

HARYANA WATER RESOURCES AUTHORITY



**ANNUAL REPORT
FOR THE
FINANCIAL YEAR
2022-2023 & 2023-2024**

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EXPLANATORY MEMORANDUM

Haryana is a water deficit State with respect to surface and groundwater resources. The surface water resources are limited as there is no perennial river running in the State. Many parts of Haryana are completely or partially dependent on groundwater to meet the water demands for drinking, domestic, commercial, and irrigation purposes. As a result, the groundwater level in the State particularly in the fresh groundwater zone is depleting fast due to the over-extraction of groundwater beyond the annual groundwater recharge. The State's average decline in the water table from June 1995 to June 2020 is 9.47 metres. Where, out of 7,287 villages, 3,041 villages are groundwater stressed. On the other side, 3,93,092 hectares area or 9% of State's geographical land is affected due to water logging. Moreover, water logging conditions have given rise to the secondary problem of salinity. An area of 1,78,624 hectares which is 3% of total geographical area is facing severe water salinity making water unfit not only for drinking but also for agriculture purposes.

With an aim to perform interrelated functions pertaining to groundwater and surface water management within the State of Haryana; the State Government established **Haryana Water Resources Authority (HWRA)** for conservation, management, regulation, and management of water resources under the provisions of the **Haryana Water Resources Authority Act, 2020**. The HWRA is working towards ensuring the judicious, equitable, and sustainable utilization, management, and regulation of water resources including groundwater, surface water, and reuse of treated waste water. The different solutions spanning policy, technology, economics, and behavioural change are being incorporated to achieve equitable, efficient, and environmentally sustainable water management in the State.

Groundwater depletion on one side and waterlogging on the other, are two extreme scenarios that require a thorough investigation of the entire State. Adopting a decentralized approach, HWRA has undertaken an extensive exercise of categorizing the villages of the entire State based on the groundwater level data. The results are guiding in prioritizing village-wise strategic approaches and context-specific solutions to the problem.

Effective Water Planning must take into cognizance the current resource availability vis-à-vis the current needs and future demand. HWRA, in coordination with Irrigation & Water Resources Department and other concerned Departments has formulated the "Integrated Water Resources Action Plan (IWRAP) of Haryana (2023-25)." This comprehensive and insightful publication represents a significant milestone in our

collective efforts to understand, protect, and manage water resources in the State of Haryana. The IWRAP is a compilation of the Block-wise and District-wise action plan of demand and supply side interventions of each Department with water saving as the key objective. The detailed action plan at the District level and Block level aims at reducing the water supply-demand gap more than 49%. The IWRAP emphasises on both demand-side water management interventions like Micro Irrigation, Crop Diversification, Direct Seeding of Rice, Varietal Interventions, Conservation Tillage, Green Manuring/Dhaincha, and Natural Farming etc. and supply-side water management interventions like Modernization of Channels & Water Courses, Reuse of Treated Wastewater, Groundwater Recharge, Pond Rejuvenation, Check Dams, Roof-Top Rain Water recharge etc. for every Block of Haryana.

This effort is the first of its kind initiative in India which contains the targets with actionable and monitorable outcomes along with key performance indicators delineated out for each proposed activity/ intervention. The IWRAP 2023-25 will go a long way in strategizing Government policies and planning for areas requiring higher prioritisation for optimum results. The plan also contains targets for dealing with the problems of water logging.

The Authority is regulating illegal extraction of groundwater by granting No Objection Certificate for extracting groundwater/permission to use groundwater for projects including Industry, Mining, and Infrastructure. To make the application process easier, a highly user-friendly web portal has been developed and is working efficiently. Authority has received a total of 7,193 applications and has issued permissions to 3,319 number of projects till March, 2024.

The Haryana Government has regarded the concept of wastewater recycling and reuse to be an important, plausible and feasible solution to partly arresting the shrinkage of the precious resource. The need of the hour is therefore to consider the fast-increasing Municipal Treated Waste Water as a potential water resource that can suitably be put to effective use, particularly for non-potable purposes. The recently amended Act namely 'The Haryana Water Resources (Conservation, Regulation & Management), Authority (Amendment), Act, 2022 has been passed to give a wider mandate to the Authority for Reuse of Treated Waste Water Policy 2019.

Further HWRA is making efforts towards revising deficiency in the system by facilitating inter-departmental collaborations, being in convergence of various schemes and programmes, building stakeholders' awareness and advocating best practices for achieving the goal of improved water management and governance of water resistance.

The Authority endeavours to implement the provisions of the Act in letter and spirit with the actions, inter alia, so far done by the Authority, as produced in this Report.

(Keshni Anand Arora)
Chairperson.

ABOUT THE HARYANA WATER RESOURCES AUTHORITY

The Government of Haryana under the provisions of Haryana Water Resources Authority Act, 2020 has established Haryana Water Resources Authority (HWRA) for the conservation, management, and regulation of water resources (including groundwater). It aims to consolidate interrelated functions pertaining to groundwater and surface water management within the State of Haryana for ensuring judicious, equitable, and sustainable utilization of water.

Powers, functions and duties of the Authority are as follows: -

- a) Issue directions with regard to development, management and conservation of water resources of the State in accordance with the Integrated State Water Plan with prior approval of Government;
- b) Impose restrictions, if any, for categorisation of water resource potential, usage and recharge across the State with prior approval of Government;
- c) Prepare and get approved a framework from the Government for granting permissions for water use;
- d) Issue directions, by giving notice and inviting objections, if any, in such form and in such manner, as may be prescribed, regarding the development, use, management and conservation of water resources with prior approval of Government;
- e) Issue advisories to the Government, regarding effective implementation of policies and programs of the Union Government and Government of Haryana for development, management, and conservation of water resources;
- f) Publish or cause to be published such reports to disseminate scientific data and information to generate public awareness about water and its management;
- g) Make recommendations to the Government for establishment of a system for enforcement, monitoring and measurement of quality and type of water use;
- h) Publish report with regard to Ground Water Resources and Surface Water Resources in the State annually;
- i) Make recommendations to the Government, for monitoring and implementation of stipulated quality standards for disposal of waste water;
- j) Recommend Bulk Water Entitlements for rural water supply, municipal water supply, irrigation water supply or industrial / commercial water supply;
- k) To take suo moto cognizance of any subject dealing or involving water and issue directions with prior approval of Government;

- l) Map the aquifer in the State, prepare hydrological map and integrate these inputs in Comprehensive Water Resources Plan and impose such restrictions/obligations and mechanisms to make the water regime sustainable in the State and;
- m) Carry out or cause to be carried out surveys, investigations and research relating to conservation, usage, or quality of water etc.

KEY FOCUS AREAS OF HWRA

HWRA offers advice, develops plans, facilitates dialogues, provides platforms, generates knowledge, and regulates ground water extraction for improved water governance in the State.

1. Planning

- i. Spearheading the integrated and holistic approach to address waterlogging and water depletion.
- ii. Village-wise categorization and planning to design village-specific programs/interventions.
- iii. Implementation of Integrated Water Resources Plan with Block-level Water Gap Analysis and Integrated Water Resources Action Plan.

2. Regulation and Monitoring

- i. Grant No Objection Certificates for extracting groundwater/permission for groundwater extraction for the projects including Industry, Mining, and Infrastructure.
- ii. Establishment of tariffs on bulk water supply, and treated waste water.
- iii. Regulatory Authority for Treated Waste Water Policy to ensure its implementation and achieve effective industrial waste water management and maximum reuse of treated waste water.
- iv. Issuance of directions to ensure compliance with the issued guidelines/orders.
- v. Monitoring of implementation of water-related schemes and programs of the Government like Atal Bhujal Yojana, Jal Shakti Abhiyan etc.

3. Coordination and Collaboration

- i. Facilitate collaborations and convergence of schemes and programs with various Line Departments.

4. Knowledge Sharing, Training, and Awareness

- i. Facilitate IEC activities, training, and awareness programs for various stakeholders like industries, communities, farmers, school children, and youth.
- ii. Providing a platform for discussions and interventions on potential technological solutions to address the key water issues of Haryana.
- iii. Advocating adoption of best practices on water conservation, sustainable and

conjunctive use of surface and ground water, and equitable distribution of water.

