



Government of Rajasthan

RAJASTHAN: URBAN WATER SUPPLY POLICY

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List of acronyms

ADB	Asian Development Bank	MLD	Million Litres/ Day
AMRUT	Atal Mission for Rejuvenation and Urban Transformation	NABARD	National Bank for Agriculture and Rural Development
BCC	Behavioural Change Communications	NCR	National Capital Region
BCM	Billion cubic metres	NRW	Non- Revenue Water
CAA	Constitutional Amendment Act	PHC	Primary Health Centre
CCDU	Communication and Capacity Development Unit	PHED	Public Health and Engineering Department
CIPP	Customer Interest Protection Plan	PPP	Public Private Partnership
CPHEEO	Central Public Health and Environmental Engineering Organisation	PWD	Public Works Department
CSR	Corporate Social Responsibility	RHB	Rajasthan Housing Board
DA	District Authority	RO	Reverse Osmosis
DAs	Development Authorities	RPCB	Rajasthan State Pollution Control Board
DEWATS	Decentralized Wastewater Treatment Systems	RUIDP	Rajasthan Urban Infrastructure Development Project
DLB	Directorate of Local Bodies	RUIFDCo	Rajasthan Urban Infrastructure Finance & Development Corporation
DMA	District Metering Area	RWSSC	Rajasthan Water Supply and Sewerage Corporation
DPR	Detailed Project Reports	RWSSMB	Rajasthan Water Supply & Sewerage Management Board
EPC	Engineering Procurement Construction	SAAP	State Annual Action Plan
FYP	Five Year Plan	SCADA	Supervisory Control And Data Acquisition
GIS	Geographic Information System	SLNA	State Level Nodal Agency
GWD	Ground Water Department	TDS	Total Dissolved Solids
HQ	Head Quarter	TNA	Training Needs Assessment
HRD	Human Resource Development	UDH	Urban Development & Housing
IEC	Information, Education And Communication	UIDSSMT	Urban Infrastructure Development Scheme for Small and Medium Towns
INR	Indian rupees	UIT	Union Territory
IPC	Interpersonal Communication	UITs	Urban Improvement Trusts
JICA	Japan International Cooperation Agency	ULD	Urban Local Department
LIC	Life Insurance Corporation	WRD	Water Resources Department
LPCD	Litres per Capita Per Day		
LSGD	Local Self Government Department		
MIS	Management Information System		

Nature and intent of the policy document

The **Rajasthan Urban Water Supply Policy** aims to influence the thought process and deliberations that will set an overall direction for developmental activities in the urban water sector.

The policy aims initially at recognising issues related to urban water management in aspects related to drinking water. The other components of the policy thereafter share the government's vision on addressing these issues, including implementation arrangements

The Government of Rajasthan (GoR) has prepared a separate State Sewerage and Wastewater Policy. It has set directions on aspects related to sewerage, septage management and wastewater recycle / reuse. These aspects have been kept outside the scope of the Urban Water Supply Policy document. However, linkages between these two policies have been considered in various components described in the policy document. This is the objective underpinning the Urban Water and Wastewater Policy.



1

Background and introduction

This policy document has been drafted considering the requirement for providing sustainable water supply services in urban areas of the state. The recommendations made under the Rajasthan State Water Policy of 2010, the National Water Policy of 2012 have been considered.

This policy intends to guide all the stakeholders, including government institutions, municipalities, parastatal bodies, water, service providers, and water users to improve efficiency and sustainability of water services. The policy provides an overarching framework for addressing the legal, regulatory, institutional, administrative, and environmental issues and challenges faced by the urban water sector. These key focus areas of the policy have been outlined in **Figure 1**.

Figure 1: Key focus areas of the policy



Rajasthan is a water-deprived state. According to the *Vyas Committee Report (2009)*, the average annual per capita availability in the state¹ is said to be less than 800 m³ (as against the generally accepted requirement of 1000 m³). The state's surface water resources form not more than roughly 1% of that in the country, while the state accounts for 6% of India's total population. The groundwater level in Rajasthan has reportedly declined by more than 4 m over the last decade². The quality of available water is also a matter of concern. On a national scale, 25% of all habitations with multiple quality issues in the country are located in Rajasthan, which include 40% of all fluoride-affected areas and, 83% of all salinity-affected areas, and 23% of all nitrate-affected areas.

Traditionally, Rajasthan's socio-economic culture has relied on a system of sustainable water management. Both the surface water and groundwater systems have been serving the local human and livestock populations traditionally. In addition, a key operational factor common across both of them has been a high degree of community participation, and the idea of socio-economic values built around a common objective of 'water for all'. The contemporary public water systems can be compared based on the utilisation of the potential of these systems.

Out of the state population of about 69 million, about 25% is urban, increasing at a rate close to 3% per annum. Currently, out of the total number of 185 urban local bodies (ULBs) in the state, 183³ are covered by piped water supply. According to the State Planning Department⁴, only 23 ULBs were able to provide more than 100 litres per capita a day (lpcd), 79 were able to provide 60–80 lpcd of water, and 74 were able to provide 40–60 lpcd as against a service-level benchmark of 135 lpcd. On the other hand, frequency of water supply is another major focus area, with the gap between water supply hours ranging between one and three days.

1.1 Institutional structure

The PHED is the primary entity responsible for planning, designing, building, operating, and maintaining urban and rural drinking water supply in the state. Under the 74th Constitutional Amendment Act (74th CAA), responsibility of the operation and maintenance of certain urban water supply schemes is to be handed over to ULBs. The availability of resources with ULBs—skilled staff and funding—therefore, is brought under sharp relief as the factor directly determining their capability to carry out their functions.

¹Vyas Committee Report, Government of Rajasthan, 2009

²Source: <http://wrmin.nic.in/forms/list.aspx?lid=304>

³Vyas Committee Report, Government of Rajasthan, 2009

⁴Source: <http://wrmin.nic.in/forms/list.aspx?lid=304>

It is felt that in future, the role of the PHED should focus more on bulk water supply and local distribution. On the other hand, operation and maintenance (O&M) cost of the urban scheme should be that of ULB's that could manage independently and collect tariff to operate water supply on PPP or management contract basis.

1.2 Amount and quality of water supplied

Table 1: Per capita water supplied in selected townsⁱ

Urban centres	Per capita water supplied (lpcd)	Urban centres	Per capita water supplied (lpcd)
Kuchera	41	Govindgarh	27
Makrana	34	Baswa	17
Malpora	31	Jaipur	134
Kumher	28	Udaipur	182
Churu	127	Satalkheri	26
Bhadra	80		

Table 1: Per capita water supplied in selected towns, which presents the amount of water supplied in certain towns of the state, highlights the difference between the supply quantities across various urban centres.

Table 2: Districts with a high proportion of unpotable groundwater sourcesⁱⁱ

District	Total number of samples	Total number of unpotable samples	District	Total number of samples	Total number of unpotable samples
Bhilwara	213	57	Barmer	68	52
Nagaur	160	66	Jodhpur	55	26
Bharatpur	199	42	Bundi	93	31
Churu	248	31	Udaipur	123	23
Jaipur	1,868	350			

Some 70% of habitations in the state are facing contamination in their drinking water, which has high total dissolved solids (TDS), and too much salinity, fluoride and nitrates. Groundwater is a major source of water supply in the urban centres. **Table 2** presents a select set of samples where groundwater is the most unpotable.

1.3 Extent of piped water coverage

At the policy level, it is intended to provide all households with a piped water connection and therefore, ULBs need to develop a strategy for extending pipe coverage in uncovered areas. **Table 3** presents the situation in this regard in select urban centres of the state. The data is intended to highlight the gap between the existing coverage of piped water supply and the intended full coverage.

