

# Rainwater Harvesting and Groundwater Recharge

## The Role being played by MWRRA in the State of Maharashtra, India for the cause of Rainwater Harvesting and Groundwater Recharge

### (a) Background

In the Indian Constitution, the subject of water has been classified/categorised as State subject and federal State Government have been empowered to legislate the laws pertaining to the water including Groundwater.

In the State of Maharashtra in India, the federal State Government has given great emphasis on the subject of development and management of the groundwater.

In the year 1993, the State Government has enacted a law – Maharashtra Groundwater (Regulation for Drinking Water Purposes) Act, 1993 - with the object to regulate the exploitation of groundwater for protection of public drinking water sources and the matters connected and incidental thereto for the purpose of drinking water in which the subject of groundwater was predominantly dealt with.

The State Government through this Statutory legislation of 1993 had constituted a highly technical authority known as "Groundwater Survey and Development Agency" (GSDA) which has its independent head quarter in Pune and equipped with State of Art laboratories and infrastructure with the effective manpower strength of more than 1,500 technical-Geologist, Hydrologist/Engineers as well as non-technical personnel with the sufficient infrastructure distributed in the six regional head quarter of the State. GSDA has played vital role in fulfilling the object of the said legislation.

The structures and the models prepared by GSDA for the purpose of rainwater harvesting and artificial recharge have been widely appreciated.

### (b) The adaptation of new approach for development and management of groundwater through the The Maharashtra Groundwater (Development & Management) Act, 2009:

Based on the model Act of Central Government, the Maharashtra Groundwater (D & M) Act, 2009 came to be enacted and enforced w.e.f. 01.06.2014 with the objects to facilitate and ensure sustainable, equitable and adequate supply of Groundwater of prescribed quality, for various category of users, through supply and demand management measures, protecting public drinking water sources and to establish the State Groundwater Authority and District Level Authorities to manage and to regulate, with community participation, the exploitation of groundwater within the State of Maharashtra; and matters connected therewith or incidental thereto.

### (c) Rainwater Harvesting and Artificial Recharge of Groundwater

Apart from various provisions given in the Act, there is specific statutory provisions for *Rainwater Harvesting and Artificial Recharge of Groundwater* under which the MWRRA as State Groundwater Authority is mandated with the responsibility of identifying the recharge worthy areas in the State in consultation with Groundwater Survey and Development Agency (GSDA) and also Central Groundwater Board and issuing necessary guideline for rainwater harvesting to recharge groundwater. The Act has defined "*artificial recharge to groundwater*" means the process by which groundwater reservoir is augmented in excess of recharge under natural conditions of replenishment and "*recharge worthy area*" means area favourable for groundwater recharge and storage, as delineated by the Groundwater Surveys and Development Agency.

### (d) Role of State Groundwater Authority for *Rain water harvesting for artificial recharge of groundwater*

1. The State Groundwater Authority has also been mandated with issuing necessary directions to the District Watershed Management Committees (DWMC) in consultation with Watershed Water Resources Committees (WWRC), Panchayats and GSDA to prepare an Integrated Watershed Development and Management Plan (IWDMP) for artificial recharge on groundwater on priority for the notified areas and subsequently for non-notified areas.
2. The State Authority shall direct the District Watershed Management Committee, in consultation with the Watershed Water Resources Committee, Panchayat and the Groundwater Surveys and Development Agency, to prepare an Integrated Watershed Development and Management Plan for artificial recharge of groundwater on priority for the notified areas and subsequently for the non-notified areas. This plan shall be a part of the sub-basin and basin-wise water plan of the

State. The State Groundwater Authority in association with State Government has also been mandated with implementation of IWDMP in consultation with WWRC for the artificial recharge of the groundwater.

3. The State Government and the State Authority shall ensure the implementation of the Integrated Watershed Development and Management Plan in consultation with the Watershed Water Resources Committee and Panchayats
4. The State Groundwater Authority has to ensure engagement of the stakeholders in Watershed Development and Management to facilitate groundwater recharge through community participation and has to issue guidelines to disincentivise the groundwater user for taking water intensive crops in a manner to be prescribed by the State Government through Rules under the Act.
5. The State Authority shall issue guidelines to disincentivise the groundwater users for taking water intensive crops, in the manner as may be prescribed.
6. In urban areas falling in notified areas, the State Authority shall issue directives to the concerned authorities or urban local bodies for ensuring construction of appropriate rain water harvesting structures in favourable or technically suitable residential, commercial industrial and other premises ensuring construction of appropriate rainwater harvesting structure in favorable or technically suitable residential, commercial, industrial and other premises having an area of 100 sq.mtr. or more in a stipulated period, including directions to be issued for roof top rainwater harvesting structures in the building plants before according approval for construction and permanent water and electricity connection after due compliance of the directions given in this regard.
7. One of the important functions and the duties of the State Groundwater Authority is to issue directions to the Urban Local Bodies for State Groundwater Authority has to ensure participation of voluntary agencies for promotion of mass awareness and training programs for WWRC and stakeholders on rainwater harvesting and artificial recharge of groundwater.
8. The State Authority itself or through other agencies shall take steps for promotion of Mass Awareness and Training Programme for Watershed Water Resources Committee and stakeholders on rain water harvesting and artificial recharge to groundwater through Government Agencies, Non-Government Organisations, Volunteer Organisations, educational institutions, Industries or individuals.
9. The State Authority may encourage or incentivize the best practices, innovative activities implemented by the Watershed Water Resources Committee, village, local community or Non-Government Organisations, by giving some incentives through State Government in the manner as may be prescribed.

(e) Groundwater Estimation and Identification of Recharge Worthy Areas

The State Groundwater Authority mandated with the functions of carrying out the work of groundwater estimation in consultation with CGWA after receiving recommendations from the Groundwater Surveys and Development Agency and views of various institutions working in the groundwater field including the Central Groundwater Authority, based on scientific groundwater quality studies and estimation and after ascertaining the views of the users of groundwater of the area, to regulate the extraction or the use of groundwater or both in any form in a watershed or aquifer area, and declared such area being a notified area, by notification in the Official Gazette, for the purposes of this Act, with effect from such date as may be specified therein.

(f) Conclusion

The task of rainwater harvesting and artificial recharge cannot be achieved unless there is participation of the public at large. Therefore, the State Authority is duty bound to take into the account the views of the stakeholders at large and mass awareness to make the subject of rainwater harvesting and artificial recharge as **peoples' movement for which** the maps pertaining to the recharge worthy areas have been prepared in consultation with GSDA and Maharashtra Remote Sensing Agency (MRSAC) and the authority is determined to achieve the object of the work of rainwater harvesting as well as artificial recharge in the State of Maharashtra so as to make the State as a role model for the entire country.

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