LANDMARK ACHIEVEMENTS

1. CATEGORIZATION OF VILLAGES BASED ON DEPTH OF GROUND WATER TABLE

The Government approved the recommendations of Haryana Water Resources Authority (HWRA) of Village-wise categorization of Haryana State into 07 (Seven) different categories based on depth to water table under Section 11(2) of the Haryana Water Resources (Conservation, Regulation and Management) Authority Act, 2020.

The methodology proposed by HWRA is based on the firm opinion that the problem of Water Logging & Depletion should be dealt with at the Village level than a Block. The groundwater level of all Villages (7287) was collected by Ground Water Cell, I&WRD, Haryana from the existing 2200 numbers of observations points on the basis of contouring method. Haryana Water Resources Authority has categorized all the Villages of Haryana State into 'seven' distinct categories based on the groundwater level and keeping in mind twin ground water problems i.e. Ground Water Depletion and Water Logging.

The depth to water level data as well as the declining rate for the last 10 years (June 2010 to June 2020) is available in all Villages of the State. The Villages having a water level of more than 30.00 meters are categorized as Severely Groundwater Stressed Villages and represented by 'Red' colour. The stress level of these Villages are prioritized based on the rate of decline, greater than 2.00 m/year, 1.01 to 2.00 m/year, 0.00 to 1.00 m/ year and Villages have no declining trend during the last ten years (June-2010 to June-2020).

The Villages having a water table of 20.01 to 30.00 meters are categorized as Moderately Groundwater Stressed Villages and represented by 'Pink' colour. The stress level of these Villages are prioritized on the basis of the rate of declining trend greater than 2.00 m/year, 1.01 to 2.00 m/year, 0.00 to 1.00 m/year and Villages have no declining trend during the last ten years (June-2010 to June-2020). Villages have more rate of water level declining trend required immediate action on a priority base.

Similarly, the Villages having a water level of 1.51 to 3.00 meters are categorized as Potential Water Logged Villages and represented by a 'Purple' colour. Further, villages having water level in the range of 0.0 to 1.50 meter are categorized as Severely Water Logged Villages and represented by 'Blue' colour. The waterlogging level of these Villages is prioritized based on the rate of a rising trend. The average rising trend is equal to or more than 0.01 m/year and Villages have no rising trend during the last ten years (June 2010 to June 2020). Villages that have a higher rate of water table rising trend requires immediate action on a priority basis in these water logged Villages.

The CGWB has been estimating the groundwater resources and categorising them based on Water Balance Status at a District/Block level. But the Haryana State Government is categorizing based on depth to groundwater levels at Village level. The HWRA has undertaken an extensive exercise of categorizing the Villages of the entire State based on the groundwater level data, which has been notified to the Gram Sachivs and local Administration to notify and aware them of the current groundwater situation.

The categorization of Villages will not only help in identifying the gravity of the problem of each Village but will guide in prioritizing them to adopt Village-wise strategic approaches and context-specific solutions to the problems identified. This decentralized approach to planning will help the State Government to succeed in arresting the Village-level local water issues.

Table 1. Categorization of Villages based on Ground Water Level in June 2020

(Villages showing a rising trend of last 10 years data i.e. June-2010 & June-2020)

| Sr. no. | | Depth to water Table Ranges (meter) | Categories | Colour | No. of Villages | Rising >0.01m/yr | No. of Villages Decline | Show no fluct. |
|---------|-------|-------------------------------------|---|-------------|-----------------|------------------|-------------------------|----------------|
| 1 | (i) | 30.01 to more | Severely Ground water stressed villages | Red | 1948 | 24 | 1921 | 3 |
| | (ii) | 20.01 to 30.0 | Moderately Ground water stressed Villages | Pink | 1093 | 45 | 1046 | 2 |
| 2 | (iii) | 10.01 to 20.0 | Potential Ground water stressed villages | Light Green | 1903 | 194 | 1695 | 14 |
| | (iv) | 5.01 to 10.0 | Good Ground water Potential villages | Green | 1304 | 255 | 1029 | 20 |

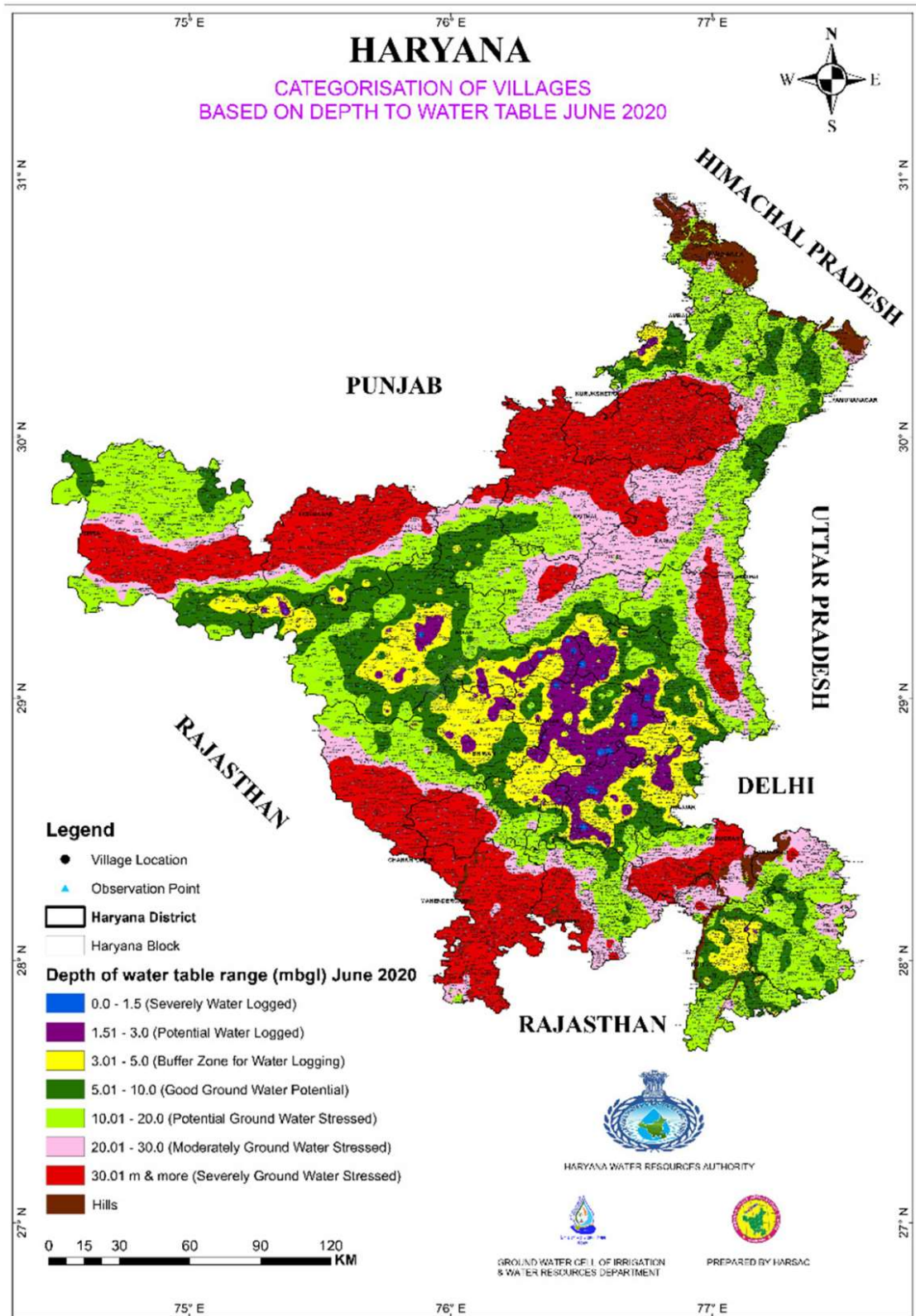
| | | | | | | | | |
|---|-------|-------------|--|--------|------|------|------|----|
| 3 | (v) | 3.01 to 5.0 | Buffer Zone for water logging villages | Yellow | 618 | 274 | 330 | 14 |
| 4 | (vi) | 1.51 to 3.0 | Potential water-logged villages | Purple | 333 | 212 | 116 | 5 |
| | (vii) | 0.0 to 1.5 | Severely water-logged villages | Blue | 88 | 75 | 13 | 0 |
| | | Total | | | 7287 | 1079 | 6150 | 58 |

