

Demand for Grants 2021-22 Analysis

Jal Shakti

The Ministry of Jal Shakti is responsible for the development, maintenance, and efficient use of water resources in the country and coordination of drinking water and sanitation programs in rural areas. The Ministry was created in 2019 by integrating the Ministries of: (i) Water Resources, River Development, and Ganga Rejuvenation, and (ii) Drinking Water and Sanitation.

In this note we discuss the overview of finances of the Department of Drinking Water and Sanitation, and the Department of Water Resources separately, and then discuss broader issues in the sectors.

As 2020-21 had extra-ordinary expenditure on account of Covid-19, we have used annualised increase over the 2019-20 figures for comparing the 2021-22 Budget Estimates.

Allocations in Union Budget 2021-22

In 2021-22, the Ministry of Jal Shakti received an allocation of Rs 69,053 crore which is a 64% annual increase over the actual expenditure in 2019-20. The focus of the increased expenditure is on drinking water, which is line with the government’s agenda to provide functional tap water connections to all households by 2024.¹ Further, the Economic Survey (2020-21) noted that a strong emphasis on sanitation and drinking water is required to prevent communicable diseases.²

Table 1 provides details on allocations to the two departments under the Ministry.

Table 1: Budgetary allocation to the Ministry of Jal Shakti (in Rs crore)

Department	Actuals (19-20)	Revised (20-21)	Budgeted (21-22)	Annualised Change (Actuals 19-20 to BE 21-22)
Drinking Water and Sanitation	18,264	17,024	60,030	81%
Water Resources	7,419	7,262	9,023	10%
Total	25,683	24,286	69,053	64%

Note: BE is budget estimate.

Sources: Demands for Grants 2021-22, Ministry of Jal Shakti; PRS.

Policy proposals in Union Budget 2021-22

- The Jal Jeevan Mission (Urban) will be launched to enable universal water supply and liquid waste management in urban areas.
- The Urban Swachh Bharat Mission 2.0 will be implemented. It will focus on sludge and waste water management.

Overview of Finances

Department of Drinking Water and Sanitation

The **Department of Drinking Water and Sanitation** administers programs for safe drinking water and sanitation in rural areas. It is responsible for the two programs: the Jal Jeevan Mission with an aim to provide functional household tap connection to every rural household, and the Swachh Bharat Mission-Gramin for sanitation.³

The Department has an allocation of Rs 60,030 crore, accounting for 87% of the Ministry’s allocation. This is an 81% annual increase compared to the actual expenditure in 2019-20.

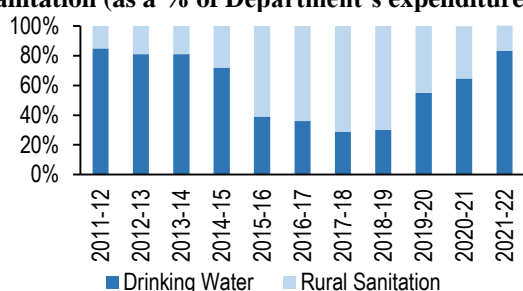
Over the past 10 years, the expenditure by the Department increased at an average annual growth rate of 3% (excluding 2021-22). Table 2 below shows the trends in expenditure by the Department in the last decade. The allocation for the Department increased by 253% in 2021-22 (over the revised estimates for 2020-21).

Table 2: Expenditure by the Department of Drinking Water and Sanitation

Year	Expenditure (in Rs crore)	% Change in expenditure
2012-13	12,968	29.7%
2013-14	11,941	-7.9%
2014-15	12,091	1.3%
2015-16	11,081	-8.4%
2016-17	16,476	48.7%
2017-18	23,939	45.3%
2018-19	18,412	-23.1%
2019-20	18,264	-0.8%
2020-21	17,024	-7%
2021-22	60,030	253%

Note: Values for 2020-21 are revised estimates and 2021-22 are budget estimates. Allocations before 2019-20 were towards the erstwhile Ministry of Drinking Water and Sanitation. Sources: Union Budgets 2014-15 to 2021-22; PRS.

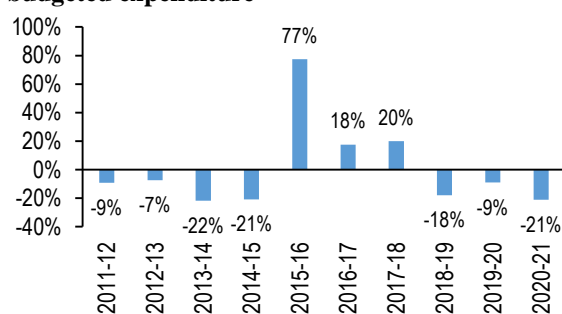
As can be seen in Figure 1, from 2011-12 to 2014-15, the Department’s expenditure was focused on drinking water. With the introduction of the Swachh Bharat Mission, between 2015-19, the focus of expenditure was on rural sanitation. However, since 2019-20 the expenditure focus has shifted back towards drinking water.

