

## 5.1 Introduction

Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development calls for concerted efforts towards building an inclusive, sustainable and resilient future for people and the planet. The 193 Member States of the United Nations (UN) officially adopted a new sustainable development agenda entitled, “Transforming Our World: The 2030 Agenda for Sustainable Development” at the Sustainable Development Summit held at UN Headquarters in New York in September 2015. This agenda contains 17 Goals and 169 targets. The action for achievement of Sustainable Development Goals (SDGs) started on 1 January 2016 and these are expected to be achieved by 31 December 2030. Of these 17 goals, one goal i.e. Goal 6- ‘Ensure availability and sustainable management of water and sanitation for all’ is related to clean water and sanitation. The targets under this goal are shown in Box 5.1.

### Box 5.1: Targets under Goal 6

- 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations;
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally;
- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity;
- 6.5 By 2030, implement integrated water resources management at all levels, including through trans-boundary co-operation as appropriate;
- 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes;
- 6. a By 2030, expand international co-operation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies; and
- 6. b Support and strengthen the participation of local communities in improving water and sanitation management.



## 5.2 Activities towards achievement of SDG-6 relating to Ground Water

NITI Aayog has been entrusted with the role to co-ordinate ‘Transforming our world: the 2030 Agenda for Sustainable Development’ (SDGs). NITI Aayog is required to periodically collect data on SDGs and to act proactively to fructify the goals and targets quantitatively as well as by maintaining high standards of quality. Ministry of Statistics and Programme Implementation (MoSPI) undertook a parallel exercise of interaction with the Ministries to evolve indicators reflecting the SDG goals and targets. To achieve these tasks, the draft mapping of the goals and targets vis a vis the Nodal and other Ministries has been carried out in consultation with MoSPI.

For Goal 6, the targets identified by NITI Aayog for DoWR, RD&GR as related to ground water are as shown in Table 5.1.

**Table 5.1: SDG Targets relating to Ground Water**

Target	Scheme	Concerned Ministry/Department
<b>6.4</b> By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of fresh water to address water scarcity and substantially reduce the number of people suffering from water scarcity.	Ground Water Management and Regulation	DoWR, RD&GR
<b>6.6</b> By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	Ground Water Management and Regulation	DoWR, RD&GR
<b>6.b</b> Support and strengthen the participation of local communities in improving water and sanitation management.	Not linked*	DoWR, RD&GR

\*this target was not linked to a scheme by NITI Aayog

In the background of the mapping of SDGs by NITI Aayog, Audit assessed the status against the relevant targets under SDG 6 from the records of CGWB and DoWR, RD&GR. The observations are as follows.