Table 2: Categorization of Villages based on Ground Water Level in June 2020

(Villages showing decline trend of last 10 years data i.e. June-2010 & June-2020)

| Sr. no. | | Depth to water Table Ranges (meter) | Categories | Colour | No. of Villages | Decline rate 0-1m/yr | Decline rate 1-2m/yr | Decline rate >2m/yr |
|---------|-------|-------------------------------------|---|-------------|-----------------|----------------------|----------------------|---------------------|
| 1 | (i) | 30.01 & more | Severely Ground water stressed villages | Red | 1948 | 1010 | 825 | 86 |
| | (ii) | 20.01 to 30.0 | Moderately Ground water stressed Villages | Pink | 1093 | 936 | 110 | 0 |
| 2 | (iii) | 10.01 to 20.0 | Potential Ground water stressed villages | Light green | 1903 | 1677 | 18 | 0 |
| | (iv) | 5.01 to 10.0 | Good Ground water Potential villages | Green | 1304 | 1029 | 0 | 0 |
| 3 | (v) | 3.01 to 5.0 | Buffer Zone for water logging villages | Yellow | 618 | 330 | 0 | 0 |
| 4 | (vi) | 1.51 to 3.0 | Potential water-logged villages | Purple | 333 | 116 | 0 | 0 |
| | (vii) | 0.0 to 1.5 | Severely water-logged villages | Blue | 88 | 13 | 0 | 0 |
| | | Total | | | 7287 | 5111 | 953 | 86 |

MAP 1: HARYANA SHOWING DEPTH TO WATER TABLE, JUNE 2020



In the review meeting held under the Chairmanship of Hon'ble Chief Minister, Haryana on 18.01.2024, it has been decided that the Haryana Water Resources Authority may

finalize the categorization of Villages based on groundwater level for the year 2023 after giving public notice.

2. FORMULATION OF INTEGRATED WATER RESOURCES PLAN (IWRP)

The Government of Haryana has established the Haryana Water Resources Authority (HWRA) for the conservation, regulation, and management of water resources under the provisions of the Haryana Water Resources (Conservation, Regulation and Management) Authority Act, 2020. It aims to consolidate interrelated functions pertaining to groundwater and surface water management within the State of Haryana for ensuring the judicious, equitable, and sustainable utilization, management, and regulation of water.

As per Section (11) of the HWRA Act, 2020, the Authority shall prepare an Integrated State Water Plan based on Block-level planning every three years. This plan shall be placed before the Government or any authority authorized by the Government on this behalf, which may, with such modifications as deemed necessary, approve it within six months from the date of submission. Section 12 of the Act provides the power to the Authority issue directions with regard to the development, management and conservation of water resources of the State in accordance with the Integrated Water Resources Plan of the State with the prior approval of the Government.

As per the mandate of the provisions under Section (14) of the HWRA Act, 2020, a District Level Committee known as the District Water Resources Planning Committee has been constituted to prepare the District Water Resources Plan (DWRP). The Deputy Commissioner is the Presiding Officer, the Additional Deputy Commissioner and officials from various Departments are members of this Committee. The State Plan of Haryana “Integrated Water Resources Plan (IWRP)” is consolidated and prepared based on the data of 22 DWRPs received from the District Water Resources Planning Committees. A comprehensive self-guiding template was formulated for the District plans by the HWRA. The District plans are prepared with a collaborative interdepartmental approach under the technical guidance of the Authority.

Haryana is facing the twin problems of Groundwater depletion and Water Logging. The problem of groundwater depletion in Haryana is a cause of concern. Excessive extraction and insufficient replenishment have resulted in falling water

levels, with numerous locations experiencing acute water stress.

An Integrated Water Resources Plan has been formulated for the State of Haryana. The main objective of the IWRP is to formulate an Integrated Water Resources Management strategy and approach to deal with the key water issues and challenges facing in Haryana. This effort is the first of its kind in India where Block-level water resource availability of surface and groundwater has been assessed at the grass root level and the demand and supply water gap has been determined systematically and scientifically. The overall water demand of the State in 2021 has been calculated to be 34,96,276 Cr. Litres whereas the total water availability from all resources is 20,93,598 Crore Litres. The corresponding water gap for 2021 is estimated to be 14,02,678 Crore Litres.

A. SCOPE AND STRUCTURE OF THE IWRAP

The Plan consists of the assessment of water availability from various water sources, the water demand of various sectors and the corresponding- demand and supply water gap at a Block level. Accordingly, a three-year Action Plan to significantly reduce the water gap by at least 45% in the next three years (2023-26) is prepared with specific demand-side and supply-side water management strategies and interventions for each of the 142 Blocks of Haryana. The action plan emphasizes the optimal use of Groundwater and Surface Water Resources, Rain Water Harvesting, and Aquifer Recharge as well as on enhanced use of Treated Waste Water. The interventions given are focused on areas with high groundwater depletion. There is also a separate Action Plan for the areas affected by waterlogging and groundwater salinity. The plan consists of the following mentioned 11 Chapters-

CHAPTER 1. STATE PROFILE OF HARYANA

This chapter covers basic details on the State's demography, socio-economic profile, net sown and gross cropped area, irrigated area, crop production, livestock and fishery population, rivers and canal system, hydro-meteorological and hydro-geological conditions.

CHAPTER 2. SURFACE WATER RESOURCES AVAILABILITY AND ITS CHALLENGES

This chapter includes an assessment of internal as well as external surface water resources covering rivers, dams, barrages, canals, and drains in

the State. A detailed section on water share of Haryana under different inter-State agreements is also given. It also discusses major surface water issues and challenges.

CHAPTER 3. GROUND WATER RESOURCES AVAILABILITY AND ITS CHALLENGES

This chapter provides insights on groundwater resources' availability, annual extraction, depletion over the years, the State of each Village on the basis of depth to groundwater level, relevant parameters on the quality of groundwater and key challenges of groundwater management in the State.

CHAPTER 4. WASTE WATER TREATMENT, REUSE STATUS AND ITS CHALLENGES

This chapter consists of details on Domestic and Industrial Waste Water Generation and its current reuse in the State. It mentions the scope and opportunities of recycling and effective reuse of wastewater and provides the goals of the Reuse of Treated Waste Water Policy 2019. It also highlights the several challenges and risks which need to be countered in order to facilitate an effective mechanism for the maximum reuse of wastewater, especially for non-potable purposes.

CHAPTER 5. RAINFALL AND ITS VARIABILITY, RUNOFF AND RECHARGE POTENTIAL

This chapter draws information on rainwater availability and its variability - annually for the past 4 years (2022-2019), decadal (2000-2020), 30 years (1989-2018) and 121 years (1901-2021) from the IMD data. District-wise analysis of monsoon rainfall and its departure from normal rainfall is shown. Rainfall runoff estimation and potential for artificial recharge are also computed.

CHAPTER 6. WATER DEMAND ACROSS VARIOUS SECTORS IN HARYANA

This chapter provides details on the water requirement of various sectors like domestic, agriculture, horticulture, livestock, industries, infrastructure, forest and wildlife, establishment and institutions and an analysis of how the demand varies from sector to sector. The water demand for the year 2021 as well as projections of future water demand is given.

CHAPTER 7. WATER AVAILABILITY, DEMAND AND GAP IN HARYANA

The significant imbalance between the water demand and water resource availability is given in this chapter highlighting the risk of increasing water insecurity in the State.

CHAPTER 8. EXISTING POLICIES, LAWS AND INSTITUTIONS RELATING TO WATER

This chapter gives in-depth coverage of the legal, policy, and administrative or organizational factors governing the water sector in the State. It covers a wide range of water institutions that are currently operating at the State, District and Village/local levels.

CHAPTER 9. KEY WATER ACHIEVEMENTS IN 2022-23

This chapter lists the key programs and initiatives of the Government already being undertaken by the State Government of Haryana to improve the conservation and sustainable management of water resources.

CHAPTER 10. INTEGRATED WATER ACTION PLAN OF HARYANA 2023-2026

The future action plan for the next three years 2023-26 to reduce the existing water gap as well as to reclaim the water-logged land is laid down in this chapter. It entails a combination of demand-side efficiency and supply-side augmentation, interventions and projects proposed by the various line departments to improve the performance in the efficient management of water resources.

CHAPTER 11. STRATEGY AND APPROACH TO ACHIEVE WATER SECURITY IN HARYANA

This chapter asserts a strategy centered on water security which requires high levels of collaboration, consensus-building, and collective action in four principal areas of policy and governance, institutional strengthening, sustainable infrastructure development and focused research to catalyze transformational change at scale.