Figure 1: Expenditure on drinking water and sanitation (as a % of Department's expenditure)

Note: Values for 2020-21 are revised estimates and 2021-22 are budget estimates.

Sources: Union Budgets 2011-12 to 2021-22; PRS.

Between 2011-15, the actual expenditure by the Department of Drinking Water and Sanitation was lower than the budgeted expenditure. However, during 2015-18, the Department spent more than the allocated amount. The actual expenditure in 2015-16 was 77% higher than the budgeted expenditure for the year. This may be due to the lack of adequate budgeting and planning in the implementation of the scheme.

Figure 2: % change between actual and budgeted expenditure

Note: The expenditure figure for 2020-21 is revised estimate.

Sources: Union Budgets 2011-12 to 2021-22; PRS.

Schemes under the Department of Drinking Water and Sanitation

Expenditure by the Department of Drinking Water and Sanitation is primarily towards the two major schemes, the Jal Jeevan Mission (JJM) and the Swachh Bharat Mission-Gramin (SBM-G). Table 3 provides details on allocation towards these schemes over the past three years.

Table 3: Budgetary allocation to the Department of Drinking Water and Sanitation (in Rs crore)

Major head	Actuals (19-20)	Revised (20-21)	Budgeted (21-22)	Annualised Change (Actuals 19-20 to BE 21-22)
JJM	10,030	11,000	50,011	123%
SBM-G	8,213	6,000	9,994	10%
Others	21	24	25	10%
Total	18,264	17,024	60,030	81%

Note: BE is budget estimate.

Sources: Demands for Grants 2021-22, Department of Drinking Water and Sanitation; PRS.

JJM has been allocated Rs 50,011 crore in 2021-22 (123% annual increase over 2019-20). This increase may be owing to the government's aim to provide functional tap water connections to all households by 2024.¹ SBM-G has been allocated Rs 9,994 crore in 2020-21 (10% annual increase over 2019-20).

The 15th Finance Commission noted that the COVID-19 pandemic has highlighted the importance of drinking water and sanitation.¹⁴ It recommended greater emphasis on availability of safe drinking water and sanitation services to protect human health during infectious disease outbreaks.¹⁴ Further, it recommended that 60% (Rs 1,42,084 crore) of the total grants for rural local bodies be spent on these sectors during 2021-26.¹⁴

Swachh Bharat Mission - Gramin

In 2014, the Swachh Bharat Mission (Gramin) was launched by restructuring the Nirmal Bharat Abhiyan.⁴ The Mission aimed to achieve universal sanitation coverage, improve cleanliness, and eliminate open defecation by October 2, 2019.⁵

The expenditure towards rural sanitation schemes saw a steady increase from 2011-12 (Rs 1,500 crore) to 2017-18 (Rs 16,888 crore), and a decrease in the subsequent years. Table 4 shows the trends in budget allocation and actual expenditure on rural sanitation in the past 10 years.

Table 4: Budgeted versus actual expenditure on sanitation (in Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2011-12	1,650	1,500	91%
2012-13	3,500	2,474	71%
2013-14	3,834	2,244	59%
2014-15	4,260	2,841	67%
2015-16	3,625	6,703	185%
2016-17	9,000	10,484	116%
2017-18	13,948	16,888	121%
2018-19	15,343	12,913	84%
2019-20	9,994	8,213	82%
2020-21	9,994	6,000	60%

Note: The 'actuals' figure for 2020-21 is the revised estimate.

Sources: Union Budgets 2010-11 to 2021-22; PRS.

The increased spending from 2015-16 to 2017-18 was due to the focus on improving sanitation, after the launch of SBM-G. Note that the allocation towards the scheme has been the same since 2019-20 (Rs 9,994 crore). Further, there has been under-utilisation of the allocated amount since 2018-19.

Construction of Individual Household Latrines (IHHLs):

The cost for constructing a household toilet was increased from Rs 10,000 to Rs 12,000 in September 2014 when the Nirmal Bharat Abhiyan was restructured into SBM-G.⁶ This cost for constructing toilets is shared between the centre and the state in the ratio of 60:40. Table 5 gives

the number of household toilets constructed since the inception of the scheme.

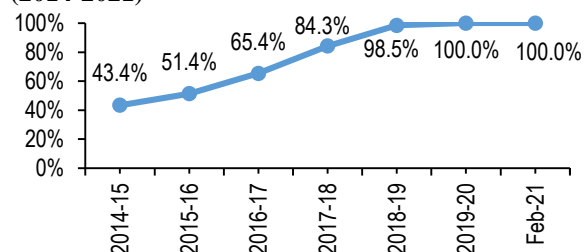
Table 5: Toilets constructed since 2014-15

Year	Toilets Constructed
2014-15	48,10,142
2015-16	1,23,98,184
2016-17	2,15,10,893
2017-18	2,92,57,956
2018-19	2,18,50,623
2019-20	1,77,02,842
Total	10,75,30,640

Sources: SBM Dashboard, Ministry of Jal Shakti; PRS.