Table 3: Towns and extent of piped water supply in select towns/citiesⁱⁱⁱ

Urban centres	Percentage of households in the jurisdiction with piped water connections	Urban centres	Percentage of households in the jurisdiction with piped water connections
Mandalgarh	50	Hindaun	8
Todaraisingh	65	Tijara	10
Tonk	52	Gothra	22
Uniara	38	Nimbahera	51
Bayana	50	Satalkheri	41
Deeg	32		

1.4 Recovery of operations and maintenance (O&M) costs and efficiency of revenue collection

At the policy level, it is expected that O&M costs will be recovered. A vicious circle is often observed starting with low quality of assets, leading to poor service quality and the subsequent unwillingness to pay. This in turn results in inadequate funding to improve asset quality. A branch of this circle covers higher dependence on subsidies (estimated at 74%⁵) and cross-subsidies. The tariff revenues of water supply and sewerage collected cover approximately 35% of

⁵Rajasthan: Water Assessment, International Finance Corporation, 2013

the current O&M costs. Poor metering, billing, and collection rates on one hand, and un-rationalised tariff levels/structure on the other, are considered as the main factors responsible for this financial scenario.⁶

To improve revenue collection, role of human activity for meter reading and assessment should be reduced. This can be undertaken by introducing latest meter and metering technology of smart meters and advance meter reading by remote.

Table 4 highlights the situation related to cost recovery (operating ratio⁷) in certain towns of the state, showing the varying levels of O&M cost recovery as against the target of full recovery.

Table 4: Cost recovery in selected towns of the state^{iv}

Urban centres	Cost recovery	Urban centres	Cost recovery
Beawar	0.95	Bikaner	23.50
Kekri	100.00	Churu	52.20
Goredi Chancha	5.40	Alwar	16.50
Kuchera	5.50	Jaipur	2.80
Nagaur	5.40	Udaipur	26.11
Todabhim	1.00		

At a deeper level, the efficiency of collection of bills is reported to vary between zero (e.g. Bhinder and Deogarh) and 100% (e.g. Padampur and Udaipur). It is to be noted that the efficiency of billing (revenue assessment) itself needs to be monitored.

1.5 Non-revenue water (NRW) levels

Table 5: NRW levels for selected towns in Rajasthan¹

Urban centres	NRW level (%)	Urban centres	NRW level (%)
Kuchera	47	Jaipur	42
Hindaun	60	Bassi	52
Gangapur	68	Viratnagar	46
Todra	65	Churu	35
Kherli	45	Bhadra	12

NRW results in commercial and physical losses to the water service provider. A high quantity of NRW hinders coverage expansion and service-level improvement. **Table 5** highlights the NRW levels of selected towns across Rajasthan, depicting the relatively high yet varying levels of NRW across the selected towns of the state.

1.6 Sources of water supply: Groundwater/surface water

Of the 222 schemes supplying water to the urban centres of the state, 14 (or 7%) depend on surface water, 54 (or 25%) on both surface and groundwater and the remaining 156 are entirely dependent on groundwater.^v **Table 6** shows the extent of reliance of urban water supply on groundwater and surface water. These numbers are not exclusively for urban use. Currently, separate data for monitoring urban reliance on ground/surface water sources is not being collected.

Table 6: Source of domestic water^{vi}

Source of water	Percentage of drinking water demand* satisfied by these sources	Percentage of drinking water demand* satisfied by these sources in Jaipur city
Groundwater	91	75
Surface water	9	25

**Although this demand will include rural as well as urban areas, groundwater reliance in urban areas is likely to be even higher.*

1.7 Metering

Data shows that over 32 urban centres in the state do not have metered household connections.^{vii} The extent of metering, where meters are installed, varies from 17% (e.g. Beawar) to 87% (e.g. Udaipur).

⁶Lessons from Business Plans for Maharashtra, Rajasthan, Haryana and International Good Practices, World Bank, 2012

⁷Total annual revenue assessed over total annual O&M costs

1.8 Duration and frequency of water supply

While majority of the towns (161) receive water supply once every 24 hours, a considerable number receives it less frequently—49 towns once in 48 hours, and 12 towns once in 72 hours. The duration of water supply varies from 20 minutes to over one hour every day. Inclusion of *this data in the policy demonstrates that cognisance has been taken of the difference between the current hours of supply and the intended 24x7 supply.*

1.9 Tariff mechanism

Even though ULBs are technically independent to determine water tariffs (as per the 74th Constitutional Amendment Act or CAA), the legitimacy of their decisions needs further strengthening. As such, in practice, they are not using their rights and responsibilities to determine the tariffs.

Depending on individual water supply, each ULD would need to design its tariff structure. Such situations exist in several states like Madhya Pradesh, Gujarat, and Maharashtra.

1.10 Customer grievance redressal

The policy recognises that many complaints are not even registered due to the possible lack of easily accessible mechanism for customers to register grievances. The reported ^{viii} redressal of a majority of customer grievances needs to be viewed in this context. Therefore, each water supply system should have an active customer service centre/call centre that is duly outsourced for providing effective redressal service.

1.11 Human resources

Hiring of staff at ULBs becomes critical from the perspective of O&M of water supply and sanitation systems according to the 74th CAA. The current levels of vacancies across ULBs range from 18% (e.g. Hanumangarh) to 51% (e.g. Tonk). This data aims to contextualise and drive the approach adopted to address institutional and human resource-related aspects for improving water supply services.

1.12 Water transfers due to demand-supply gap

It is projected^{ix}, that by 2045, to meet the demand-supply gap of 3,037 MLD in both groundwater and surface water, solutions that are more effective will be considered.. The policy recognises this in adopting approaches for conjunctive water use and progressively greater use of recycled water for non- consumptive usage.



"According to the Vyas Committee Report, by 2045, the state is estimated to experience water shortage of 9.4 BCM. In this shortage, surface water will contribute 2.4 BCM (25%) and groundwater 7.0 BCM (75%)."

1.13 Investment in the sector

An outlay of 2,402.40 crore INR was provided for urban water supply sector in the 11th Five Year Plan or FYP 2007-2012, against which the actual expenditure incurred for the period 2007-11 was 1,749.99 crore INR (73%). For the 12th FYP (2012-2017), out of the total outlay of 14,615 crore INR for the water supply and sanitation sector, 5,394 crore INR (37%)^x is planned to be spent on urban water supply. *The policy intends for: (a) future and planned investments to be correctly estimated and (b) the intended investments to be effectively facilitated.*

1.14 Private sector participation

The following table presents selected new initiatives proposed to be taken up through private sector participation as part of the 12th FYP.

Table 7: Selected new initiatives for PPP/EPC projects as per the 12th FYP^{xi}

Name of the project	Project brief
Chambal-Bhilwara Urban Water Supply Scheme: Augmentation (Phase-II) ⁱ	<ul style="list-style-type: none">2.5 million residents of 9 towns and 1,688 villages in Bhilwara and Kota districts, and 68 villages en route to Chittorgarh district will be covered. Source will be the Chambal river, near Bhainsroadgarh, which is situated upstream of Jawahar Sagar2.5 billion INR on turnkey basisCluster scheme of 205 villages of Asind tehsil in Asind town

Name of the project	Project brief
Preparation of model concession agreement for PPP for improvement and management of the city's water supply distribution system	<ul style="list-style-type: none"> Covers the towns of Ajmer and Udaipur Focuses on developing additional sources of water and improving the existing water supply and sewerage systems in Udaipur and Ajmer

1.15 Rainwater harvesting

Efforts to harvest rainwater in urban areas are still underway. The following table presents the rise in groundwater level in *Buja* village achieved through the construction of *johad* (earthen check dams that catch rainwater). *The intent of this data is to demonstrate the potential of rainwater harvesting and traditional methods in improving the levels of groundwater.*

Table 8: Rise in groundwater level due to traditional water harvesting methods^{xiii}

Total depth of well (m)	Depth of water level before construction of <i>johad</i> (1985)	Depth of water level after construction of <i>johad</i> (1994)
25.30	19.30	7.63
20.40	90.40	8.05
13.10	8.50	2.44

1.16 Institutional framework

The following table (Table 9) presents an overview of the institutional framework applicable to the urban water supply sector in Rajasthan.