B. METHODOLOGY of the IWRAP

The entire plan has been designed and developed in-house by the team of experts of HWRA in close collaboration and support of the District Administration

and State Line Departments especially the Department of Irrigation and Water Resources (I&WRD). This is done as a sincere effort to achieve data credibility and devise a realistic and implementable action plan to achieve the desired results rather than just producing an academic report. Another advantage of doing it in-house is that the plan can be improvised or modified in the course of implementation in case any improvements are required. Future updating of the State Plan after every three years is also to be done by HWRA.

STAGE 1: DEVELOPMENT OF DISTRICT WATER RESOURCES PLAN

In the first stage, the DWRP of 22 Districts was prepared. The scope of the DWRP is to identify the water gap and prepare a Three Year Action Plan for the development and management of the District's Water Resources, both surface water and groundwater. The following main tasks were performed in preparation for the DWRP:

1. Development of an exhaustive template for the DWRP by the HWRA covering: important aspects related to water including but not limited to the following:
 - Hydrogeology, Geomorphology, Soil Profile, Climate and Rainfall
 - Status of Agriculture, Horticulture, Fishery, Livestock, Human Population
 - Surface Water Availability
 - Ground Water Availability
 - Rainfall-runoff Estimation
 - Treated Waste Water Availability and Reuse Status
 - Estimation of District Water Demand and Water Balance
 - Identification of Key Challenges
 - Three-Year Strategy and Action Plan to Arrest the Water Issues
2. Issuance of the template to the District Water Resources Planning Committees of the 22 Districts of the State to develop the District Plans.
3. Technical guidance and support of HWRA to the District Water Resources Planning Committees for preparation of the plans.
4. Detailed review and identification of gaps in the DWRP submitted to the Authority. Multiple iterations of the District Plans were reviewed by the Authority.

5. Compilation of data from the final DWRPs of 22 Districts.
6. Data Validation and Verification from the concerned State Head Departments.
7. Review Meetings held by W/PS to CM, W/Chairperson, HWRA and ACSs of various concerned departments with the Deputy Commissioners.

STAGE 2: DEVELOPMENT OF INTEGRATED WATER RESOURCES PLAN HARYANA

The following main tasks were performed in preparation for the “Integrated Water Resources Plan (IWRP) 2023-26”:

1. Preparation of the outline and layout of the State Plan of Haryana.
2. Defining objectives, components and data requirements.
3. Compilation of the hydro-meteorological and hydro-geological background.
4. Assessment of surface water resources availability and supply, both internal and external.
5. Assessment of availability and exploitation of groundwater resources.
6. Assessment of the capacity of wastewater treatment plants, current treatment and reuse potential.
7. Calculation and projection of water demand for Agriculture, Horticulture, Domestic, Industrial, Institutions, Power, Livestock, Fisheries, Forests and Wildlife sectors.
8. Assessment of demand vis-à-vis availability of water resources in the State.
9. Compilation and prioritization of projects for Three Action Plan 2023-26 to bridge the water deficit gap.
10. Identification of key issues and challenges of the water sector in Haryana.
11. Documentation of policies, laws, programs and initiatives of the State Government.
12. Development of an integrated strategy and approach to achieve water security in the State.
13. Devising recommendations regarding Institutional, policy and legal, infrastructure, problems and research gaps identified.
14. Inclusion of external review and inputs from water experts.
- 15.

DATA COLLECTION AND ANALYSIS

1. Consolidation of data received from the Districts as per the DWRP.
2. Identification of additional data needs and collection of data from the State Departments.
3. The State Government policies, institutional framework and initiatives pertaining to the development, conservation, protection and management of its water resources.

The key computations in the Plan are obtained using the following mentioned norms and formulas:

i. Surface Water Availability and Supply

Assessment of external as well as internal water resources at various dependabilities as well as supplies through various outlets is made based on the data received from the Irrigation and Water Resources Department, Haryana.

ii. Groundwater Availability and Extraction

Groundwater availability and extraction figures are taken from the Dynamic Groundwater Resources of the Haryana State as on 31st March 2020 published by GWC, I&WRD, Haryana and CGWB, NWR, Chandigarh in July 2021.

iii. Treatment of Waste Water and Reuse

Assessment of the present treatment of wastewater through STPs and CETPs and their current reuse has been made based on the data received from the PHED, Haryana and HSIIDC, Haryana.

iv. Rainfall-Runoff and Recharge Potential

Estimation of rainfall-runoff is made based on Binnie's Empirical Method and recharge potential is taken as 20% of the estimated rainfall-runoff as guided by the report on the Master Plan of Artificial Recharge to Groundwater 2020 of CGWB.

v. Water Demand

The present (2021) water demand for the different uses and future projections for 2025 are made with the objective of adding it to the planning database. The Block-wise assessments of present water demand are based on the set norms of water supply and requirements for

domestic, agriculture, horticulture, livestock, forest and wildlife, establishment and institutions, industries, infrastructure, forest and wildlife and fisheries sector. Whereas, the future demand for 2025 is calculated based on the assumptions and trends of the past few years. The standard norms for calculating the water demand of various sectors were followed in the DWRPs which are listed in the table given below.

| Sector | Norms Adopted as per | Details |
|---------------------------|---|---|
| Domestic Water Demand | Central Public Health Environmental Engineering Organization (CPHEEO) for water supply in rural and urban areas | Refer to sub-section 6.1.1 of Chapter 6 |
| Agriculture Water Demand | Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) | Refer to sub-section 6.1.2 of Chapter 6 |
| Horticulture Water Demand | CCSHAU | Refer to sub-section 6.1.3 of Chapter 6 |
| Livestock Water Demand | Animal Husbandry & Dairying Department, Haryana | Refer to sub-section 6.1.4 of Chapter 6 |
| Fisheries Water Demand | Fisheries Department, Haryana | Refer to sub-section 6.1.6 of Chapter 6 |

Data Sources

- Data provided in the District Water Resources Plans submitted by the District Water Resources Committee(s) under the Chairpersonship of the Deputy Commissioner of each District.
- Data received from the various State Line Departments along with their declarations/authorized letters.
- Published data/information from various reports.

Review Methodology

- The data was checked for data entry, measurement units and calculation errors for the estimated figures given in the District Water Resources Plans.
- Data validation and verification from the various State Head Departments.
- Experts' reviews and opinions were also taken and considered on the methodology, approach and results/outcomes of the plan.

Data Limitations

There are some limitations to the data, as detailed below.

i. Time lag

There is a time lag between the latest data available and the year specified under the plan.

ii. Change in Nodal Officers at the State Water Resource Department/
Irrigation Department

The assigned Nodal Officers appointed initially were changed in some Districts, leading to information gaps, thereby delaying the process.

Gaps and Discrepancies

Given the data scarcity in the water sector and the fact that Block-level data were being collected and compiled for the first time at the State level, there are certain data gaps that exist. These are expected to be assessed and plugged into future iterations of the plan, in close collaboration with the Line Departments.

3. FORMULATION OF IMPLEMENTABLE INTEGRATED WATER RESOURCES ACTION PLAN (IWRAP)2023-25

A two-day 'Water Conclave' with the theme of 'Amrit Jal Kranti' was held at Panchkula on 26-27 April, 2023 under the Chairmanship of Hon'ble Chief Minister, Haryana. The main objective of Water Conclave was to deliberate on a concrete, quantifiable and monitorable Action Plan on monthly basis to reduce the existing water gap of 14,02,678 Cr Litres by all the concerned Departments.

Accordingly, the Hon'ble Chief Minister, Haryana on 09.06.2024 have launched the Integrated Water Resources Action Plan (IWRAP) Haryana to be undertaken for two years (2023-25) prepared by the Irrigation and Water Resources Department (I&WRD) and Haryana Water Resources Authority (HWRA) based on the Action Plan uploaded by each Department on the HWRA online portal, on the lines of the presentation given by the Departments during the 'Water Conclave-2023'. This IWRAP (2023-25) contains the monthly targets with actionable and monitorable outcomes along with the key performance indicators delineated for each proposed activity/intervention at the State, District and Block Level by all the concerned departments.