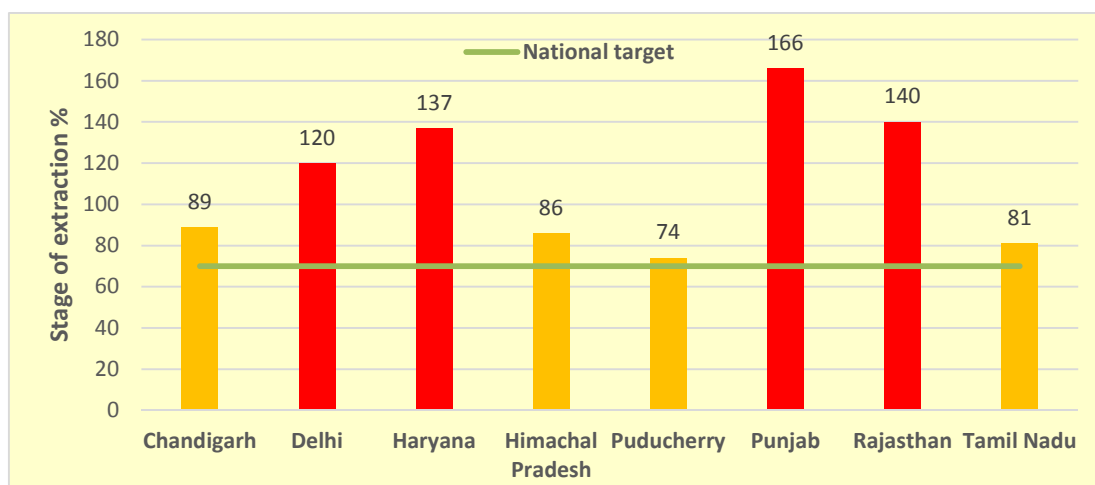
### 5.2.1 Target 6.4

For target 6.4, NITI Aayog has identified one indicator i.e. ‘percentage annual ground water withdrawal against net annual availability’. As per NITI Aayog, the national target value for this indicator for the year 2030 should be 70. Thus, this target will be achieved if percentage annual ground water withdrawal against net annual availability i.e. Stage of Extraction is 70 *per cent* or less.

As already pointed out in Chapter 2 of this report, over the period from 2004 to 2017, there has been a decline in the percentage of assessment units categorised as safe (<70%), whereas the percentage of blocks categorised as semi-critical, critical and over-exploited (>70%) has steadily increased. The overall stage of extraction of ground water has increased from 58 *per cent* in 2004 to 63 *per cent* in 2017. Audit observed that while this value is 63 *per cent* at national level as per the last assessment of CGWB

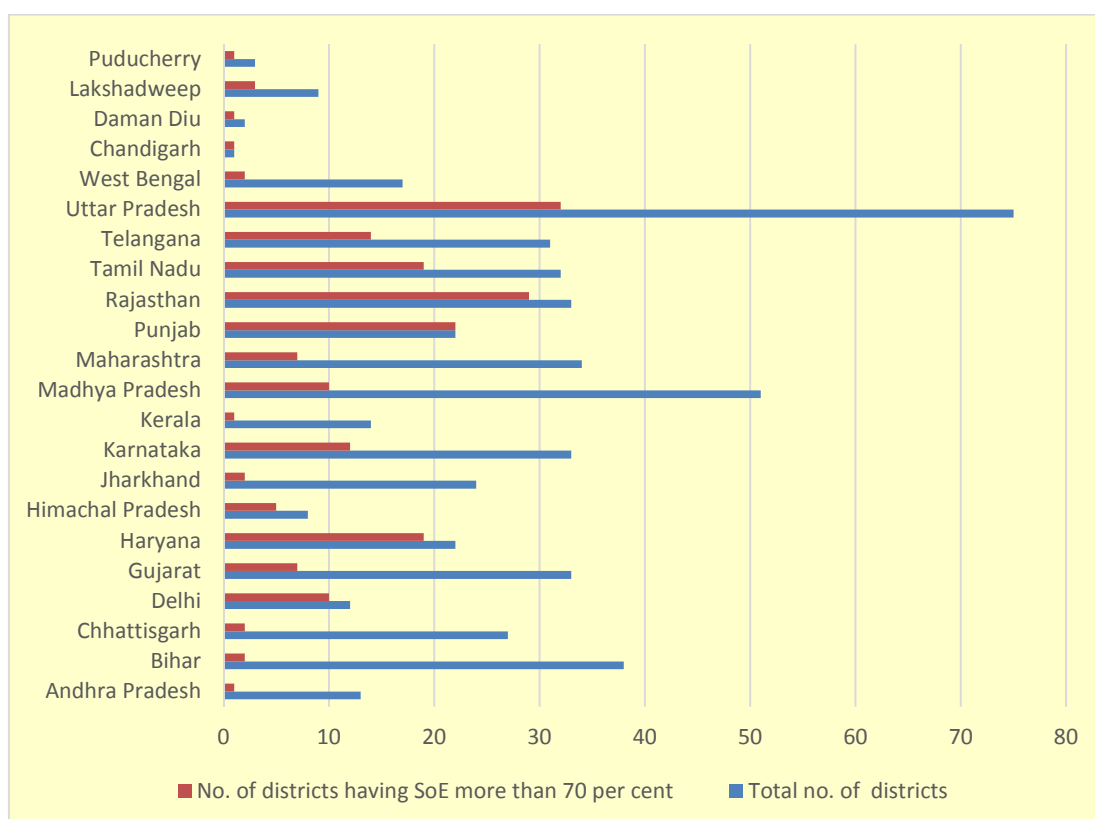
(March 2017), there are eight States/UTs where this value was higher than the target of 70 (Chart 5.1).

