Executive Summary

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National Water Policy emphasizes on addressing important issues regarding availability of minimum quantity of potable water to all citizens and its fair pricing, improved water supply in rural area with proper sewerage facilities, efforts to provide water supply preferably from surface water in conjunction with ground water and rainwater. Besides these, it also emphasizes on management of ground water under public trust doctrine, publishing water accounts and water audit reports indicating leakage and pilferages, undertaking artificial recharging projects and rainwater harvesting.

Rural and Urban Water Supply in Haryana is financed through various Centrally Sponsored and State Schemes namely National Rural Drinking Water Programme (now Jal Jeevan Mission), Augmentation Rural Water Supply Programme, National Bank for Agriculture and Rural Development (NABARD), Swaran Jayanti Mahagram Yojana Rural Water Supply, Mahatma Gandhi Gramin Basti Yojana (MGGBY), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Urban Water Supply State Plan and Urban NCR (Water Supply).

In the State of Haryana, Rural Water Supply is under the jurisdiction of Public Health Engineering Department (PHED) which caters to water supply requirement of 1.65 crore rural population (as per census 2011). The norms of drinking water supply in rural areas are designed as per Jal Jeevan Mission (Centrally Sponsored Scheme) guidelines at 55 litre per capita per day (LPCD) for non-desert areas and 70 LPCD for desert areas/NABARD funded projects. There were 1,737 water deficient habitations (below 55 LPCD norm) in rural areas as on July 2022. Water Supply in Urban areas is maintained and implemented by three departments viz. Public Health Engineering Department (PHED), Urban Local Bodies (ULBs) and Haryana Shehri Vikas Pradhikaran (HSVP). As per census 2011, the Urban Population of Haryana is 0.89 crore. The PHED, ULBs and HSVP assess the total requirement of drinking water supply for urban areas on the basis of prospective population for next 30 years by taking into consideration the water allowance of 135 LPCD as per Central Public Health & Environmental Engineering Organisation (CPHEEO) Manual 1999. As on March 2021, nine out of 89 towns were water deficient (below 135 LPCD norm).

Keeping in view the significance of providing adequate and potable water in rural and urban areas, a Performance Audit on Rural and Urban Water Supply Schemes in Haryana was conducted for the period 2016-21.

The objective of the performance audit was to ascertain whether (i) Proper policies/ plans in line with National Water Policy were formulated, based on assessment of requirement and availability of water to provide safe and adequate quantity of drinking water to rural and urban population as per norms;

(ii) Financial management was effective and funds were provided in a timely manner and schemes were executed and implemented within the stipulated time and cost; (iii) Adequate attention was accorded to ensure sustainability of water sources and environmental issues were suitably addressed; (iv) Repairs and maintenance of the existing water supply assets were effective for ensuring uninterrupted water supply; and (v) Mechanism for monitoring of quality of water supply and surveillance was adequate and effective.

Performance audit was conducted covering Rural and Urban Water Supply in Haryana for the period 2016-21. The field study was conducted in eight districts out of 22 districts. Audit was conducted at 36 offices of Public Health Engineering Department, Urban Local Bodies (Municipal Corporations) and Haryana Shehri Vikas Pradhikaran during field study. As part of this audit, dump data of PHED as available with the department was analysed in detail. Further, to verify the coverage, survey was conducted in MGGBY *bastis* in villages of selected districts. In addition to this, some locations were selected in these districts for assessment of (i) Quantity of water supplied by installation of flow meters and sub-meters for a month, (ii) Quality of water by jointly collecting samples with departmental representatives and sending the samples to privately hired lab (third party) as well as to State Water Testing Laboratory of PHED at Karnal. (iii) Quantity and quality of water by conducting beneficiary survey of selected locations.

The State Rural and Urban Water Policies notified (March and June 2012) in Haryana on the directions of Hon'ble Punjab and Haryana High Court were not revised in line with National Water Policy.

The main objective of the existing State Water Policies to bill the consumers on the basis of volumetric consumption of water instead of flat rates was not achieved. In rural areas, water billing was done on flat rates and metered connections were not provided.

No consolidated action plans were prepared for futuristic planning. The divisional offices were following the practice of preparing habitation wise estimates instead of a consolidated plan for the district. There was no arrangement made by PHED in 39 *per cent* (17 out of 44 test-checked villages) villages to provide water supply under Mahatma Gandhi Gramin Basti Yojana as assessed by audit during physical verification.