The Action Plan contains both supply-side and demand-side water interventions activities. Supply-side water interventions includes underground pipelines for irrigation water supply, lining of canals/water courses, groundwater recharge, rejuvenation of ponds, surface water storages, reuse of treated waste water etc and demand side water interventions includes Micro Irrigation, crop diversification, direct seeding of rice, conservation tillage, varietal interventions, water efficiency in fisheries sector etc.

The proposed interventions are grouped into the following categories with the water saving under each category and their targets:

| Proposed Interventions | 2023-24 | | 2024-25 | | 2023-25 | |
|---|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|
| | Proposed Water Savings (cr litre) | Proposed Target Area/No | Proposed Water Savings (cr litre) | Proposed Target Area/No | Proposed Water Savings (cr litre) | Proposed Target Area/No |
| Micro Irrigation (Acre) | 49000 | 250000 | 51000 | 250000 | 100000 | 500000 |
| Modernization of Channels and Water Courses (No.) | 20368 | 1150 | 42224 | 1155 | 62592 | 2305 |
| Crop Diversification (Acre) | 42500 | 120000 | 70800 | 200000 | 113300 | 320000 |
| Direct Seeding of Rice (Acre) | 21800 | 200000 | 27250 | 250000 | 49050 | 450000 |
| Reuse of Treated Wastewater (MCM) | 18248 | | 31898 | | 50146 | |

| | | | | | | |
|---|-----------------|--------|---------------|---------|-----------------|---------|
| Groundwater Recharge*/ Pond Rejuvenation/ Check Dams/ Roof top recharge (No.) | 38243.5 | 15953 | 42710 | 16816 | 80953.5 | 32769 |
| Fisheries Water Use Efficiency (Acre) | | 2471 | | 2471 | | 4942 |
| Varietal Interventions (Acre) | 21450 | 150000 | 28600 | 200000 | 50050 | 350000 |
| Conservation Tillage (Acre) | 38700 | 900000 | 51600 | 1200000 | 90300 | 2100000 |
| Manuring/ Dhaincha- (Acre) | 22800 | 600000 | 24700 | 650000 | 47500 | 1250000 |
| Vegetable/horticulture (acre) | 7982 | 30000 | 10880 | 40000 | 18862 | 70000 |
| Natural farming (Acre) | 13750 | 20000 | 20600 | 30000 | 34350 | 50000 |
| TOTAL | 294841.5 | | 402262 | | 697103.5 | |

WATER SAVING AS PER PLAN %

21%



29%

49.7%



The water saving as per plan is to reduce the water gap by 49.73% in next two years. The following three committees have been setup for monitoring the implementation of the IWRP:

- Committee headed by the Hon'ble Chief Minister;
- Committee headed by the Chief Secretary;
- District Level Committee(s) headed by the Deputy Commissioner.

The action plan to deal with the problem of water logging includes surface/sub surface/vertical drainage, adoption of salt tolerant crop varieties, conjunctive use of canal and saline water, bio drainage and use of saline water for shrimp cultivation.

4. MONITORING MECHANISM

The targets chalked out for each proposed activity/intervention under the Integrated Water Resources Action Plan are actionable and give monitorable outcomes along with key performance indicators for each proposed activity/intervention at the State, District and Block Level by various departments. A proforma for updating monthly achievements of water saving & Land reclamation by the Line Departments has been uploaded on the portal by the Haryana Water Resources Authority. Its progress is being regularly monitored by Chairperson, HWRA

and two Committees formed under the chairmanship of Hon'ble Chief Minister & Chief Secretary Government to Haryana. The composition of the Committees is given below:-

(a) District Water Resources Planning Committee (DWRPC) headed by Deputy Commissioner of each district;

(b) Monitoring of Committee headed by Hon'ble Chief Minister, Haryana;

(c) Constitution of Committee headed by W/Chief Secretary, Government of Haryana;

Review meeting under the Chairmanship of Hon'ble Chief Minister, Haryana with the Line Departments was held on 18.01.2024 to review the water saving progress as per the IWRAP and necessary directions were issued so as to achieve water saving targets as per the Integrated Water Resources Action Plan (IWRAP) 2023-25.

| Water Saving Through Water Conservation Efforts | |
|--|----------------------|
| Total Target up to March, 2025 | 6,90,520.44 Cr. Ltr. |
| Total Target up to March, 2024 | 3,04,373.03 Cr. Ltr. |
| Total Target up to Dec, 2023 | 2,60,498.75 Cr. Ltr. |
| Achievement up to Dec, 2023 | 2,48,702.57 Cr. Ltr. |
| Achievement up to Dec, 2023 % | 95.47 % |

More than 95% of the targets for water saving up to December, 2023 have been achieved with the cooperation of various Line Departments/Agencies.

5. WATER RESOURCES ATLAS HARYANA, 2023

Haryana Water Resources (Conservation, Regulation and Management) Authority (HWRA), Citizen Resource Information Department (CRID) and the Haryana Space Applications Centre (HARSAC) are working jointly for the development of "Water Resource Atlas, Haryana 2023". This remarkable endeavour uses cutting-edge technology, such as satellite images, Geospatial Information Systems (GIS), and extensive ground data, to delve deeply into the world of water resources (both ground and surface). The astounding data on the State of Haryana's water resources in reaction to both natural and manmade forces is startling. The endeavour to comprehend the water resources scenarios and create a foundation for water savings

related works is even more beneficial in light of the associated statistics that are offered in the Atlas. This Water Resource Atlas will play a significant role in raising awareness of the need to safeguard and conserve water resources among the Government, scientific community, and many societal groups.

6. LEGISLATIVE WORK

The revised framework under Section 12(3) for granting permission under Section 16 and to achieve other purposes of the Act, has been approved by the Authority and submitted to the Government for approval.

7. OUTREACH PROGRAM

- i. The Authority through the insertion of various notices in the print media as well as interaction with the project proponents including industries, infrastructure, mining, commercial entities and various institutions/departments have been creating awareness among the various stakeholders with regard to the provisions of the Haryana Water Resources (Conservation, Regulation and Management) Authority Act, 2020 and Rules & Regulations, and guidelines made thereunder.
- ii. It had come to the notice of HWRA that industries/project proponents have been facing certain difficulties for seeking groundwater extraction permissions/No Objection Certificate for extracting groundwater. Accordingly, the HWRA decided to hold one day orientation program/seminar with the coordination of District Administration by inviting all the Line Departments, Industrial Associations, Industrialists, proponents of Mining Projects & Infrastructural projects, of the following Districts for resolving the No Objection Certificate for extracting groundwater/Permission related queries by the technical experts of the HWRA:

| Sr. No. | Name of District |
|----------------|-------------------------|
| 1. | Panipat |
| 2. | Sonepat |
| 3. | Gurugram |
| 4. | Faridabad |
| 5. | Yamunanagar |
| 6. | Mewat |

| | |
|----|--------|
| 7. | Rewari |
|----|--------|

The above webinars/orientation programs (online/offline mode) included an interaction session for understanding the guidance about the issuance of Permission/No Objection Certificate for extracting groundwater and for resolving the quarries pertaining to surface water supply and CTE/CTO and highlighted & discussed the need for smart and sustainable groundwater management in the industrial, commercial and agricultural sectors. In addition to this all the quarries and doubts of the Industry/project proponents regarding online application on the portal of HWRA were answered/cleared by the technical experts of the HWRA.

- iii. In order to create awareness amongst the water users regarding the constitution and jurisdiction of the Authority, various public notices were issued by the Authority through leading newspapers. These public notices were addressed to the projects including industry/mining/infrastructure sectors extracting groundwater to seek permission from the Authority for No Objection Certificate for extracting groundwater.
- iv. Advertisements through newspapers and radio jingles on Micro Irrigation, Crop Diversification, Direct Seeding of Rice, and World Water Day were made to generate awareness on water saving and conservation among farmers and the general public.
- v. The HWRA issued public notices through leading newspapers to create awareness among all the bulk water tanker operators/owners/agencies regarding the constitution and jurisdiction of the Authority and get their water tankers registered on the portal of the HWRA.
- vi. The HWRA in collaboration with Gurugram Metropolitan Development Authority and District Administration of Gurugram held an interaction meeting with the stakeholders of Industries and Infrastructure Sectors of Gurugram District on 06.12.2021 at Conference Hall, PWD Rest House, Gurugram regarding optimum use

of treated waste water.

