Km.

²⁰¹ GO Ms. No.1 Finance (Works & Projects – F7) Department, dated 25.02.2012.

and ultimately the work was awarded to the same contractor, being the lone qualified bidder, at a tender premium of 3.2 *per cent*. The work was awarded (July 2017) for ₹ 31.60 crore against the estimated value of ₹ 30.62 crore.

As per Note-6 under Para 154 of the AP Public Works Department (APPWD) Code, additional items of work which can be independently executed may be let out after call of tenders. It also stipulated that if tender call is considered undesirable, additional work can be entrusted to the original contractor on nomination basis, at a rate not exceeding the estimate rates. Therefore, in the instant case, both the options – i.e., either to entrust the road work through tender process or to entrust the same to the original contractor on nomination basis, were permissible. Thus, before taking a decision to go for tenders for the additional work, the Government should have analysed the trend of tenders for road works in that area. The trend of tenders invited during the year 2016-17²⁰² and finalised by Roads & Buildings Department in Anantapuramu district was verified in audit and it was observed that out of a total of 76 road improvement/widening/strengthening/maintenance/repair works²⁰³ that were finalised during this period, 74 were premium tenders (+ 2.11 to + 4.99 *per cent*) and only 2 were discount tenders (- 1.65 and - 2.49 *per cent*). Had the trend of tenders in road works been analysed, the Government would have realised that the offer of the original contractor (i.e., at 12.69 *per cent* discount) was beneficial. Had the offer of the contractor been accepted, the diversion road work could have been entrusted for ₹ 26.73 crore, which was ₹ 4.87 crore less than the final entrustment value.

Thus, rejecting the beneficial offer of the existing contractor for execution of the supplemental work at a discount of 12.69 *per cent* and awarding of work through tenders at a premium of 3.2 *per cent*, resulted in avoidable extra financial burden of ₹ 4.87 crore to the Government.



Government replied (March 2019) that it had instructed the Department to follow its earlier orders not to entrust such additional works to the existing agency and that the additional expenditure of ₹ 4.87 crore was a result of following transparent bidding process. The fact remains, however, that since the Para 154 of APPWD Code had not been amended, entrustment of the additional work to the same contractor was permissible. An analysis of trend of tenders would have helped in realising that the contractor's discount offer was

²⁰² i.e., the year preceding the month in which tenders for the instant work were invited.

²⁰³ Costing more than ₹10 lakh.

economical. Rejection of the beneficial offer of the original contractor led to avoidable extra financial burden of ₹4.87 crore.

(c) Avoidable extra expenditure of ₹8.68 crore due to non-availing of exemption of Central Excise Duty

In the work of Kuppam branch canal under HNSS Project (Phase-II), payment of Central Excise Duty on goods which are eligible for exemption led to avoidable extra expenditure of ₹8.68 crore.

The Water Resources Department awarded (January 2016) the work of 'Excavation of HNSS Kuppam Branch canal from Km 0.000 to Km 143.900 to feed an ayacut of 6300 acres under tanks and to provide drinking water to 8 Mandals in Palamaner and Kuppam constituencies' to a contractor²⁰⁴ for an agreement value of ₹430.27 crore. As per the agreement, the work was stipulated for completion by October 2016. The work was in progress as of September 2018.

During audit (October 2018) of the HNSS Division No.12, Kuppam, the following was observed :

The scope of the above work *inter alia* included procurement and erection of three lifts and laying of pressure mains (pipelines) for a length of 4.720 Km. As per the Notification²⁰⁵ issued (2004) by GoI, all the items of machinery including ancillary equipment and pipes needed for delivery of water for agricultural or industrial purposes are fully exempted from payment of Central Excise Duty (CED) subject to issue of a certificate by the Collector/Deputy Commissioner/District Magistrate concerned.

The agreement²⁰⁶ entered (January 2016) with the contracting agency for the above mentioned work included clause that while preparing the bids, the bidders shall take into account all taxes, duties and expenses such as excise duty, etc. and that the Department shall give exemption certificate for excisable goods. On the other hand, the agreement also contained another provision²⁰⁷ stating that excise duty would be reimbursed to the contractor on production of evidence of payment. It was observed that under the above clause, the contractor claimed reimbursement of CED paid by him on the pipes, pumps/motors and electrical equipment used in the work. Accordingly, the Department reimbursed (June - July 2017) CED amounting to ₹8.68 crore to the contractor, based on the copies of invoices for the goods submitted by the contractor. While reimbursing the CED to this contractor, the Department did not consider the fact that the pipes, pumps/motors and electrical equipment used in the work were eligible for CED exemption under the GoI notification. It was observed

²⁰⁴ M/s RK-HES-KOYA(Joint Venture).

²⁰⁵ No.3/2004-Central Excise, dated 08.01.2004.

²⁰⁶ Clause 24.0 (page-17 of the agreement).

²⁰⁷ Clause 18.1 (page-79 of the agreement).

that the Department had issued exemption certificates for such items to the contractors in other irrigation works executed earlier in the State. Thus, payment of CED in this work on the goods which are eligible for exemption as per GoI notification was unjustified and resulted in avoidable additional expenditure of ₹ 8.68 crore.