Table 9: Existing Institutional framework for the urban sector

Institutions/Agencies	Roles/ Responsibilities
State government	<ul style="list-style-type: none"> Policy, funding and tariff determination
State Water Resource Planning Department (SWRPD)	<ul style="list-style-type: none"> Policy, planning
Public Health and Engineering Department (PHED)	<ul style="list-style-type: none"> Policy, asset creation, O&M billing and collection, quality monitoring
Rajasthan Water Supply and Sewerage Corporation (RWSSC)/ Rajasthan Water Supply & Sewerage Management Board (RWSSMB)	<ul style="list-style-type: none"> Institutional decisions and financing for water supply projects of the PHED
Water Resources Department (WRD)/ Ground Water Department (GWD)	<ul style="list-style-type: none"> Overall water resources management, monitoring and regulation of groundwater
Urban development and housing	<ul style="list-style-type: none"> Administrative department of urban development and housing; monitoring and supervising DAs/UITs/RHB (Rajasthan Housing Board)
LSGD/Directorate of Local Bodies (DLB)	<ul style="list-style-type: none"> Administrative department of local government/ ULBs; monitoring and supervision of ULBs
Rajasthan State Pollution Control Board (RPCB)	<ul style="list-style-type: none"> Environmental regulation and pollution control
Rajasthan Urban Infrastructure Development Project (RUIDP)	<ul style="list-style-type: none"> Special project unit for urban water supply, sewerage and sanitation infrastructure creation for RUIDP project towns (funded by ADB)
Rajasthan Urban Infrastructure Finance & Development Corporation (RUIFDCo)	<ul style="list-style-type: none"> Channelising funds for ULBs, nodal agency for JnNURM, UIDSSMT, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and others project units (asset creation for all towns)
Development Authorities (DAs)/Urban Improvement Trusts (UITs)	<ul style="list-style-type: none"> Urban development; creation of developed land parcels; infrastructure development and service delivery for areas under jurisdiction
Development Authorities (DAs)/Urban Improvement Trusts (UITs)	<ul style="list-style-type: none"> Urban development; creation of developed land parcels; infrastructure development and service delivery for areas under jurisdiction
ULBs	<ul style="list-style-type: none"> Operation and management of urban water supply in some ULBs
Private operators	<ul style="list-style-type: none"> Management of urban water supply and sewerage in full of part – water treatment plants (WTPs), STPs, etc.

Existing arrangement in water supply sector: Public Health and Engineering Department (PHED) is responsible for end-to-end management of water supply systems – policy, design, construction, operations and maintenance, billing and collection, and quality monitoring activities, for all components including intake, treatment, transmission and distribution. In compliance with 74th CAA, GoR has delegated O&M, billing and collection related to water supply services to a few ULBs in the State (8 ULBs have been delegated the function under State Government Order since 2012). While GoR is planning to delegate functions to other ULBs in a similar model, as of now, PHED is responsible for all activities related to water supply in other ULBs in the state. PHED undertakes capex and opex works through fund available from revenue collected from water charges, schemes of state / central government, external aid and budgetary allocations available from GoR.



2

Need for a comprehensive policy



"Planning, development, operation, and maintenance of all water resources... in response to the growing need for drinking water... [for] general improvement of living conditions and employment is of utmost importance."

-Rajasthan State Water Policy, 2010

The GoR remains fully committed to providing safe drinking water services as a basic human right fulfilling a fundamental need to its citizens.

In order to address the complex technical, institutional, social, environmental, and sustainability challenges facing urban settlements, a comprehensive and specific urban water supply policy has been envisaged.

The Rajasthan State Water Policy, 2010, provides the following recommendations for drinking water:

Adequate drinking water facilities shall be provided to the entire population both in urban and in rural areas. Future irrigation and multipurpose projects shall invariably include a drinking water component wherever there is no dependable alternative source of drinking water. Any available water should be channelised to meet the drinking water needs of human beings and animals. . The following actions shall be taken to fulfil this need:

- i. Increased budget shall be allocated for upgrading urban and rural domestic and livestock water supply.
- ii. Water rates shall be gradually increased to self-support the operation of urban and rural piped schemes.
- iii. Finance of rural water supply schemes shall be continued.
- iv. Water quality standards shall be ensured.
- v. Strict control over activities that endanger sources, such as discharge of hazardous wastes etc., shall be exercised.
- vi. Privatisation of urban water supply especially for meter reading, billing, etc. can be contracted out.

In addition to these, the goal of the state's urban water supply policy is to ensure socio-economic development and improved health status of urban population, especially the poor and disadvantaged with emphasis on gender specific issues, through the provision of sustainable water supply services and protection of the environment. These provisions should be implemented keeping a balance between the notion of increasing future urban population and optimal usage of state water resources to meet overall state water requirements in sectors other than urban.

In this regard, the policy specifically endorses the following core principles:

- i. Environmentally and socially sustainable distribution and utilisation of water resources.
- ii. Inclusive and participatory decision-making.
- iii. Transparent decision-making processes to achieve socio-environmental as well as economic-financial objectives.
- iv. Capacity building for enhanced institutional ability to govern the sector effectively.
- v. Ensuring, protecting, and optimising investments.
- vi. PPP in the most appropriate manner.
- vii. Public outreach for environment and health-related outcomes.
- viii. Establishment of an efficient, effective, affordable, and accountable system for managing urban water supply.
- ix. Effective monitoring and evaluation of the initiatives that have been taken up to improve water supply services.
- x. Financially self-sustainable water distribution systems, through full recovery of O&M costs.
- xi. Clearly defined roles for bulk and retail distribution of water.

3

Goal and vision of the Rajasthan Urban Water Supply Policy

3.1 Vision of the policy

The policy envisions providing universal and continuous access to potable-piped water supply services at an affordable price and in an equitable, financially sustainable, and environmentally sustainable manner in all urban areas of the state. The following aspects are critical to achieve this goal:

- i. Coverage of all citizens in the urban areas for service provisioning.
- ii. Adequate water services provided to all urban customers.
- iii. Equity across the geographic and demographic fabric of the customer base.
- iv. Ensuring the system's financial sustainability in a progressive manner through improved efficiency, tariff rationalisation, corporatised operations, and decreased dependence on unsustainable resources.
- v. Improving service levels in a well-defined and phased manner by ensuring interventions in the spheres of infrastructure, institution, autonomy, and management, monitoring mechanisms and regulatory framework.
- vi. Performance-linked appraisals and other incentive mechanisms for successful and professional operations of service-providing organisations.
- vii. A mixed period of 5, 15, and 30 years according to the complexity and scale of the objectives to be achieved.
- viii. Guidelines to decide the usage of water, drinking water being the priority, which is drawn from surface sources and guidelines for reducing service level and frequency of supply in time of drought and disaster.

The state drinking water policy recognises water as a prime natural resource, a basic human need, and a precious asset of the state. The Sector Vision for 2025 as stated in the policy is: *"Support socio-economic development of the state by ensuring safe, potable, affordable, accessible, reliable, and equitable drinking water supply to all its citizens by creating robust and sustainable infrastructure backed up by strong institutional and financial structure and comprehensive legal and regulatory framework."* In addition, the state would focus on increasing the PHED's share in all water bodies by using better irrigation practices such as sprinkle, drip, and other water saving irrigation instead of flow irrigation to augment the existing water supply levels.