- vii. To make the general public aware about the Water Conservation, Haryana Water Resources Authority and Irrigation & Water Resources Department have prepared a detailed brochure which contains details of various water conservation & saving schemes of the Department of Agriculture & Farmers Welfare, Department of Irrigation & Water Resources, Horticulture Department etc. In this brochure, detailed information about each scheme along-with procedure for application to get the benefits of all these schemes has been enumerated. These brochures have been sent to the Sarpanches of all the Gram Panchayats in the State with a request to provide information to the farmers about all these schemes given in the brochure, paste the related information on the notice boards of various places in Villages & Government offices, organize exhibitions/public awareness camps by calling all the officers/officials of the concerned Departments of Agriculture, Irrigation, Horticulture etc.

8. GUIDANCE ABOUT THE IMPLEMENTATION OF HARYANA WATER RESOURCES ACT TO OTHER STATE

The Ministry of Jal Shakti organized 1st All India Annual State Ministers Conference on Water with the theme “Water Vision@2047” on 05th and 06th January, 2023 at Bhopal (M.P.). The Haryana Water Resources Authority was the only Authority all over India which was invited to attend this Conference. The work of HWRA was appreciated during this conference. Accordingly, the team of officials from the various States/UTs visited Haryana Water Resources Authority to have discussion about the implementation of Haryana Water Resources Act and learn from the experience of implementation of the Haryana Water Resources (Conservation Regulation and Management) Authority Act 2020 as per the following details:

| Sr. No. | State/UT |
|---------|------------|
| 1. | Tamil Nadu |
| 2. | Bihar |
| 3. | Chandigarh |

9. CAPACITY BUILDING

The HWRA has dedicated Branches including Administration, Accounts, Legal, IT, Technical and Grievances, for looking after the various projects and complaints section of the HWRA. I.T. Professionals assist HWRA in the upgradation of data base and modification of the software from time to time in association with the National Informatics Centre, Haryana.

10. INTERNATIONAL ENGAGEMENT

The Authority is working towards establishing partnerships and collaborations with reputed global institutions and universities for knowledge exchange/sharing and, research studies, implementing pilot projects by adopting cost-effective and innovative technologies to effectively manage the water resources.

11. COORDINATION WITH WORLD BANK FOR FUNDING OF RS. 5,000 CRORES PROJECT “WATER SECURE HARYANA”

Collaborative efforts were made with the World Bank to secure funding of Rs. 5,000 Crores for “Water Secure Haryana” project. The project’s objective is - “to improve irrigation, drainage and agriculture practices for a water secure and climate resilient Haryana”.

12. REGISTRATION/NO OBJECTION CERTIFICATE TO THE PROJECTS FOR EXTRACTION OF GROUNDWATER

i. Registration/No Objection Certificate for extracting groundwater to the Industries:

The Authority, after detailed scrutiny, has issued 2,957 permissions till 31.03.2024 with condition to water conservation and recharge of ground water by ensuring rainwater harvesting and optimum use of treated wastewater for non-potable use.

ii. Registration/No Objection Certificate for extracting groundwater to the Infrastructures:

The Authority, after detailed scrutiny, has issued 360 permissions till 31.03.2024 with condition to water conservation and recharge of ground water by ensuring rainwater harvesting and optimum use of treated wastewater for non-potable use.

iii. Registration/No Objection Certificate for extracting groundwater to the Mining:

The Authority, after detailed scrutiny, has issued 2 permissions till 31.03.2024 with condition to water conservation and recharge of ground water by ensuring rainwater harvesting and optimum use of treated wastewater for non-potable use.

13. FUNDING FOR WATER CONSERVATION PROJECTS

Reference of Acts and CMs: Fund of the Authority shall consist of the amount to be paid to it by Government and all other receipts by way of gift, grant, penalties, fee, user charges or otherwise and shall be utilized for making payments and for performing its duties and discharging its functions under this Act. The Haryana Water Resources Authority, has so far, granted permission to about 3,319 applicants of the sectors of Industry, Infrastructure and Mining with a condition to conserve water and recharge of ground water by ensuring rainwater harvesting and optimum use of treated wastewater for non-potable use and collected Rs. 161.10 Crores as revenue. The Haryana Water Resources Authority released these funds for water conservation projects of Irrigation & Water Resources Department as per the details given below:-

| Sr.no | Period | Amount | Schemes |
|-------|-----------|--------------|--|
| 1 | 2023-2024 | 41,33,64,000 | Transfer to irrigation and water resource department |
| 2 | 2023-2024 | 13,52,91,000 | Transfer to irrigation and water resource department |
| 3 | 2023-2024 | 5,26,41,061 | Transfer to irrigation and water resource department |
| TOTAL | | 60,12,96,061 | |

*In addition to the above for the fiscal year 2023-24, Rs.21.70 Cr. have been earmarked for water conservation projects of the Irrigation & Water Resources Department. This amount will be released in the current financial year to Irrigation & Water Resources Department after the approval of Government in this regard.

Further, Rs.4.30 Cr. were funded to Haryana School Shiksha Pariyojana Parishad for the construction of 237 Nos. of rooftop rainwater harvesting structures in the various Government Schools.

14. CSR FUNDING

The Authority is directly securing financial support to the CSR Trust of Haryana, from the prominent industrial units in the State of Haryana.

15. REVISION OF TARIFF OF BULK USE OF SURFACE WATER AND TREATED WASTE WATER

The Haryana Government passed the Haryana Water Resources (Conservation, Regulation and Management) Authority (Amendment) Act, 2022 under which the Authority has been given the mandate to decide the bulk water tariff. The HWRA in the exercise of powers conferred under the Section 18 of the HWRA Act decided to revise the bulk water tariff of bulk water use of surface water and that of treated waste water.

Earlier the rates were revised in the year 2012 then in 2018. This clearly shows the commitment of the Government for sustainable use of water resources in the State. The Government also gives the mandate for enforcement and implementation of Treated Waste Water Policy of the Government to the Authority, therefore, the Authority issued the notification for tariff of bulk water use of surface water and that of treated waste water (**Annexure 'A' & 'B'**). These revised rates were decided on the proposals submitted by the Irrigation & Water Resources Department and Public Health Engineering Department. The sole aim and objective to revise the tariff is to sensitize the people to use the water consciously & efficiently and therefore by pricing the rates rationally and reasonably the Authority aims to achieve the sustainable use of water in the State. These rates were applicable from 01.08.2022. These rates are applicable on users other than agriculture.

16. STATEMENT ON STEPS TAKEN TO MITIGATE ANY NON-COMPLIANCE OF THE PROVISIONS OF THE ACT AND RULES AND REGULATIONS LAID THEREIN BY THE PROJECT PROPONENTS INCLUDING INDUSTRIES, INFRASTRUCTURE, MINING, COMMERCIAL ENTITIES ETC.

- i. The Authority has framed a policy for payment of late fee/ penalty by the promoters, in case they failed to submit their application with the Authority for registration of their ongoing projects within the prescribed period **that is the final cutoff date of 15.02.2022 a late fee of Rs. 1 lac has been charged (except Micro and Small Industry drawing ground water less than 10 cubic meter per day.**
- ii. The Haryana Water Resources Authority, has notified the Environment Compensation to regulate and control ground water abstraction in the

State, in the exercise of the powers conferred under Sub-Section (3) of Section 12 of "The Haryana Water Resources (Conservation, Regulation and Management) Authority Act, 2020, (hereinafter 'the Act') and in continuation of earlier Notification No. HWRA/485/Notification/2021 dated 10.09.2021, ('the Guidelines').