There was no prescribed procedure of preparing annual Operation and Maintenance (O&M) plan in Haryana Shehri Vikas Pradhikaran and in Urban Local Bodies. Involvement of Panchayati Raj Institutions (PRIs) and local communities in O&M of rural water supply was not found satisfactory.

The financial management was not effective as savings were noticed under Central and State schemes. There was lack of departmental efforts in making schemes

financially self-sustainable. The revenue collection was only one *per cent* of the overall maintenance expenditure for rural areas and in case of urban area, it was overall 15 *per cent* of maintenance expenditure for the period 2016-21. Water charges of ₹ 278.20 crore was not received from consumers as of March 2021 in the test checked departments/divisions. There was short-realisation/ collection of ₹ 69.36 crore on account of community contribution by the Gram Panchayats.

There was no metering mechanism in rural areas. No flow meter/bulk meter at supply points existed for knowing the actual water losses during transmission in the state. At 23 locations in the selected districts, where quantity of water supply was checked using flow meters, water supply in terms of LPCD was found to be less than the norms. In 72 out of 604 test-checked cases, the discharge of raw water by Irrigation department was found to be less than actual requirement. The storage capacity of storage and sedimentation tanks in 63 out of 604 cases was found to be less than the actual requirement. Against the norm of 135 LPCD, PHED and HSVP were providing 111 LPCD and 86 LPCD respectively to the inhabitants of Rewari town. There were instances of unmetered connections and illegal connections in the test checked division of Haryana Shehri Vikas Pradhikaran and Urban Local Bodies.

Water quality was found affected at some selected locations due to presence of coliforms, physical and chemical parameters found beyond permissible limits. There was shortage of manpower in the State, District and sub-divisional Laboratories. Resultantly, shortfalls in water sample testing at the District/Sub-divisional laboratories were noticed in the selected districts. Audit could not ascertain follow-up on the samples found unfit during testing as no record for the purpose was maintained by the PHED. Shortcomings were noticed in functioning of Laboratories (State, District and Sub-divisional) against the Uniform Drinking Water Monitoring Protocol. There was no facility for testing Uranium contamination in the State Laboratory.

Field testing kits were not used judiciously as neither the record related to procurement and distributions of kits was maintained nor were the unfit samples found by using FTKs sent to nearby laboratories for further examination. Cases of delay in commissioning of conversion of ground water-based schemes to surface water-based schemes were noticed thereby compromising with the quality of water supplied in these habitations.

There was non-achievement of target for construction of sustainability structures like rainwater harvesting systems, water recharging systems under NRDWP. During the period 2016-21, the ratio of newly commissioned canal-based schemes to newly commissioned tube-wells kept on decreasing indicating that lack of efforts to reduce dependency on ground water. Though timelines were fixed by the departments (PHED, ULBs & HSVP) for resolving grievances/

complaints, but the basis of categorization of the complaints was non-existent. Resultantly, the monitoring of the grievance redressal remains lax.

The department should prepare AAP with community participation to ensure that schemes are aligned to community requirements and ensure optimum and sustainable utilisation of water resources. The State Government should prepare a detailed sector programme for the next ten years period for smooth water supply in terms of coverage of water supply connections and per capita supply of water. The department/concerned entities should make efforts for recovery of arrears of water charges, collection of community contributions for making the schemes self-sustainable. Periodic assessment for upgrading water supply infrastructure must be done by preparation of half-yearly/yearly returns. Metering should be made mandatory for effective water management so that leakage/wastage of water could be avoided and fines be imposed on consumers having unmetered and illegal connections. To assess total water availability for distribution, the department should explore option of capturing realtime based data/IoT (Internet of Things) based data at source/water works so that proper monitoring may be done at any time and at any level. The department should focus on improving testing facilities by upgrading laboratories infrastructure and deploying manpower as per requirement. FTKs being an important detecting tool for initial screening of contamination, the department should ensure its usage judiciously and as per extant instructions. Timely and appropriate remedial measure are required to be taken by the department for detection of Uranium and heavy metals so as prevent the chances of people getting exposed to the contaminated underground water. The Department should prioritise timely completion of water supply projects in the quality affected habitations to ensure that potable water supply is available to the inhabitants. The Department should ensure construction of sustainability structures as envisaged and explore options for reducing dependence on ground water in the overexploited blocks. The Departments/entities should ensure proper planning for timely execution and completion of works/projects for benefit of the inhabitants. The Department should strengthen its monitoring mechanism and proper documentation should be done for each and every activity viz. awareness programme, complaints, survey reports, procurement data so that proper monitoring may be ensured at each level. It is recommended that a common portal may be devised for State level capturing of data.