4

Objectives of the policy

The GoR aims to provide safe and reliable water supply through piped distribution systems to all households at an affordable price. The objectives of the policy are briefly described below:

1. **Water coverage:** To provide 100% coverage to all households in urban areas of the state with at least 135 lpcd of potable water, supplied through 24x7 piped and metered individual water supply connections with reduced NRW levels. Focus shall be on customer satisfaction, frequency, and reliability. Priority shall be given to increasing the coverage of water supply services, especially in slum areas.
2. **Sustainable water supply:** To ensure availability, quality, and sustainability of domestic water supply by: (a) conserving existing water sources; (b) improving the efficiency of existing schemes (including reduction of losses) and their financial viability; (c) using all possible options of water treatment as per requirement; and (d) developing new and sustainable water sources.
3. **Sector regulation:** To regulate the urban water supply sector using institutional and legal means in order to provide adequate water to all users; ensure the safety and security of service provisioning systems, and facilitate long-term financial sustainability of the sector; to provide guidelines on the legal/ regulatory framework; and make efficient institutional arrangements for sustainable water supply services.
4. **Environmental sustainability:** To improve the quality of life and environment through effective and efficient management of water services and formulation of guidelines for the conservation of depleting water resources in Rajasthan.
5. **Restoration of traditional water management practices:** Focus on improving key infrastructure, local/ community participation-based maintenance, and revitalisation of traditional water systems in order to provide water services to the masses in a comparatively shorter period of time and with investment that is more efficient. In addition, raise public awareness and consciousness on water usage, issues related to unsustainable water practices, and water conservation.
6. **User participation:** To ensure effective participation of users in developing, operating and maintaining water supply services and to empower them to manage their own water supply services while ensuring gender-sensitivity and sustainability in sectoral decision-making. In addition, to encourage judicious allocation of water, with universal access to safe drinking water as the top priority.
7. **Institutional capacity:** To improve institutional capacity and human resources of related departments and governing agencies in order to provide efficient, effective and sustainable water services by working with empowered and capacitated local communities.
8. **Integrated approach** towards improving water supply and hygiene behaviour.
9. Ensure **gender responsiveness** in the planning, implementation, and management of water supply policy at state government, key departments, and ULB levels.
10. Provide pointers on **sustainable financing arrangements** including PPP and community participation for the water supply sector, and aim for financial sustainability of systems for water distribution.
11. Accelerated growth by contributing to the state's economic and social advancement.
12. Allocation of **institutional responsibilities** between key stakeholders - responsibility of bulk water distribution to the PHED and of retail water distribution to ULBs.

5

Structure and components of the policy



The structure of the policy

The policy starts by recognising the ground-level concerns and situation in the water sector in Rajasthan. The objectives of the policy are based on the on-ground situation and the concerns to be addressed. The policy then proceeds to present the approach to be adopted, and the guidelines to be followed for addressing the concerns and achieving the objectives.

To achieve this, the structure of the policy covers envisioned functions of key stakeholders in urban water supply sector of the state. These key stakeholders include key departments (PHED, UDH, LSGD), ULBs, and other governing agencies. Key components of the policy include the following:

- i. Water supply service coverage
 - a. Provision of individual water supply connections to households in slums and poor settlements
- ii. NRW reduction
- iii. Operationalisation of 24x7 water supply
- iv. Corporatisation of utilities
- v. Sustainable water management
- vi. Capacity building and institutional strengthening
- vii. Effective multilayer and multilevel grievance redressal mechanism

6

Principles for implementation of the policy

The key principles that will govern the roadmap for implementation of this policy cover:

- a. **Autonomy of institutions/agencies:** The institutions/agencies in consideration shall have certain independence to make decisions for management of operations in their area/ jurisdiction. The autonomy shall be balanced by procedural measures to ensure accountability and consideration of views of all the stakeholders.
- b. **Transparency:** State agencies shall voluntarily disclose information about project implementation, O&M, financial status, and performance indicators in a manner that is easily accessible to the public.
- c. **Accountability:** The agencies shall build in-house capacity to ensure prompt responses to comments, grievances, and queries raised by all stakeholders. The responsible department in the agency shall be trained to be up-to-date with key developments in the agencies, and ensure references to relevant public orders/notifications, while drafting responses to the queries or grievances.
- d. **Water allocation priorities:** Principle of equity and social justice must be adhered to for the allocation of water. For urban water allocation, priorities shall remain same as directed in the state water supply policy vide section 1.1.1. In case of water scarcity or stress, agencies shall ensure that basic drinking water needs of human beings and animals are met first.
- e. **Public participation:** A well-structured and reasonable process for public deliberation (to be carried out before a draft of a decision or an order is prepared) and consultation (to be carried out after a first draft of a decision or an order is ready) shall be carried out targeting all stakeholders. Some of these stakeholders include civil societies (such as non-governmental organisations or NGOs), educational and research institutions, donor organisations, democratically elected representatives and the customers themselves.
- f. **Capacity building of stakeholders (especially beneficiaries) to enable them to participate in the decision-making process:** For the state agencies to meet the requirements of the above-mentioned principles, relevant in-house capacity is required to implement functions related to transparency, accountability, and public participation. The relevant governing agencies, therefore, should focus on developing a vision and formulating plans to meet the requirements of training, human resource development, and skill development as instrumental components to ensure self-sustenance of all the agencies concerned. On the other hand, beneficiaries should be capacitated to provide comments/suggestions by creating awareness about the issues related to water supply. They should also be provided with comfortable media to comment on such matters.

6.1 Relationship between the PHED and ULBs

1. The state is committed to the decentralised management of urban water supply and schemes, in accordance with the 74th CAA, by strengthening ULBs to manage schemes and provide improved services, with the PHED as a partner and facilitator. It is also committed to continue with an integrated sector-wide approach to the development, execution, and management of urban water supply schemes through ULBs.
2. The GoR will adopt a gradual approach to moving the service delivery responsibility to ULBs as per the constitutional requirements. The PHED and UDH/LSGD/RUDSICO, therefore, will continue to play a key role, particularly as they bring technical expertise and experience. In addition, the PHED would be restructured into: (i) a bulk water supply service provider to city utilities; and (ii) an O&M agency that will provide O&M and distribution services to ULBs and city utilities under a contractual framework.
3. The PHED shall continue to be the nodal department for the implementation of drinking water supply projects in the urban areas of Rajasthan. All projects shall either be implemented or coordinated by the PHED so that the funds received from various sources are utilised optimally.

4. The PHED shall also provide inputs on policymaking, planning and development, resource mobilisation and allocation, monitoring and evaluation, and information management.
5. The PHED shall ensure time-bound implementation of all the policies. The responsibility for implementation and service delivery will continue to be shared between the operations wing of the PHED and ULBs.
6. The PHED shall, therefore, undertake the following:
 - a. Handover the function of all single-town/city-level schemes to ULBs in a time-bound manner.
 - b. Provide support to ULBs that request for support from PHED to implement new schemes (by passing a resolution in the ULB council) and agreeing to take over the management of created assets on sustainable basis, including beneficiary contribution towards capital cost, if applicable.
 - c. Provide technical support and undertake major repairs for all schemes operated and maintained by the ULBs.
 - d. Provide special considerations to all habitations predominantly inhabited by underprivileged or disadvantaged groups, persons belonging to scheduled castes, and persons residing in economically backward and other special areas (e.g. towns/cities along the international border, flood-prone and waterlogged areas, and so on).
 - e. Continue to be responsible for construction of common infrastructure, such as waterworks, laying of distribution pipelines up to the entry point of each town/city in multi-town/city schemes, and highly technical works such as reverse osmosis (RO) plants.
 - f. Provide teams to build the capacity of the ULBs to strengthen these institutions and inculcate good governance systems and practices until they are able to take primary responsibility for the implementation and management of their water supply systems.
 - These teams may be sourced from in-house resources and other departments (government institutions or universities).
 - Specifically, the capacities to be enhanced shall include enforcement of rules and regulations, accountancy and bookkeeping, supervision of the work of technicians and pump operators, liaising with government departments, and managing minor repairs.
 - g. Provide a range of capacity-building services for ULBs, including training courses, practical training, and exposure visits.
 - h. Provide teams to create and capacitate community-based organisations (CBOs) such as youth groups and mothers' clubs, as well as retired government officials and ex-servicemen, so they can participate in the sectoral decision-making by the ULBs. On gender-related aspects, this includes promoting the contracting of local women's groups for O&M of water schemes.
 - i. Assist ULBs to address a range of issues, including the following:
 - Motivate the community to share the responsibility for managing of town/city water supply systems. This covers being responsive and responsible for promptly reporting the issues and problems in the systems.
 - Computerise books of accounts for greater transparency and accountability, and publicise information, thus making it easily accessible to all stakeholders.
 - Build strong, transparent, and trust-worthy partnerships with the community..
 - Set up strong conflict resolution mechanisms within the town/city.