17. STATEMENTS ON THE DIRECTION OF THE AUTHORITY AND PENALTY IMPOSED FOR CONTRAVENTIONS OF THE ACT AND THE RULES AND REGULATIONS MADE THEREUNDER:

Under Section 19 and 20 of the HWRA Act, 2020, the State Government designated/appointed the following Officers of the Irrigation & Water Resources, Town & Country Planning and Haryana State Pollution Control Board as Enquiry Officer/Enforcement Officer/Compliance Officer of the Haryana Water Resources Authority for discovery & production of documents, summoning and enforcing the attendance of any person, to conduct field inspection, enter into any premises for inspection and inquiry, submit report to the Authority:

| Sr. No | Department | Designation |
|--------|---|---|
| 1. | Irrigation & Water Resources Department | Executive Engineer |
| 2. | Town & Country Planning Department | Not below the rank of District Town Planner |
| 3. | Haryana State Pollution Control Board | Not below the rank of Regional Officer |

The data from Haryana State Pollution Control Board (HSPCB), which is available online, indicated that there are about 25,000 industries/projects which are operational in the State to which Consent to Operate (CTO) have been issued by HSPCB but only about 7,193 applications have been received so far in the HWRA for groundwater extraction No Objection Certificate for Extracting Groundwater, including Infrastructure, Industry, Commercial entities and Mining projects. It is in all likelihood that those projects, (who have not applied to the Authority for extraction of Ground Water), may be drawing/abstracting ground water unauthorizedly. Ground Water situation being alarming in the State 86 Blocks (& 02 Urban Area i.e. Gurugram & Faridabad) out of 141 Administrative Blocks have been assessed as Over-Exploited as on March, 2022. Besides, these urban areas of Gurugram and Faridabad have been separately assessed also categorized as "over-exploited". Therefore, the illegal

extraction needs to be checked and stopped and also to direct such projects to apply to HWRA for extraction of ground water.

The HWRA in its 14th Meeting, therefore, decided that the Inquiry/ Enforcement Officers from respective District(s) be directed to conduct impartial inspection(s). In this regard, a Committee of two members, as may be decided by the Deputy Commissioner of the concerned District or the Authority, to check unauthorized abstraction of groundwater. The Inspection Committee may co-opt any other Technical Officer, if so required under the circumstances. It was also decided by the Authority that in the Districts which have higher concentration of Industries/projects viz Gurugram, Faridabad, Panipat, Sonipat, Rewari, Hisar and Yamuna Nagar, at least six industries/projects must be inspected & in remaining Districts, at least three Industries/projects (in each District) are to be inspected from the month of April, 2022 onwards. As subsequently decided by Authority, from the month of September, 2022, inspections were increased to 10 nos. per month & 5 nos. per month. From April, 2023, the inspections have been increased to 20 nos. & 10 nos. respectively.

Accordingly, since April, 2022, list of premises of Industries/ Non Industrial Projects/units situated within the State, is being sent to the concerned Deputy Commissioners to conduct their inspections. Moreover, HWRA has also received complaints from general public for which inquiries have been conducted. Some inspections are conducted on the basis of orders passed by the Hon'ble National Green Tribunal. In this process 1327 Show Cause Notices have been issued up to 31.03.2024 to various Industries/ Units/ Restaurants/ Dhabas/ Banquet Halls/ Resorts/ RO Plants etc.

| Sr. No. | Description | No |
|---------|---|------|
| 1. | On hearing | 754 |
| 2. | Decided/disposed of | 273 |
| 3. | Unit applied after the receipt of Show Cause notice | 115 |
| 4. | Re inspection pending | 56 |
| 5. | Reply awaited | 129 |
| Total | | 1327 |

18. REFERENCES/DIRECTIONS RECEIVED FROM THE GOVERNMENT UNDER SECTION 27

The Authority did not receive any reference from the State Government under Section 27 of the Act.

19. AWARDS & APPRECIATIONS

- I. On 16.03.2023, the Haryana Water Resources Authority has been honoured by Shri Gajendra Singh Shekhawat, Honorable Union Minister, Ministry of Jal Shakti with the ***“Water Digest Water Awards 2022-23”*** for the best initiative in groundwater administration and management in the State.
- II. **Shri Gajendra Singh Shekhawat, Honorable Union Minister, Ministry of Jal Shakti appreciated the work of Haryana Water Resources Authority** while presiding over the meeting.
- III. The Irrigation and Water Resources Department awarded the ***“Water Digest Water Awards 2023-24”*** in the category of Best Initiative in Ground Water Administration and Management due to the efficient implementation of the Integrated Water Resources Action Plan in Haryana by the Haryana Water Resources Authority.

20. INTERDEPARTMENTAL DIRECTIONS

List of Departments with recommendations/directions given to them.

| Sr. No. | Department Name | Recommendations to the Departments |
|---------|-----------------|--|
| 1. | I&WRD. | <ol style="list-style-type: none">1. Implement and install 1699 piezometers under Atal Bhujal Yojana.2. Create a centralized water monitoring system for each District.3. Planning and creating awareness for water conservation.4. Give data available with Haryana Irrigation Research & Management Institute (HIRMI) and I&WRD and assist HWRA in preparing ‘<i>Dwi Varshik Jal Prabandhan Yojana</i>’.5. Identify the most affected Villages in terms of groundwater assessment and create awareness through IEC |

| | | |
|----|---------------------|---|
| | | <p>activities.</p> <ol style="list-style-type: none"> 6. Set up a portal for Village Water Balance Index for creating awareness about sustainable use of water. 7. Coordinate and create a mechanism with Power Department for giving priority to power connection for agriculture tube-wells. 8. Procure and use micro desalination equipment developed by DRDO for resolving the issue of salinity. 9. Develop a mechanism to pump out the water from water-logged areas of Sonipat and Rohtak into the JLN Canal. 10. Work out and develop a plan, in consultation with the Agriculture Dept. to take saline water at the nearest point of demand through lift irrigation and drainage system. 11. Proposal of installation of piezometers at Village level besides 1699 piezometers already being set up under ABY may be submitted by I&WRD for funds for dynamic monitoring of groundwater levels for better planning of various initiatives. 12. I&WRD should prepare a plan for the utilization of TWW in non-command areas for irrigation purposes. 13. I&WRD shall prepare a Draft Intervention Plan. 14. Crop diversification may be promoted for less water-intensive crops and efforts should be made to encourage micro-irrigation. 15. Department-wise Action Plan for all water stressed and water logged Villages should be proposed. 16. Water bodies must be developed under the MGNREGA Scheme to tackle the problem of water depletion. |
| 2. | Urban Local Bodies. | <ol style="list-style-type: none"> 1. Planning and creating awareness for water conservation in villages and MCs within their jurisdiction. 2. Ensure proper maintenance of existing rainwater harvesting systems. |

| | | |
|----|---|--|
| | | <ol style="list-style-type: none"> 3. Construct injection bore-well at a local level in the municipal area to improve the water table. 4. Undertake joint pilot project with PHED in Municipal Corporation of Panipat, Gurugram, Sonipat and Faridabad to use TWW. 5. Rainwater harvesting structures installed in urban areas be inspected, reports be sent to HWRA. |
| 3. | Agriculture & Farmers Welfare Department. | <ol style="list-style-type: none"> 1. Identify the most affected villages in terms of groundwater assessment and create awareness through IEC activities. 2. Install portable mechanical dryers at every mandi to facilitate farmers for drying maize crops. 3. Work out and develop a plan in consultation with I&WRD to make use of saline water through lift irrigation and drainage system. 4. The Agriculture Dept. should frame a policy for repayment of farmers' share of the amount incurred on the reclamation of water-logged land in the form of a loan. 5. Action Plan for all water-logged Villages focusing on improving the groundwater level, water logging and salinity should be proposed. |
| 4. | Fisheries Department. | <ol style="list-style-type: none"> 1. Explore and implement the use of saline water for fish farming on large scale in the water-logged areas and also create a marketing platform for the same. 2. Fish farming must be promoted in the water-logged areas immediately. An action plan, in this regard, may be formulated. |
| 5. | Forest Department. | <ol style="list-style-type: none"> 1. Plan and implement the project for bio drainage methods in water-logged areas so that the problem of water logging can be solved and to avoid a flood-like situation, especially in Rohtak, Jhajjar, Sonipat, Bhiwani and Hisar. |

| | | |
|-----|---|--|
| | | 2. A special scheme of afforestation for the water-logged saline areas should be started. An action plan and a project in this regard may be formulated. |
| 6. | PHED. | 1. Planning and creating awareness for water conservation in villages and MCs within their jurisdiction. 2. Undertake joint pilot project with ULB in Municipal Corporation of Panipat, Gurugram, Sonipat and Faridabad to use TWW. 3. Implementation of policy on reuse of TWW and meeting with stakeholders may be organized by involving HWRA |
| 7. | HIRMI. | 1. Give data available with HIRMI and assist HWRA to prepare Dwi Varshik Jal Prabandhan Yojana and Integrated Water Plan. |
| 8. | GMDA. | 1. To give access to a centralized monitoring system developed by GMDA to I&WRD for monitoring of piezometers under Atal Bhujal Yojana with monitoring access to HWRA. |
| 9. | Town & Country Planning Department. | 1. Ensure proper maintenance of existing rainwater harvesting systems by ensuring an Annual Maintenance Contract (AMC) and implementing a policy for mandatory AMC. 2. Make a policy and enforce the regulation of the dual pipeline system in the new habitations and colonies. |
| 10. | Housing Board, Panchkula. | 1. Ensure proper maintenance of existing rainwater harvesting systems by ensuring an Annual Maintenance Contract (AMC) and implementing a policy for mandatory AMC. |
| 11. | Haryana Power Generation Corporation Limited. | 1. Create a mechanism in coordination with I&WRD for giving priority to power connections for agriculture tube wells. 2. Implement the utilization of TWW in power plants instead |