As per the Department, 43.4% of the rural households had access to toilets in 2014-15, which has increased to 100% in February 2021.⁷ Figure 3 illustrates the total coverage of household toilets since the inception of the SBM programme.

Figure 3: Percentage of households with toilets (2014-2021)



Sources: Management Information System Reports of SBM, Ministry of Jal Shakti; PRS.

The Economic Survey (2020-21) noted that sanitation access improved for all states during 2012 to 2018.² However, inter-state differences in access to sanitation are still large, especially in rural areas. For example, access to sanitation is below 75% in states such as Odisha, Jharkhand, Uttar Pradesh, and West Bengal.²

Open Defecation Free (ODF) villages: Under SBM-G, a village is declared as ODF when: (i) there are no visible faeces in the village, and (ii) every household as well as public institution uses safe technology options for faecal disposal.⁸

After a village declares itself as ODF, state governments are required to verify the ODF status of such a village. Such verification must include indicators such as access to a toilet facility and its usage, and safe disposal of faecal matter through septic tanks.

The guidelines for ODF state that since it is not a one-time process, at least two verifications must be carried out.⁹ The first verification must be carried out within three months of ODF declaration. The second verification must be carried out around six months after the first verification.

As per the Ministry of Jal Shakti, a total of 6,03,142 villages across 711 districts and 35 states

and union territories have been declared as ODF as of February 2021.¹⁰ Of these, 5,99,953 villages (99.5%) have been verified by state governments as ODF under the first level of verification.¹⁰

1,79,945 villages (30%) have been verified as ODF under the second level of verification.¹¹ State-wise details on the number of villages declared and verified ODF are presented in the Annexure. The 15th Finance Commission recommended that an independent survey be instituted to estimate the prevalence of open defecation in the country.¹⁴

Further, the 15th Finance Commission noted that the practice of open defecation is still prevalent, despite access to toilets and highlighted that there is a need to sustain behavioural change of people for using toilets.¹⁴ In March 2020, the Department launched Phase II of SBM (G) which will focus on ODF Plus and will be implemented from 2020-21 to 2024-25 with an outlay of Rs 1,40,881 crore.^{12,13} ODF Plus includes ODF sustainability and solid and liquid waste management.¹⁴

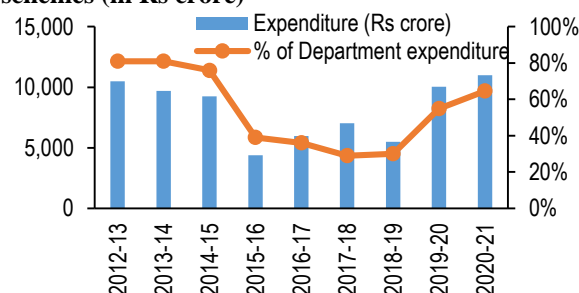
The 15th Finance Commission also noted that the scheme only provides financial incentives to construct latrines to households below poverty line (BPL) and selected households above poverty line.¹⁴ It highlighted that there are considerable exclusion errors in finding BPL households and recommended the universalisation of the scheme to achieve 100% ODF status.¹⁴

Jal Jeevan Mission

The Jal Jeevan Mission was launched in 2019 with the aim to provide functional household tap connection to every rural household by 2024.¹ It subsumed the National Rural Drinking Water Programme. The total estimated cost of JJM is Rs 3.6 lakh crore over 2019 to 2024.¹

In 2021-22, it has been allocated Rs 50,011 crore, which is a 123% annual increase over the actual expenditure in 2019-20. After a reduction in expenditure on the scheme from 2015-16 to 2018-19, the expenditure on the scheme was increased from 2019-20 onwards (Figure 4).

Figure 4: Expenditure on Drinking Water schemes (in Rs crore)



Note: Value for 2020-21 is the revised estimate.
Sources: Union Budgets 2012-13 to 2021-22; PRS.

Target versus achievements: The coverage of the National Rural Drinking Water Programme (NRDWP) was monitored in terms of habitations having provision of minimum 40 Litres Per Capita Per Day (LPCD) of potable drinking water sources at a reasonable distance. As of September 2019, 1% of rural households have been fully covered under the scheme with 40 LPCD of water supply and 16% households have been partially covered.¹⁴

JJM (which subsumed NRDWP) aims to provide functional household tap connections to every household. However, the coverage of piped-water-supply remains low. As of September 2020, only 28.7% of rural households have functional piped-water supply connections.¹⁵ Further, the 15th Finance Commission noted that though the Planning Commission had recommended increasing drinking water supply levels in rural areas from 40 LPCD to 55 LPCD, the Department is yet to incorporate this target in JJM.¹⁴