6.2 Indirect support to ULBs for effective implementation of the policy

In addition to the direct support components, components of indirect support shall also be considered. These components are of the nature of liaison between various departments in the following activities:

1. Engaging educational institutions for furthering community involvement and participation in decision-making.
2. Coordination with banks to expand the outreach of billing and collection mechanisms.
3. Legal support to recover water charges and fines from defaulters and to take punitive actions against unauthorised tapping from distribution networks.

7

Water management and source sustainability

The state government and water utilities (PHED and ULBs) shall take the following initiatives for effective water management in urban and surrounding areas:

- a. Harnessing economically utilisable surface water through improved planning, design and construction. It will also promote the conjunctive use of groundwater and surface water to provide multiple sources of water supply to the town/city, and thus promote water security (including rooftop rainwater harvesting and storm water harvesting).
- b. 'Water Grid' to interlink bulk water systems to enhance source sustainability.
- c. Water conservation in all sub-sectors of urban water supply by optimum utilisation of water, use of water saving devices and improved practices.
- d. Comprehensive and integrated planning for use of surface and groundwater resources, including conjunctive use.
- e. Investigating the economic and technical potential of the development of environmentally sustainable water resources and mitigation of environmental degradation.
- f. Financially sustainable development of water resources with pricing structure to reflect the use tariff as a tool to achieve multi-dimensional objectives of water management.
- g. Encourage the use of alternative cost-effective technologies for WTPs and life cycle-based process selection.
- h. Involvement of private sector and local communities in the development and O&M of sustainable water resources.
- i. Effective efforts to reach out to all stakeholders to ensure sustainable water management.
- j. Efficient and adequate human resources development and institutional infrastructure for adopting new technologies/practices and an innovative approach to achieve the objectives of sustainable water management.
- k. Evaluation of the potential for groundwater recharging with particular emphasis on water-critical and overexploited areas.
- l. Aquifer mapping and introduction of aquifer wise planning based on modern technologies and setting up of community organisations at the town/city and aquifer level to plan and manage groundwater resources with a focus on drinking water supply.
- m. Enhanced and informed public participation to manage groundwater extraction so as not to exceed the average medium-term recharge potential
- n. Strengthening rules for rainwater harvesting⁸ measures to cover all properties in Nagar Nigam/ Nagar Parishad/ Nagar Palika area.

⁸Provision of rainwater harvesting made mandatory in respect of plots having more than 300 sq. m area in Nagar Nigam/ Nagar Parishad/ Nagar Palika area and notification in this respect issued vide letter dated 16 January 2006 by the Local Self Department.

8

Water supply service coverage

The focus shall be on providing piped water to all the households of the urban centre (as notified by the government or census) on equitable and continuous basis. The PHED and the ULBs shall jointly prepare a roadmap for covering the entire population, especially the urban poor, with piped water supply.

8.1 Provision of individual water supply connections to households in slums and poor settlements

The state government aims to make water easily accessible to the households in slums and poor settlements. The actual extent of the initiative (especially to determine the number of public stand-posts that need to be removed and the number of connections they provide) shall be thoroughly discussed with and endorsed by all concerned stakeholders through a transparent process. The following points carry special significance in this regard:

- a. Priority will be to provide connections to poor households at an affordable tariff, and follow a pro-poor connection charge policy. Options of covering subsidies, rationalising or blocking tariff for this shall be considered by PHED, ULBs, and the government, in consultation with the stakeholders.
- b. Priority will be to ensure maximum coverage of poor households under the given constraints.
- c. Priority will be to identify the poor, and prevent non-deserving groups to benefit from any pro-poor initiatives.
- d. De-legalising the water connection bill, as a proof of residence, address, or ownership, should be explored as a solution to the problem of providing connection in slum and non-authorized areas, where water theft and illegal connections are prevalent.



9

Operationalising 24x7 water supply

The state is keen on providing 24x7 water supply to: (a) ensure continuous pressurisation of the piped system, and (b) eliminate the drudgery associated with intermittent water supply at odd hours of the day.

The following aspects shall be focussed upon in this regard:

- a. The government shall develop schemes that would encourage 24x7 water supply and provide subsidies in a transparent and accountable manner as necessary.
- b. Technical guidelines shall be promulgated to govern the implementation of 24x7 water supply schemes.
- c. Technical support shall be provided to all the ULBs to move towards metered 24x7 water supply systems in the future.



10

Metering

The state is committed to providing 100% individual metered household connections in all urban areas of Rajasthan. Accordingly, the PHED shall pursue the following initiatives:

- a. Deliver reasonably priced water meters to all towns/cities with 100% private individual household water connections providing 24x7 water supply.
- b. Convert all existing unmetered water connections to metered ones within the next five years.
- c. Ensure that all household connections from the new water supply schemes are metered.
- d. Assist the ULBs on demand to procure and supply good-quality meters and ensure cost-effectiveness and quality control (similar arrangement to be provided for meter repairs, replacement of old meters and recalibration of meters).
- e. Provide a standard design for household connections to ULBs.
- f. Assist in training local plumbers to ensure the use of good quality materials for household water connections and proper connection of water meters.
- g. Provide subsidised private water connections for slums and poor settlements in all towns/cities.
- h. Explore solutions for remotely readable meters.



11

NRW reduction

Reduction in NRW is envisaged to make more water available for distribution and enhance the financial sustainability of the service providers. The following measures shall be undertaken to realise this vision:

- a. Establishment of a strong and dedicated governance framework to monitor levels of NRW and to demonstrate effects of NRW on financial indicators such as tariff and the level of cost recovery. If the ULBs feel the need for creating a separate cell for the NRW reduction, an NRW cell can be established in the large ULBs, and at the level of clusters in smaller ULBs. This may help them in monitoring the achievement of the framework and extract accountability from the officials and external experts appointed in the cell.
- b. NRW shall be at a reasonable level: The reasonable level to be targeted at each of the urban centres shall be devised based on a comprehensive study and discussion among the PHED and the ULB officials.
- c. The following measures shall be undertaken to achieve a reduction in NRW levels:
 - i. Planning and implementation of district metering area (DMA)-based water supply distribution systems.
 - ii. Achieving 100% metering in service areas.
 - iii. Installation of bulk water meters at nodal levels.
 - iv. Replacement and repair (as applicable) of leaking and worn-out pipelines.
 - v. Replacement of inefficient pumping installations.
 - vi. Installation of pressure monitoring points.
 - vii. Detect leakages.
- d. NRW shall be directly linked to the reporting parameters on efficiency of the ULB as a service provider and the PHED as a facilitator of water supply service.
- e. The NRW reduction measures shall be a part of reorganisation, rehabilitation, and extension of existing water supply schemes. Similarly, it will be an integral part of O&M of new water supply schemes.

12

Development of water supply GIS

An effective and comprehensive GIS-based database and MIS, correctly mapping the assets, user base, and the status of operations, shall be established.