| | | |
|-----|---|---|
| | | of the use of fresh water. |
| 12. | HSIIDC. | 1. Explore and implement the project of optimum utilization of TWW available in the industrial estates. |
| 13. | HSVP. | 1. Ensure proper maintenance of existing rainwater harvesting systems by ensuring an Annual Maintenance Contract (AMC) and implementing a policy for mandatory AMC. 2. Implement the utilization of TWW for non-potable usage. |
| 14. | Haryana Pond & Waste Water Management Authority. | 1. Water bodies must be developed under the MGNREGA scheme to tackle the problem of water depletion. |
| 15. | Rural Development Department. | 1. Water bodies must be developed under the MGNREGA Scheme to tackle the problem of water depletion. |
| 16. | Development & Panchayat Department. | 1. An action plan for all the water-stressed and water logged villages focusing on the interventions for improving the groundwater level water logging and salinity issue be proposed. |
| 17. | Central Soil Salinity Research Institute (CSSRI). | 1. To coordinate with Agriculture Dept. & HAU for encouraging the use of salt tolerant varieties of crops in water logged areas and DSR for paddy plantation. |
| 18. | PWD (B&R). HSVP HSAMB | 1. Rainwater harvesting structures installed in urban areas be inspected and report be sent to HWRA. 2. Wherever possible, recharging shafts may be constructed for recharging the groundwater along State Highways and |

| | | |
|--|--|---|
| | | roads made by HSVP and Marketing Board. |
|--|--|---|

21. ADMINISTRATION AND ESTABLISHMENT MATTERS:

i. Composition of Authority;

HWRA Panchkula at present consists of Chairperson and three Members.

ii. Details of the Chairperson and Members appointed during the year and those demitted office:

The details of the Chairperson and Members are as follows:

| S.No. | Name | Designation | Duration of Service |
|-------|--------------------------------------|-------------|---------------------|
| 1 | Smt. Keshni Anand Arora, IAS (Retd.) | Chairperson | 14.01.2021-Ongoing |
| 2 | Sh. D.P.S. Beniwal | Member | 22.04.2021-Ongoing |
| 3 | Sh. M.S. Lamba | Member | 22.04.2021-Ongoing |
| 4 | Sh. Sanjay Marwaha | Member | 12.07.2021-Ongoing |

22. DETAILED STATEMENT CONTAINING INFORMATION ON PERSONNEL IN THE AUTHORITY.

The Authority has recruited the following Officers/ Officials on a contract/ deputation/ Additional Charge basis against 49 different posts sanctioned by the State Government.

| Sr. No. | Name | Sanctioned Post | Filled | Vacant | Remarks |
|---------|--------------------|-----------------|--------|--------|---|
| 1. | Secretary | 1 | - | 1 | C.E.O. has been appointed by the Government |
| 2. | Under Secretary | 1 | 1 | - | -- |
| 3. | Research Officer | 1 | - | 1 | -- |
| 4. | Private Secretary | 1 | 1 | - | -- |
| 5. | Superintendent | 2 | 2 | - | Vacant Since Sep, 2023 |
| 6. | Personal Assistant | 5 | - | 5 | -- |

| | | | | | |
|-----|-------------------------------|---|---|---|--|
| 7. | Assistant | 8 | - | 8 | -- |
| 8. | Sr. Scale Stenographer | 2 | - | 2 | -- |
| 9. | Jr. Scale Stenographer | 2 | - | 2 | -- |
| 10. | Steno Typist | 3 | 3 | - | -- |
| 11. | Clerk-Cum-Computer Operator | 9 | 1 | 8 | -- |
| 12. | Driver | 5 | - | 5 | -- |
| 13. | Legal Advisor | 1 | 1 | - | Vacant since 31.12.2023 |
| 14. | Legal Assistant | 1 | - | 1 | -- |
| 15. | Chief Technical Officer | 1 | 1 | - | -- |
| 16. | Chief Hydrologist | 1 | 1 | - | -- |
| 17. | Programmer (C) | 1 | - | 1 | -- |
| 18. | IT Officer/Jr. Programmer (C) | 1 | - | 1 | -- |
| 19. | Accounts Officer | 1 | 1 | - | Vacant Since September, 2023. Further 02 Accounts Officer have deputed by the Finance Department on additional Charge. |
| 20. | Accounts Assistant | 1 | - | 1 | -- |
| 21. | Accounts Clerk | 1 | - | 1 | -- |

However the posts of Chief Accounts Officer, Additional District Attorney and System Executive Officer are not available in the authority but the additional charges have been given by the Government on these posts for the smooth functioning of the Authority. The post of Additional District Attorney is lying vacant since March, 2024.

In addition to the above, certain services like security, record-keeping, data entry operators, accountant, class-IV services etc. have been arranged through Haryana Kaushal Rozgar Nigam.

23. EXPERTS AND CONSULTANTS ENGAGED

The Authority has engaged the following consultants/advisors on a contract basis to assist the Authority in its functioning:-

| Sr. No. | Name | Designation |
|---------|--|-------------|
| 1. | Advisor | 1 |
| 2. | Consultant (Technical Advisor)-cum-CTO | 1 |
| 3. | Consultant (Chemical)-cum-CTO | 1 |
| 4. | Consultant (Engg.)-cum-CTO | 1 |
| 5. | Consultant (Monitoring & Enforcement) | 1 |
| 6. | Water Consultant | 2 |
| 7. | Senior Consultant (I.T.) | 1 |
| 8. | Junior Consultant (Chem.) | 1 |
| 9. | Junior Consultant (I.T.) | 1 |

24. EMPLOYEE WELFARE MEASURES

- i. **Labour Welfare Fund:** - Contributions towards the Labour Welfare of the employees are being made by the Authority for the employees to get benefits of the schemes being run by the Labour Welfare Board.
- ii. **ESI Contribution:** - Contribution towards ESI is being made by the Authority so that the employees could avail medical facilities from the ESI dispensaries.
- iii. **EPF Contribution:** - Contribution towards EPF is being made by the Authority for the Social Security of the employees.
- iv. **NPS Contribution:** -For contribution to NPS of the regular employees of the Authority, an NPS account has been opened by this office.

25. ANNUAL ACCOUNTS OF THE AUTHORITY

The Annual Accounts of the Authority for the year 2022-23 has been finalized in consultation with M/s P.K. Bhasin & Associates, Chartered Accountant and they have requested the Government to request the Principal Accountant General (Audit), Haryana, for certification of accounts of the Authority. Further, The Annual Accounts of the Authority for the Financial Year 2023-24 shall be audited in

consultation with M/s P.K. Bhasin & Associates, Chartered Accountant and same shall be sent to the Principal Account General (Audit) for certification.

| Financial Year | Total Expenditure |
|----------------|-------------------|
| 2022-23 | 975.59 Lakh |
| 2023-24 | 625.73 Lakh* |

* unaudited expenditure for the Financial Year 2023-24.

26. RIGHT TO INFORMATION

The information relating to RTI Act, 2005 is as under:

| | |
|--|-----|
| No. of applications received by SPIO seeking information under RTI Act. | 10 |
| No. of applications for which information has been provided by SPIO | 10 |
| No. of applications pending with SPIO | Nil |
| Number of appeals filed before the First Appellate Authority against the order of SPIO | Nil |
| Number of which have been disposed of by the First Appellate Authority | Nil |
| Number of appeals pending with the First Appellate Authority | Nil |
| No. of applications/ appeals not disposed of in the stipulated time frame | Nil |

Keshni Anand Arora
Chairperson

D.P.S Beniwal
Member

M.S. Lamba
Member

Sanjay Marwaha
Member