**Chart 5.1: States having high stage of extraction of Ground Water**



At the district level however, it was seen that out of 534 districts in 22 States/UTs, 202 districts had stage of extraction more than 70 per cent (Chart 5.2). The stage of extraction in these 202 districts ranged from 71 per cent to 385 per cent. Details are shown in **Annexure 5.1**.

**Chart 5.2: Districts having high stage of extraction of Ground Water**



Department/CGWB needs to review the progress made under target 6.4 against the latest assessment of stage of extraction of ground water and plan interventions to address the issues at both Centre and State level.

### **5.2.2 Target 6.6**

Target 6.6 is related to protecting and restoring water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. CGWB had, as a part of its 'Ground water Management and Regulation Scheme' proposed a component of Aquifer Mapping and Preparation of Aquifer Management Plan during XII Plan (2012-17) which was to be further continued during 2017-20. Under the Aquifer Mapping, a combination of geologic, geophysical, hydro-geologic, hydrologic and water quality data are integrated to characterise the quantity, quality and distribution of ground water in aquifers. Audit observed that of the total identified area of 24.8 lakh sq. km. to be mapped under NAQUIM, 13 lakh sq. km. had been covered as of September 2020 but Aquifer Mapping Reports in respect of nearly 6.5 lakh sq. km. (i.e. 50 *per cent* of the area covered) for 29 States/ UTs only had been finalised. There were other shortcomings also which have already been discussed in Chapter 4 of this report.

Considering the fact that CGWB has not been able to prepare the maps for all the aquifers, Centre and State governments, in the absence of these maps, may not be able to plan and implement strategies to protect these aquifers as per target. It is pertinent to mention that this target is to be achieved by the year 2020.

### **5.2.3 Target 6 b**

Target 6 b is related to supporting and strengthening the local communities in water management. The National Water Policy (2012) also envisages that declining ground water levels in over-exploited areas need to be arrested by introducing improved technologies of water use, incentivising efficient water use and encouraging community based management of aquifers. Accordingly, DoWR, RDGR had, as a part of its 'Ground Water Management and Regulation Scheme' proposed a component of participatory management during XII Plan (2012-17). Participatory management was envisaged to enable the community and stake holders to monitor and manage the ground water as common pool resources themselves. This required a coordinated effort involving Government departments, research institutes, Panchayati Raj Institutions, civil society organisations and stakeholders at village level.

However, as highlighted in Chapter 4 of this report, no action on this component was taken by the Department. Further, in the context of extension of this scheme for 2017-20, this component, which had a pan-India scope was removed and included under another scheme Atal Bhujal Yojana, launched in December 2019, but limited to seven States only. Hence, there was delay in government initiative in respect of this target and as such, target 6 b remains unachieved in respect of ground water.

### 5.3 Conclusion

The activities of CGWB were not aligned with the targets and indicators set by NITI Aayog for achievement of SDGs. In respect of SDG-6.4 relating to stage of extraction of ground water, although the national level was within the target set, there were eight States/UTs where the levels of the target had been breached. CGWB had not achieved its own targets for mapping of aquifers and was thus, not in a position to enable the States/UTs to plan strategies for protection and restoration of aquifers as targeted under SDG-6.6. CGWB had not taken any action with regard to SDG-6b, as the component relating to this SDG viz. participatory management of ground water was removed from the Ground Water Management and Regulation Scheme and included in another scheme that was launched only in December 2019.

### 5.4 Recommendations

1. The Department may review the mandate of CGWB and take steps to strengthen the organisation to achieve the commitments made by the country in the 2030 agenda for Sustainable Development Goals.
2. The Department may assess the progress made under each of the identified targets and take definite action to ensure that India is able to achieve the relevant Sustainable Development Goals as committed.



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