Government replied (March 2019) that CED on the machinery and pipes used in the work was paid to Government only and the contractor was not benefited. It also stated that CED was reimbursed to contractor as per agreement conditions and after verification of the evidence of payment of CED. Government, however, did not furnish any reply as to why the CED exemption was not availed on the items eligible for exemption which led to additional expenditure on public exchequer by ₹ 8.68 crore.

3.3 Avoidable accumulation of interest on Mobilisation Advance

In the modernisation works of Commamuru Canal (Package Nos. 26 and 27) of Krishna Delta System, inaction on part of the Department to terminate the contracts despite suspension of work by contractor for three years and the consequent non-encashment of bank guarantees led to avoidable accumulation of interest to the extent of ₹18.68 crore on the mobilization advance paid to the contractor. The accrued interest is being recovered from the contractor at the instance of Audit.

As a part of modernisation of Krishna Delta System, the Water Resources Department entrusted (May 2008) two works of modernisation of Commamuru Canal (i) Package No. 26 for ₹209.61 crore; and (ii) Package No.27 for ₹196.19 crore (totaling to ₹405.80 crore) in Guntur District to a contractor²⁰⁸. The work was scheduled for completion by August 2012. Due to slow progress of work, extension of time was granted thrice with the last extension up to March 2016 on the grounds of non-availability of work front due to continuous release of water in the canal, cyclone, scarcity of sand, etc. The value of the work done and paid for at agreement rates was ₹46.16 crore, as of August 2018.

A scrutiny (December 2016 and September/October 2018) of the works records of the Executive Engineer, Krishna Western Division, Tenali revealed the following:

The agreements (clause 49.1 of General Conditions of Contract) provided for payment of five *per cent* of the value of the contract as labour mobilisation advance to contractor. The advance was payable after receipt of bank guarantees (BGs) from a scheduled bank for five *per cent* of the contract value. The advance shall bear interest as per the borrowing rate approved by Government from time to time. The advance was recoverable from all the interim payments to be made to the contractor during execution of work at the rate of 20 *per cent*

²⁰⁸ M/s Progressive Constructions Ltd.

of each interim payment together with interest from the next running bill after 10 *per cent* of the contract value is paid for. Accordingly, the department paid (July-August 2008) mobilisation advance of ₹20.29 crore to the contractor after obtaining BGs for the same amount.

The contractor did not maintain the required pace of work. The contractor executed work valuing a total of only ₹46.16 crore (i.e. 11.37 *per cent*) as against ₹405.80 crore in the two packages up to August 2015 and stopped the work. The contractor attributed continuous release of water into the canal resulting in non-availability of working period as a reason for slow progress of work. Thereafter, the contractor did not resume the work despite issue of notices and granting extension of time up to March 2016 by the Department. The Department later withdrew (2015 and 2017) work valued ₹36.01 crore and ₹0.69 crore from the Packages 26 and 27 respectively, divided the work in to seven packages and entrusted to five different agencies. The other agencies were executing these seven works and the progress (September 2018) ranged from 44 to 90 *per cent*.

It was observed that out of the total mobilisation advance of ₹20.29 crore paid to the first contractor, the department recovered only ₹78.64 lakh from the interim payments. Due to stoppage of work by the contractor, no further bills were paid to contractor and the balance advance and the interest accrued there on was not recovered. The Department encashed (June 2016) BGs worth ₹4.06 crore, thereby partially reducing the outstanding advance. It was observed that Clause 55 of the General Conditions of Contract stipulated that the Department may terminate the contract if the contractor stops the work for 28 days when such stoppage is not authorised by the Engineer-in-Charge. In the instant case, however, though the contractor had not responded to the notices to resume the work for the last three years, the Department did not take any action to terminate the contracts and to encash the remaining BGs amounting to ₹16.23 crore. Though the EE had brought the above issues to the notice of the Superintending Engineer, Irrigation Circle, Guntur (SE) (the agreement concluding authority) and requested to terminate the contracts in July 2016 and again in May 2017, no further action had been taken in this regard. This was despite the fact that blocking up of mobilisation advance with the contractor and the accumulation of interest thereon was pointed out during local audit in December 2016. It was only after Audit brought this issue to the notice of Government in October 2018, the Department recovered the principal amount of mobilisation advance by encashing (November 2018) the remaining BGs of the contractor amounting to ₹16.23 crore. Due to the delay in encashment of BGs by the Department, however, the interest on mobilisation advance which had accrued to the extent of ₹18.68 crore, as worked out by the Department, was yet to be recovered from the contractor.

The Government, while intimating (March 2019) the fact of recovery of the advance by encashment of BGs, stated that BGs worth ₹10.15 crore obtained from contractor towards Earnest Money Deposit (EMD) and a sum of ₹3.47 crore withheld from work bills towards security were available with the Department. Government further replied that the issue of closure of contracts was being pursued. The reply is silent as to why the Department failed to terminate the contracts and encash the BGs in the last three years.

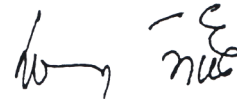
Thus, inaction of the Department to terminate the contract as per agreement conditions and encash the BGs for three years after suspension of work by contractor resulted in avoidable accumulation of interest of ₹18.68 crore, which is yet to be recovered from the contractor.



(L.V.SUDHIR KUMAR)
Principal Accountant General (Audit)
Andhra Pradesh

Hyderabad
The 29-07-2020

Countersigned



(RAJIV MEHRISHI)
Comptroller and Auditor General of India

New Delhi
The 31-07-2020