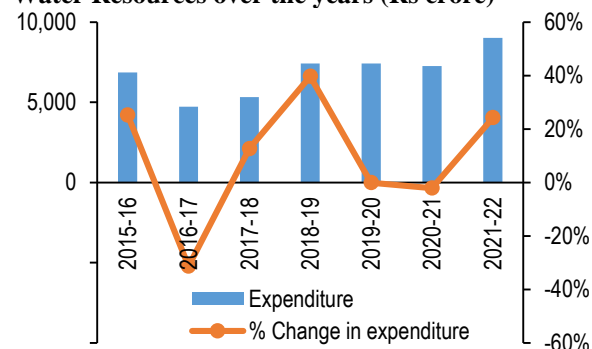
The Standing Committee on Drinking Water and Sanitation (2020-21) noted certain weaknesses in the implementation of the scheme including: (i) lack of participatory approach, (ii) inadequate financial resources, (iii) non-availability of technical human resources, and (iv) poor operation and maintenance of completed schemes.¹⁶ It recommended a speedy increase in the provision of piped water supply and effective strategies to monitor accomplished work.¹⁶

Department of Water Resources

The Department is responsible for: (i) planning and coordination of water resources in the country, (ii) monitoring of irrigation and flood control projects, (iii) supporting state level activities for ground water development, and (iv) reduction of pollution and rejuvenation of rivers.¹⁷

In 2021-22, the Department has an allocation of Rs 9,023 crore, accounting for 13% of the Ministry's allocation. This is a 10% annual increase over the actual expenditure in 2019-20.

Figure 5: Expenditure by the Department of Water Resources over the years (Rs crore)



Note: Values for 2020-21 and 2021-22 are revised estimates and budget estimates respectively.
Sources: Union Budgets 2015-16 to 2021-22; PRS.

Major schemes

In 2021-22, 62% of the Department's expenditure is estimated to be on the Pradhan Mantri Krishi Sinchai Yojna. This is followed by the National River Conservation Plan (10.5%), Water Resources Management (8.1%), and Namami Gange (6.7%).

Table 6: Allocation to the Department of Water Resources (in Rs crore)

Major Head	Actuals (19-20)	Revised (20-21)	Budgeted (21-22)	Change (Annualised) (Actuals 19-20 to BE 21-22)
PM Krishi Sinchai Yojna	4,033	4,391	5,588	17.7%
National River Conservation	1,336	900	950	-15.7%
Water Resources Management	626	449	729	7.9%
Namami Gange	353	500	600	30.3%
Central Water Commission	391	361	389	-0.2%
Central Ground Water Board	236	235	238	0.4%
Others	444	427	528	9.0%
Total	7,419	7,262	9,023	10.3%

Note: BE is budget estimate. Others include central sector projects such as river basin management, and major irrigation projects.

Sources: Demands for Grants 2021-22, Department of Water Resources, River Development, and Ganga Rejuvenation; PRS.

Issues to consider

Irrigation

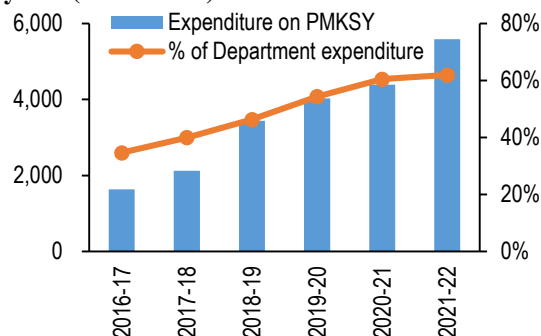
The Economic Survey (2016-17) highlighted that 52% of the total net sown area in India is unirrigated and depends on rainfall for cultivation.¹⁸ It noted that when rainfall is significantly less than usual, the unirrigated areas face higher adverse effects than the irrigated areas. Therefore, it recommended that irrigation coverage in the country needs to be increased.¹⁸

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) was launched during 2015-16.¹⁹ The scheme seeks to: (i) expand coverage of irrigation, (ii) improve water use efficiency on farms, and (iii) introduce sustainable water conservation practices.²⁰ The Jal Shakti Ministry implements certain components of the scheme, such as PMKSY – Har Khet Ko Pani, Flood Management, and Borders Area Programme.¹⁹ Other components of the scheme (such as Per Drop More Crop and Watershed Management) are implemented by the Ministry of Agriculture and Farmers' Welfare and the Ministry of Rural Development.

Figure 6 shows the expenditure on the scheme from 2016-17 to 2021-22. The scheme has been allocated Rs 5,588 crore in 2021-22. Its share in the Department's expenditure is estimated to

increase from 35% in 2016-17 to 62% in 2021-22.

Figure 6: Expenditure on PMKSY over the years (in Rs crore)



Sources: Union Budgets 2016-17 to 2021-22; PRS.