The following measures shall be taken in this regard:

- a. GIS technology shall be used for ground and surface water mapping and conservation.
- b. GIS shall be used to map the accurate status on lifespan, usability, and the levels of maintenance needed for proper operation of assets for water supply

12.1 Computerised gender-disaggregated customers' database

Women are often the most-affected group of beneficiaries when it comes to reliability, quality, and quantity of water supply. Gender-disaggregated database of customer profiles shall be used for determining the location and details of such higher-affected community sections. The following points shall be considered in this regard:

- a. Incentives shall be provided for organisations in the water sector to prioritise gender disaggregation in database creation, maintenance, and use.
- b. Institutional constraints that restrict gender disaggregation shall be removed. Roles and responsibilities of the PHED, and that of the ULBs shall explicitly cover gender-related functions.
- c. The information collected from the GIS-based system and MIS shall be analysed, and all future water initiatives shall consider these results, in order to empower women.

13

Corporatisation of utilities in major urban centres

Corporatised approach to service provisioning shall be adopted to make the services more focused and responsive to the needs of the situation. The arrangement shall aim to bring in economies of scale, operational autonomy, transparent management, more accountability, incentives to employees, and internal control systems in the form of audits, etc. which are necessary elements in delivering better public services.

The following guiding principles shall be adopted to devise a roadmap for the corporatisation of water services in major urban centres of the state:

- a. Determination of the urban centres eligible for corporatisation. For instance, the geographical and commercial scale of Jaipur could be considered as suitable for corporatisation.
- b. Taking an **integrated, holistic service delivery approach**, undertaking technical/system efficiency measures, and ensuring administrative and financial efficiency measures.
- c. **Increasing the coverage of supply, especially to the poor**, reducing non-revenue water and improving supply reliability, and incentivising demand side management.
- d. **Taking technical efficiency** measures complemented by administrative efficiency measures like proper HRD policies and planning.
- e. **Robust business planning and improvement in revenue**, with effective management of cash flows to improve financial management.
- f. **Transferring ongoing business**, assets, liabilities, staff, rights, and service obligations to a ring-fenced and professionally run entity.

The corporatised entity shall have the following characteristics:

- a. **Separate legal entity:** The organisation shall be legally established as an independent entity.
- b. **Managerial autonomy:** Management will have control over all inputs and issues related to business within the proposed area of operations. The control and autonomy shall be balanced by transparency and accountability measures elaborated in various sections of this policy.
- c. **Transparency and reporting:** The entity will be subject to corporate law, which has evolving principles of good governance and accounting rules in the country.
- d. **Staffing:** The entity shall have its own staffing policies and rules, allowing for workforce benefits such as performance incentives and bonuses, together with more flexibility on hiring/retention of staff and over other disciplinary procedures.
- e. **Economic regulation:** The entity shall adjust tariffs in an autonomous, transparent, accountable, and participatory manner. It shall manage its functions, ensuring benefits to the urban poor, preparing a roadmap for the 'Water for All' on a sustainable and affordable basis.
- f. **Partnerships:** The entity shall promote involvement of PPPs, NGOs/CBOs, CSR wings, and take other measures to ensure greater acceptance and ownership among stakeholders. The corporatised entity shall have a board of independent directors consisting of renowned representatives of all categories of stakeholders, namely academicians, NGOs, CBOs, eminent citizens, corporates and other significant stakeholders.

14

Tariff adjustment

Tariffs shall be treated as a comprehensive overlap of social, economic, financial, political, and environmental objectives of good sectoral governance. Tariff setting shall therefore be viewed as a tool to achieve such multi-dimensional objectives. One of the key financial/economic objectives recognised by the policy is full O&M cost⁸ recovery, which is a beginning for ensuring long-term financial viability of water supply services.



Note: In this context, the procedure for tariff determination is of the utmost importance. In the subsequent part of this section, the policy focusses on two major key components in tariff determination, starting from procedural approach to tariff methodology followed by cost rationalisation

The following guidelines shall be followed for tariff adjustment:

- a. Tariffs shall be ideally set in order to cover the reasonable and efficient cost of service delivery. At the same time, tariffs shall be set such that they are affordable to the people. The trade-off between these aspects shall be duly considered to achieve a balance.
- b. Utilities shall pay reasonably for extraction of raw water from the resources.
- c. Transparent, accountable, and participatory processes shall be carried out by the governing agencies in charge of determining the tariff.
- d. Connection charges may be incentivised to encourage people to take water supply service connections.
- e. Financial performance of the service providers shall be monitored based on performance benchmarks to focus on efficiency in operations.
- f. Tariffs shall be adjusted annually to reflect the annual changes in prices.

14.1 Framework principles for water tariff in urban areas

- a. A lifeline slab based on average consumption of urban poor or other vulnerable households (generally between 6–8 kilolitres or kl per month per connection) and tariff level kept at an affordable level shall be defined so that these needy communities are protected with assured water services.
 - The net operating subsidy required to meet the lifeline needs shall be cross subsidised from other customer groups.
- b. For optimal revenue collection, tariff shall have at least three slabs. Demand management considerations shall be reflected in the slab levels.
- c. High-consumption customers and commercial customers who use water for other than drinking and personal hygiene purposes shall be levied with higher than the average cost of water both for recovering full cost of water, financing the subsidy for poor and to discourage water wastage, thus encouraging demand management. At the same time, measures shall be carried out to ensure sensitivity towards judicious use of water and avoid the 'I pay, I will waste' mentality.
- d. Considering differential socio-economic conditions of different categories of urban local bodies, the respective tariff levels shall be separately fixed.
- e. Transparent subsidy framework shall be developed and instituted so that the poor and other vulnerable communities are protected and the cost recovery is insulated.
- f. Tariffs shall be adjusted periodically to reflect current O&M costs. The respective agency in-charge of tariff adjustment shall ensure that town specific differential is reflected in the tariff methodology prescribed herein as per the policy.

⁸Although there are cases where capital as well as O&M costs can be loaded on utility tariffs, in the current context the prevailing thinking is reflected in the preference for recovering only O&M costs.

14.2 Cost rationalisation

- a. Rationalisation of the costs to be recovered through tariffs for water supply, reuse and recycle shall be a pre-requisite in the tariff adjustment process taking into considerations local parameters such as willingness to pay, support for tariff collection and support for imposition penalties in case of non-submission.
- b. A draft methodology document shall be prepared, detailing the steps for approving the costs to be recovered through tariffs.
- c. Comments/suggestions shall be invited about the cost components from all relevant stakeholders based on the draft methodology document publicised through easily accessible media.
- d. The draft methodology document shall be circulated to relevant departments of the government, concerned NGOs in the relevant sector(s), academic institutions, service providers dealing with provision of water services, and experts in the relevant fields.
- e. Copies of the draft methodology paper shall be made available at all relevant government offices followed by due communication of its availability through relevant public media such as newspapers and social media (in all relevant languages).
- f. Public hearings (with the official quorum capacitated to understand all relevant state languages) shall be held at all major urban centres of the state to consider the views and comments of the stakeholders on the draft methodology document.
- g. Dates and venues for the public hearings shall be fixed and published on widely accessible public media such as newspapers and social media, in advance for a considerable period prior to the date of the public hearing.
- h. The process mentioned in steps a. to g. shall be completed within a stipulated period, unless extended by the respective governing agencies, with due publicity of this fact.
- i. Upon receiving the comments/suggestions on the draft methodology document, a list relating to approval of costs to be recovered through tariff shall be prepared, expressing the views of the stakeholders. The list shall be publicised through easily accessible media.
- j. The methodology document based on the comments and inputs received shall be revised upon publicising the comments/suggestions for a reasonable time.
- k. The revised methodology document shall be considered as final and binding until a review is taken up as per the procedure determined by the governing agencies concerned.
- l. The costs approved through the above steps shall be considered for the preparation of the tariff proposal.