Har Khet ko Pani: This scheme's objectives include: (i) creation of new water sources, (ii) restoration and repair of traditional water bodies, (iii) command area development, and (iv) strengthening of distribution network from irrigation sources to the farm.^{21,22}

Some components of the scheme are:

Accelerated Irrigation Benefit Programme (AIBP): Under this scheme, financial assistance is being provided for faster completion of irrigation projects. As of February 2021, 44 projects (42%) out of the 106 projects selected under the scheme have been completed.²³ Further, 22 projects (20%) projects are facing constraints such as land acquisition, legal, and contractual issues.²³

Command Area Development and Water Management Programme: The objective of the programme is to enhance utilisation of irrigation potential created. This is achieved through activities such as construction of field channels, land levelling, and reclamation of waterlogged area.²⁴ As of February 2021, there are 88 projects under the programme, of which only 18 (21%) have achieved more than 50% physical progress.²⁵

Flood Management

The National Water Policy (2012) noted that climate change has deepened incidences of water related disasters such as floods, increased erosion, and increased frequency of droughts.²⁶ The central government supports states by providing financial assistance for undertaking flood management works in critical areas through the Flood Management and Border Areas Programme. From 2017-18 to 2019-20, central assistance of Rs 2,022 crore has been released under the scheme.²⁷

Under flood management component of the scheme, 14 projects of the 83 sanctioned projects had been completed as of March 2020.²⁸ Major issues faced while implementing the scheme include acquisition of land for the project, legal problems, non-release of state share, and

inadequate budget allocation.²⁹ The Standing Committee on Water Resources (2020-21) noted the delay in completion of projects and recommended that the Department resolve the underlying factors for such delay.²⁸

Conservation and Rejuvenation of rivers

The Ministry of Jal Shakti implements the Namami Gange Mission with the objective of rejuvenation of river Ganga and its tributaries through municipal sewage and industrial effluents treatment, river surface cleaning, and rural sanitation.³⁰ As of February 2021, 142 (43%) of the 334 projects sanctioned under the Mission have been completed.³¹

The scheme was launched in 2014 with a budget outlay of Rs 20,000 crore for the period 2015-2020.³² During the period 2015-16 to 2020-21, only Rs 4,016 crore (20%) has been spent on the programme.³² In 2021-22, the scheme has been allocated Rs 600 crore, which is 30% annual increase over the actual expenditure in 2019-20. Table 7 shows the trends in budget allocation and actual expenditure on Namami Gange from 2015-16. Note that the utilisation under the scheme has remained less than 65% since the scheme started.

Table 7: Budgeted versus actual expenditure on Namami Gange (in Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2015-16	-	100	-
2016-17	-	1,675	-
2017-18	2,300	700	30%
2018-19	2,300	688	30%
2019-20	750	353	47%
2020-21	800	500	62%

Note: The 'actuals' figure for 2020-21 is the revised estimate. Sources: Union Budgets 2015-16 to 2021-22; PRS.

The Standing Committee on Water Resources (2020-21) noted that the implementation of the program does not match the targets.²⁸ Some key bottlenecks affecting the implementation of projects include: (i) delay in tendering process, (ii) non-availability of land for sewage treatment plants leading to delay in execution of projects, and (iii) underutilisation of sewage treatment plants' capacities due to inadequate house sewer connections in cities, among others.³³ Further, in response to the Committee's observations, the Ministry of Jal Shakti responded (February 2021) that the COVID-19 pandemic and consequent lockdown had slowed the progress of the projects due to insufficient labor.³⁴

Ground water depletion

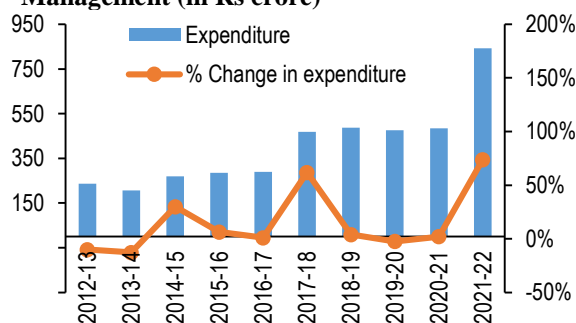
Currently, 63% of the net annual ground water available (393 billion cubic meter) is being utilised.³⁵ However, note that ground water development is not uniform across states in India.

It has exceeded 100% in some states such as Delhi (120%), Haryana (137%), Rajasthan (140%), and Punjab (166%).³⁵ This implies that the annual ground water utilisation in these states is higher than the net annual ground water availability. The status of ground water development ratio across states is provided in the Annexure. Experts have noted that India is fast moving towards a ground water crisis and nearly 60% of all districts in the country have issues related to either availability of ground water, or quality of ground water, or both.³⁶

The ground water management and regulation scheme was launched in 2008 with the aim to regulate and control the development of ground water resources of the country.³⁷ Further, the Atal Bhujal Yojana was launched in April 2020 for sustainable management of ground water resources through a strong ground water database and community participation in the sector.³⁸

Figure 7 shows the trend in expenditure on ground water schemes and the Central Ground Water Board over the past ten years. The expenditure on ground water schemes has increased substantially only in 2017-18 and 2021-22.

Figure 7: Expenditure on Ground Water Management (in Rs crore)



Note: Values for 2019-20 are revised estimates and 2020-21 are budget estimates.

Sources: Union Budgets 2011-12 to 2020-21; PRS.

Over the years, ground water usage has increased in areas where the resource was readily available due to its near universal availability, dependability, and low capital cost. Agriculture sector is the major consumer of ground water resources with about 89% of the total annual ground water extraction being used for irrigation (remaining 11% for domestic and industrial use).³⁹ Government incentives such as credit for irrigation and subsidies for electricity supply have further increased the dependency of agriculture on ground water.⁴⁰

NITI Aayog in its Composite Water Management Index (2019) emphasised that agriculture policies that limit MSPs and subsidies for water-intensive crops (such as sugarcane, wheat, and rice) in regions with declining water tables, can significantly bring down water demand from the agriculture sector.⁴¹ Further, providing better price support for crops such as pulses and oilseeds

(which require less water) would incentivise the production of these crops.⁴²

The 15th Finance Commission noted that under the Jal Jeevan Mission, 63% of rural habitations are being provided piped water supply from ground water sources.¹⁴ It highlighted that this will become unsustainable, given the highly depleted water table in the country.¹⁴

The Commission recommended the following to reduce the dependence on ground water: (i) fixing price on water on graded basis, where higher consumption entails higher charges, (ii) greater reliance on surface water for schemes such as Jal Jeevan Mission, and (iii) incentivising creation of rainwater harvesting structures (including stricter implementation of laws) and reuse of greywater.¹⁴

Ground water contamination

Ground water contamination is the presence of certain pollutants in ground water that are in excess of the limits prescribed for drinking water.⁴³ The Central Ground Water Board (2018) noted that concentration of contaminants such as fluoride, arsenic, nitrate, and iron in ground water beyond the permissible limits can lead to environmental issues and health problems. Table 8 shows the number of states and districts affected by select geogenic contaminants as of 2020.

Table 8: States and districts affected by geogenic contamination in ground water (2020)

Geogenic contaminants	Number of affected states/UTs	Number of affected districts
Arsenic (> 0.01 mg/l)	21	152
Fluoride (> 1.5 mg/l)	23	370
Nitrate (> 45 mg/l)	23	423
Iron (> 1mg/l)	27	341

Source: Unstarred Question 1944, Lok Sabha, Ministry of Jal Shakti, September 22, 2020; PRS.

Further, as of February 2020, 3% (51,952) of the total habitations (17,24,423) in India were affected by contamination of ground water.¹⁴

The 15th Finance Commission noted that the number of quality-affected habitations may rise as deeper drilling for drinking water sources may lead to chemical contamination of ground water.¹⁴

The National Water Quality Sub-Mission was launched in March 2017 to provide safe drinking water to 27,544 arsenic/fluoride affected rural habitations in the country, over a span of four years.²⁹ The Standing Committee on Drinking Water and Sanitation (2019-20) observed that out of these habitations, 11,884 habitations (43%) have been covered under the scheme. 4,100 habitations (15%) have seen an improvement in quality on retesting or have been covered under a state plan.²⁹

Annexure

Table 9: State-wise ODF declared and verified villages (as of 2020)

State	Total Villages	Total declared	Total Verified	Total Verified (2nd level)	% Verified 2nd level
Andaman and Nicobar Islands	192	192	192	192	100%
Andhra Pradesh	18,841	18,841	18,841	18,819	100%
Arunachal Pradesh	5,389	5,389	5,389	5,389	100%
Assam	25,503	25,503	25,503	15,245	60%
Bihar	38,691	38,691	37,317	-	-
Chandigarh	13	13	13	-	-
Chhattisgarh	18,769	18,769	18,769	18,769	100%
Dadar and Nagar Haveli and Daman and Diu	95	95	95	95	100%
Goa	365	365	18	-	-
Gujarat	18,261	18,261	18,261	18,261	100%
Haryana	6,908	6,908	6,908	6,908	100%
Himachal Pradesh	15,921	15,921	15,921	10,326	65%
Jammu and Kashmir	7,263	7,263	7,195	-	-
Jharkhand	29,564	29,564	29,333	164	1%
Karnataka	27,044	27,044	26,900	-	-
Kerala	2,027	2,027	2,027	2,027	100%
Ladakh	302	302	302	5	2%
Lakshadweep	9	9	9	-	-
Madhya Pradesh	50,228	50,228	50,228	3	0%
Maharashtra	40,533	40,511	40,505	-	-
Manipur	2,556	2,556	2,556	-	-
Meghalaya	6,028	6,028	6,028	2,101	35%
Mizoram	696	696	696	537	77%
Nagaland	1,451	1,451	1,142	-	-
Odisha	46,785	46,785	46,785	-	-
Puducherry	265	265	265	265	100%
Punjab	13,726	13,726	13,700	13,700	100%
Rajasthan	42,860	42,860	42,860	-	-
Sikkim	403	403	403	382	95%
Tamil Nadu	12,525	12,524	12,524	-	-
Telangana	14,200	14,200	14,149	6,822	48%
Tripura	1,178	1,178	646	142	12%
Uttar Pradesh	97,640	97,640	97,623	23,213	24%
Uttarakhand	15,473	15,473	15,473	14,340	93%
West Bengal	41,461	41,461	41,377	22,362	54%
Total	6,03,165	6,03,142	5,99,953	1,79,945	30%

Sources: Management Information System Reports of SBM; PRS.