14.3 Tariff methodology

- a. Support shall be provided to the ULBs on demand to determine and devise rationalised tariffs that incentivise the conservation of water and minimise wastage.
- b. The RWSSMB shall be made fully functional. The board shall provide regular inputs to all service providers to oversee the implementation of the urban water supply policy.
- c. A draft methodology document shall be prepared for fixing the methodology for adjustment of water tariff, subject to point g. below.
- d. Comments/suggestions shall be invited from all relevant stakeholders on draft methodology document publicised through easily accessible media.
- e. The draft methodology document shall be circulated to relevant departments of the government, NGOs concerned in the relevant sector(s), service providers dealing with provision of water services, and experts in the relevant fields.
- f. Copies of the draft methodology document shall be made available at all relevant offices, followed by due communication of its availability through relevant public media such as newspapers and social media (in all relevant languages).
- g. Public hearings (with the official quorum capacitated to understand all relevant state languages) shall be held at all major urban centres of the state to consider views and comments of the stakeholders on the draft methodology document.
- h. Dates and venues for the public hearings shall be fixed and published on widely accessible media such as

newspapers and social media in advance for a considerable period prior to the date of the public hearing.

- i. The process mentioned in a. to h. , shall be completed within a stipulated period, unless extended with due publicity.
- j. Upon receiving the comments/suggestions on the draft methodology document, a list of comments received shall be prepared expressing the views by the stakeholders relating to tariff, followed by publicising the same through easily accessible media.
- k. The methodology document based on the comments and inputs received, shall be revised upon publicising the comments/suggestions for a reasonable time.
- l. The revised methodology document shall be considered as final and binding until a review is taken up as per the procedure determined by the governing agencies.
- m. The revised methodology document shall be complete with a pro forma for drafting of the tariff proposal. This shall be made publicly available to all relevant service providers.
- n. Inflation adjustment shall be considered in a transparent manner with or without the procedure of public consultation.
- o. The tariff adjustment process shall duly consider the achievements of the service providers in improving their performance. Tariffs across various service provider jurisdictions shall be different, based on the differences between their performances.
- p. Incentives shall be provided for maintenance to ULBs for achievements of envisaged goals in the urban water supply policy.



15

Performance monitoring of service providers

The following steps shall be carried out for effective performance monitoring of service providers:

- a. A performance-monitoring template shall be prepared that covers key performance indicators to assess the level of performance of the service providers.
- b. The template shall be finalised based on the stakeholders' comments and views obtained through easily accessible public media.
- c. The service providers shall regularly provide reports on their performance according to the performance-monitoring template.
- d. The reports of the service providers shall be publicised through easily accessible media, and stakeholder comments shall be invited on the performance reports.
- e. The template as well as performance management plans of the service providers shall be updated based on stakeholder comments.
- f. Customer satisfaction surveys shall form an essential component of reporting on the performance of service providers.
- g. Reports of performance monitoring of service providers shall be available online for public reference.

15.1 Design framework for service-level improvement

Each service provider shall prepare service-level improvement plans (SLIPs) to cover all households with water supply. The PHED will also prepare the State Annual Action Plan (SAAP), which will be a state-level service improvement plan indicating the year wise improvements in water supply and sewerage connections to households. These plans shall be prepared for the next 30 years with short-term, medium-term and long-term plans.

The detailed project reports (DPR) for water supply shall be prepared as per best engineering practices, socio-economic consideration, and guidelines widely acceptable. However, the units, which can be developed in modules (e.g. water treatment plants, pumping stations, on-site treatment facilities, etc.), may be designed for appropriate shorter period as stipulated in the Central Public Health and Environmental Engineering Organisation (CPHEEO) manual.

The state government shall take up the projects for financial support in the following order of priority:

- i. District HQ towns
- ii. Towns of strategic importance
- iii. NCR towns/heritage/tourism/water body towns
- iv. Other cities with each with a population of more than 50,000
- v. Not fully connected on the basis of coverage
- vi. Rest of the towns

15.2 Earmarking of land for setting up water treatment plants

Earmarking of land for setting up water treatment facilities and pumping stations shall be done for all ULBs while preparing the master plans. Appropriate land allotment/transfer shall be done by the DA/UIT/state government.

15.3 Service-level benchmarks for urban water supply

It is intended to achieve the following benchmarks in the cities as per the priority order above:

Table 10: Service-level benchmarks for urban water supply

S.No.	Proposed indicator	Benchmark
1	Coverage of water supply connections	100%
2	Per capita supply of water	Minimum 135 lpcd, with 150 lpcd for Jaipur and NCR urban centres
3	Extent of non-revenue water	15%
4	Extent of metering	100%
5	Continuity of water supplied	24 hours
6	Efficiency in redressal of customer complaints	80%
7	Quality of water supplied	100%
8	Cost recovery	100%
9	Efficiency in collection of water charges	90%



16

Customer interest protection, promotion, and grievance redressal

The following steps shall be considered for ensuring the protection and promotion of customer interests:

- a. A customer interest protection plan (CIPP) shall be prepared by all service providers, specifying clearly the steps planned to be taken for the protection and promotion of customer interests. This plan shall ideally be prepared together with the tariff proposal.
- b. The CIPP shall cover, but not be limited to, interfacing between customers and service providers, grievance redressal, as well as plans of the service providers to run their operations to efficiently protect and promote interests of various categories of customers.
- c. The CIPP shall be finalised and modified based on comments and inputs from all stakeholders, obtained from easily accessible public media in languages including regional and local languages.
- d. The CIPP shall be used to monitor the performance of the service providers against the plans to protect and promote customer interests.
- e. The CIPP as well as the results of monitoring performance of the service providers in this aspect shall be publicised through easily accessible media.

16.1 Grievance redressal

A well-functioning system to register and address complaints regarding water supply and sanitation systems and to provide redressal of disputes shall be established targeting all the customers of the systems set up and operated jointly by ULBs and the PHED. The PHED shall therefore explore all options for the following:

- a. Improving the existing system of customer care and making this improved system available to all urban habitations of the state.
- b. Setting up a multi-level grievance redressal mechanism ranging from area sabhas to municipal wards and regional centres (multi-town/city level), which shall be well staffed with competent members who are familiar with the nature of complaints likely to be received.
- c. Setting up an effective, transparent, and accountable mechanism to redress the grievances of customers regarding water supply services, such as billing and collection.

17

Water quality monitoring systems

The following guidelines shall be considered for monitoring the quality of water:

- a. It is ultimately the state government's responsibility (through respective agencies such as the PHED) to take steps to protect and ensure the quality of water.
- b. Appropriate independent monitoring mechanisms to keep a check on all water resources and water supply systems should be established.
- c. The government should place a proper framework to address the defiance of rules pertaining to the quality or pollution of water resources.

17.1 Water quality and water safety planning

With PHED in charge for bulk water supply and ULB in charge of the distribution system, the PHED shall undertake the following steps to address issues related to water quality in the state:

- a. Encourage ULBs to motivate local communities to shift to public water supply systems from individual or private sources of water.
- b. Provide support, in the interim, to all households that continue to use private water supply sources to test and give advice on treating their water supply accordingly before use.
- c. The PHED shall test samples drawn from all publicly provided common and household-level water supply sources for physical, chemical, and bacteriological parameters, as per the CPHEEO norms, and display the results regularly through easily accessible public media.
- d. In case of disasters such as epidemics, floods or major failures of regular water supplies, water testing efforts shall be intensified beyond regular testing and appropriate treatment or alternative sources provided to ensure the supply of potable water (e.g. water tankers, drilling of supplementary bore-wells, connection to other water systems through additional pipelines, etc.).
- e. In areas where the water supply from deep tube-wells or hand pumps has higher-than-threshold-level of contaminants, including fluoride, salinity, or total dissolved solids (TDS), efforts shall be made to shift from groundwater-based sources to safer alternatives, such as conjunctive water supply, surface water sources, or RO systems.
- f. The PHED shall constantly explore and adopt new water treatment technologies, wherever applicable and effective.
- g. A water safety plan shall be prepared annually for each of the service providers, in consultation with all relevant stakeholders; it shall ideally be prepared together with the tariff proposal and the business plan.