Table 10: Status of level of ground water development across states (2017)

State	Ground water development (%)
Andhra Pradesh	44
Arunachal Pradesh	0
Assam	11
Bihar	46
Chhattisgarh	44
Delhi	120
Goa	34
Gujarat	64
Haryana	137
Himachal Pradesh	86
Jammu & Kashmir	29
Jharkhand	28
Karnataka	70
Kerala	51
Madhya Pradesh	55
Maharashtra	55
Manipur	1
Meghalaya	2
Mizoram	4
Nagaland	1
Odisha	42
Puducherry	74
Punjab	166
Rajasthan	140
Sikkim	0
Tamil Nadu	81
Telangana	65
Tripura	8
Uttar Pradesh	70
Uttarakhand	57
West Bengal	45
Total	63

Note: Total includes union territories; Data as of 2017.

Sources: Dynamic Ground Water Resources of India, 2017, Central Ground Water Board; PRS.

¹ Background on Jal Jeevan Mission, Ministry of Jal Shakti, https://jalshakti-ddws.gov.in/sites/default/files/JJM_note.pdf.

² “Healthcare takes centre stage, finally!”, Chapter 5, Volume I, Economic Survey (2020-21), February 1, 2021, https://www.indiabudget.gov.in/economicsurvey/doc/vol1chapter/echap05_vol1.pdf.

³ Annual Report 2017-18, Ministry of Drinking Water and Sanitation, https://jalshakti-ddws.gov.in/sites/default/files/Annual_Report_2017-18_English.pdf.

⁴ Review of Sanitation Programme in Rural Areas, 8th Report, Committee on Estimates 2014-15, Lok Sabha, http://164.100.47.193/lssccommittee/Estimates/16_Estimates_8.pdf.

⁵ About SBM, Swachh Bharat Mission-Gramin, <http://swachhbharatmission.gov.in/SBMCMS/about-us.htm>.

⁶ Review of Sanitation Programme in Rural Areas, Committee on Estimates 2014-15, Lok Sabha, http://164.100.47.193/lssccommittee/Estimates/16_Estimates_8.pdf.

⁷ Swachh Bharat Mission- Gramin, Ministry of Jal Shakti, last accessed on February 4, 2021, <http://sbm.gov.in/sbmdashboard/IHHL.aspx>.

⁸ Open Defecation Free (ODF) Sustainability Guidelines, Ministry of Drinking Water and Sanitation, <http://swachhbharatmission.gov.in/sbmcms/writereaddata/images/pdf/guidelines/Guidelines-ODF-sustainability.pdf>.

⁹ Swachh Bharat Mission- Gramin Guidelines, Ministry of Jal Shakti, last accessed on February 4, 2021, https://jalshakti-ddws.gov.in/sites/default/files/SBM%28G%29_Guidelines.pdf

¹⁰ Swachh Bharat Mission- Gramin Dashboard, last accessed on February 4, 2021, <https://sbm.gov.in/sbmdashboard/ODF.aspx>.

¹¹ Status of Declared and Verified villages, Swachh Bharat Mission- Gramin Dashboard, Ministry of Jal Shakti, last accessed on February 4, 2021, https://sbm.gov.in/sbmReport/Report/Physical/SBM_VillageODFMarkStatus.aspx.

¹² “Cabinet approves Swachh Bharat Mission (Grameen) Phase-II”, Press Information Bureau, Cabinet, February 19, 2020.

- ¹³ ‘Shri Gajendra Singh Shekhawat launches Swachh Bharat Mission (Grameen) Phase-II’, Press Information Bureau, Ministry of Jal Shakti, March 4, 2020.
- ¹⁴ Finance Commission Report (2021-26), Volume III, February 1, 2021, file:///C:/Users/Prs/Downloads/XVFC%20Complete_Report.pdf
- ¹⁵ Lok Sabha Unstarred Question No. 891, Department of Drinking Water and Sanitation, Ministry of Jal Shakti, answered on September 17, 2020, <http://164.100.24.220/loksabhaquestions/annex/174/AU891.pdf>.
- ¹⁶ Standing Committee on Demand for Grants (2020-21), Department of Drinking Water and Sanitation, Ministry of Jal Shakti, March 5, 2020, http://164.100.47.193/lssccommittee/Water%20Resources/17_Water_Resources_4.pdf.
- ¹⁷ Functions, Department of Water Resources, River Development and Ganga Rejuvenation, <http://mowr.gov.in/about-us/functions>.
- ¹⁸ Climate, Climate Change and Agriculture, Economic Survey 2016-17, https://mofapp.nic.in/economicsurvey/economicsurvey/pdf/082-101_Chapter_06_ENGLISH_Vol_01_2017-18.pdf.
- ¹⁹ Lok Sabha Unstarred Question No.2045, Ministry of Jal Shakti, July 4, 2019, <http://164.100.24.220/loksabhaquestions/annex/171/AU2054.pdf>.
- ²⁰ Website, Pradhan Mantri Krishi Sinchayi Yojna, last accessed on February 4, 2021, <https://pmksy.gov.in/>.
- ²¹ Demand no. 61, Department of Water Resources, River Development and Ganga Rejuvenation, Union Budget 2020-21, <https://www.indiabudget.gov.in/doc/eb/sbe61.pdf>.
- ²² “Implementation of PMKSY”, Press Information Bureau, Ministry of Agriculture and Farmer Welfare, May 2016, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=145004>.
- ²³ Dashboard, Pradhan Mantri Krishi Sinchayi Yojna – Accelerated Irrigation Benefit Programme, Ministry of Jal Shakti, last accessed on February 5, 2021, <http://pmksy-mowr.nic.in/aibp/>.
- ²⁴ Salient features, Pradhan Mantri Krishi Sinchayi Yojna, Ministry of Jal Shakti, <http://mowr.gov.in/programmes/salient-features>.
- ²⁵ Dashboard, Common Area Development Programme, Ministry of Jal Shakti, last accessed on February 5, 2021, <http://cadwm.gov.in/cadwm-dashboard/>.
- ²⁶ National Water Policy (2012), Ministry of Water Resources, http://mowr.gov.in/sites/default/files/NWP2012Eng6495132651_1.pdf.
- ²⁷ Lok Sabha Unstarred Question No.2052, Ministry of Jal Shakti, September 22, 2020, <http://164.100.24.220/loksabhaquestions/annex/174/AU2052.pdf>.
- ²⁸ Standing Committee on Demand for Grant (2020-21), Department of Water Resources, River Development and Ganga Rejuvenation, March 5, 2020, http://164.100.47.193/lssccommittee/Water%20Resources/17_Water_Resources_3.pdf.
- ²⁹ “Standing Committee on Water Resources (2019-20)”, Ministry of Jal Shakti – Department of Drinking Water and Sanitation, Demand for Grants (2019-20), http://164.100.47.193/lssccommittee/Water%20Resources/17_Water_Resources_2.pdf.
- ³⁰ Lok Sabha Unstarred Question No.2837, Ministry of Jal Shakti, December 5, 2019, <http://164.100.24.220/loksabhaquestions/annex/172/AU2837.pdf>.
- ³¹ Targets and Achievements, National Mission for Clean Ganga, last accessed on February 4, 2021, <http://35.154.100.225/nmcg/nmcgpmtmain.aspx>.
- ³² Sustainable development and climate change, Volume 2, Economic Survey 2018-19, https://www.indiabudget.gov.in/economicsurvey/doc/vol2chapter/echap05_vol2.pdf.
- ³³ “20th Standing Committee on Water Resources (2017-18)”, Ministry of Water Resources, River Development and Ganga Rejuvenation, Demand for Grants (2018-19), http://164.100.47.193/lssccommittee/Water%20Resources/16_Water_Resources_20.pdf.
- ³⁴ “Action Taken by the Government on the Observations / Recommendations contained in the Third Report on Demands for Grants (2020-21)”, Ministry of Water Resources, River Development and Ganga Rejuvenation, February 9, 2021, http://164.100.47.193/lssccommittee/Water%20Resources/17_Water_Resources_8.pdf.
- ³⁵ Water and Related Statistics, October 2019, Central Water Commission, <http://www.indiaenvironmentportal.org.in/files/file/water-and-related-statistics-2019.pdf>.
- ³⁶ 12th Five Year Plan, Planning Commission, 2013 http://planningcommission.gov.in/plans/planrel/fiveyr/12th/pdf/12fyp_vol1.pdf.
- ³⁷ Lok Sabha Unstarred Question No.737, Ministry of Jal Shakti, November 21, 2019, <http://164.100.24.220/loksabhaquestions/annex/172/AU737.pdf>.
- ³⁸ Lok Sabha Unstarred Question No. 1914, Ministry of Jal Shakti, answered on September 22, 2020, <http://164.100.24.220/loksabhaquestions/annex/174/AU1914.pdf>.
- ³⁹ Ground water year book, 2018-19, https://indiaiwris.gov.in/downloads/GW%20Year%20Book_2018-19_JAN%208.pdf
- ⁴⁰ Report of the Export Group on Ground Water Management and Ownership, Planning Commission, September 2007, http://planningcommission.nic.in/reports/genrep/rep_gmdwat.pdf.
- ⁴¹ Composite Water Management Index 2019, NITI Aayog, August 2019, <https://niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf>.
- ⁴² Report of the High-Level Committee on Reorienting the Role and Restructuring of Food Corporation of India, January 2015, http://www.fci.gov.in/app/webroot/upload/News/Report%20of%20the%20High%20Level%20Committee%20on%20Reorienting%20the%20Role%20and%20Restructuring%20of%20FCI_English_1.pdf.
- ⁴³ Lok Sabha Unstarred Question No. 2157, Ministry of Water Resource, River Development and Ganga Rejuvenation, answered on March 10, 2015, <http://164.100.47.132/LssNew/psearch/QResult16.aspx?qref=14305>.

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