17.2 Participatory water testing and safety monitoring

1. **Bacteriological quality** shall be tested by the community at common-source systems and at the household level, particularly where private individual sources like hand-pumps and submersible pumps are being used.
 - a. For community-level water testing, hydrogen sulphide (H₂S) vials shall be distributed and awareness regarding the use of H₂S vials shall be spread within the local communities through all possible means (e.g. in local schools, area sabhas, meetings of ULBs, public health centres or PHCs, etc.)
 - b. Wherever testing reveals poor water quality, the community shall be made aware of the household-level treatment options (such as chlorine tablets, boiling of water and treatment with sand and activated

charcoal) and ULBs shall monitor disinfection efforts, until the water quality is improved to the satisfaction of ULBs and the PHED.

2. **Chemical quality** for basic parameters shall be tested by the community using field test kits (FTKs) at common-source systems and at the household level, particularly where private individual sources like hand-pumps and submersible pumps are being used.
 - a. **Physical quality** parameters such as taste and odour shall be included in the tests.
 - b. **FTKs** shall be placed in common locations within the community, such as local schools, water works sites, panchayat offices, etc.
3. **Heavy metals:** Additional tests shall be carried out to test heavy metals in addition to the standard parameters used for chemical quality testing.
 - a. All public water supply schemes shall be tested at the state-level for heavy metals regularly.
 - b. All schools in the state having a private water source shall test their water supply for all basic parameters including heavy metals regularly.
4. **Testing facilities:** In addition to regular testing by the PHED at their own facilities, the following activities shall be carried out:
 - a. If a PHC exists in the town/city, the pharmacists and other relevant staff at the PHCs shall be guided and an additional incentive should be given to them for testing basic parameters and guiding users accordingly.
 - b. Wherever applicable, equipment may be provided to engineering colleges (such as those attached to the Rajasthan University, Jaipur) after signing a Memorandum of Understanding (MoU) for testing and awareness generation of local communities.



18

Billing and collection efficiency

- a. A proper mechanism should be established that would allow water service providers to pursue appropriate legal action against defaulters, provided the defaulters can economically afford to pay the bill.
- b. DMAs shall be created for effective management of billing and collection mechanisms.
- c. 100% billing shall be carried out, with alerts on billing being sent to the customers through both email and SMS.
- d. The collecting agency shall collect bills on a monthly basis, and the bills shall be volume-based. In addition, the collecting agency shall use relevant technological equipment such as computerised customer databases, SCADA, online billing, and payment. This will encourage a higher bill collection rate.
- e. The service providers shall create incentives and disincentives that will allow people to pay the bills on time. However, it should be noted that these should not be used to exploit the poor.
- f. A metered water connection shall ideally be installed within 10 working days of the water connection being approved and payment of the water connection fee.
- g. Incentives for advance payment shall be institutionalised.



19

Water linkages with economic growth and competitiveness of cities

Living conditions of a city are influenced largely by availability of safe drinking water facilities, which are critical to determining key growth factors, such as competitiveness, economic growth, and prosperity. Priority shall be to focus on aspects of enhancing economic growth and competitiveness of urban centres in Rajasthan. These include:

- Designing a smooth and simple process for applying and obtaining water connections.
- Formulation of user-friendly web portal for online application of water connections, checking status of applications, complaints, and grievance redressal.
- Providing incentives to realtors, developers for recharge of groundwater, rainwater harvesting, and efficient and judicious use of water.
- Introducing innovative uses of water to encourage tourist activities in major tourist centres of the state (e.g. Jaipur, Jaisalmer, Udaipur, or Jodhpur).
- Integrating water distribution and management systems with town development mechanisms. This shall include stronger communication among the town planning department, urban development department, and the water resources department.
- Undertaking projects that highlight the importance of water in deserts, highlighting key traditional ways of water conservation like khadin.
- Encouraging use of traditional water conservation techniques and water connection in feasible areas.



20

Roadmap for achieving policy goals

A variety of reforms needs to be initiated in the urban water sector in Rajasthan. The GoR has already taken the important step for the formation of the water sector reforms committee. This committee should take the leadership in driving the reform process in the entire sector. In addition, the policy is envisaged to achieve service-level benchmarks described above in a definite period.

Table 11: Key targets envisaged for the water sector

City	Base year (2017-18)
Water supply system (including WTPs)	5 years
District headquarters towns	
National capital region towns	
Heritage/tourism/waterbody towns	
Towns having less than 100% coverage	
Towns with population above one lakh	10 years
Towns with population more than half but less than one lakh	15 years
Rest of the towns, with population below half a lakh	
Property connection	
Where system is already commissioned, 100% coverage of connections to be achieved	Within six months
New networks with 100% household connections	Within 90 days of commissioning of the system

21

Institutional, legal, and financial set-up

The proposed projects shall be executed by the PHED/ULBs/parastatal agencies or any agency authorised by them. The RUDSICO/PHED will act as SLNA (state level nodal agency) to provide technical and financial support for the following key components.

21.1 Institutional Setup

GoR is committed to decentralised management of urban water supply schemes by strengthening ULBs to manage water supply schemes, with the PHED as a partner and facilitator. The GoR will adopt a gradual approach to moving the service delivery responsibility to ULBs as per the constitutional requirements.

Envisaged role of PHED: As mentioned earlier, one of the core objectives of this policy is clear role definition for bulk and retail distribution of water in the State in future, with responsibility of bulk water distribution to the PHED and of retail water distribution to ULBs. The PHED shall provide inputs on policymaking, planning and development, resource mobilisation and allocation, monitoring and evaluation, and information management.

The PHED will continue to play a key role, particularly as they bring technical expertise and experience. In addition, the PHED could be restructured into: (i) a bulk water supply service provider to city utilities; and (ii) an O&M agency that will provide O&M and distribution services to ULBs and city utilities under a contractual framework.

It is envisaged that PHED shall continue to be the nodal department for implementation of drinking water supply projects and all projects shall be coordinated or implemented by PHED so that funds received from various sources are utilised optimally. Further, PHED shall continue to be responsible for construction of common infrastructure, such as waterworks, laying of distribution pipelines up to the entry point of each town/city in multi-town/city schemes, and highly technical works such as Reverse Osmosis (RO) plants. PHED shall also provide capacity building and technical support to the ULBs, upon request.

PHED shall also be responsible for bulk water including source, treatment and transmissions up to the ULB, distribution and shall continue to be the nodal department for implementation of drinking water supply projects and all projects shall be coordinated or implemented by PHED so that funds received from various sources are utilised optimally.

Envisaged role of ULBs: GoR envisages to continue with an integrated sector-wide approach to the development, execution, and management of urban water supply schemes through ULBs. The function of water supply for all single-town/city-level schemes shall be delegated to ULBs in a time-bound manner. ULBs shall be responsible for billing and collection, and a range of related activities including community mobilization and management, setting up conflict resolutions mechanism, computerisation of systems and accounts, etc.

Other key agencies: Other agencies such as UDH/LSGD/RUDSICO will continue to play a key role in policy making, technical guidance, benchmarking and financing, particularly as they bring technical expertise and experience. GoR shall provide financial support through LSGD to the ULBs for operation and maintenance, and capital works for water supply system, in case of shortfall in cost recovery from water and sewerage charges by the ULB, to improve sustainability. Finance Department may also provide financial support to the concerned ULBs on an annual basis to the extent of net expenditure on water supply and sewerage.

21.2 Behavioural change communications (BCC)

The PHED shall devise and implement appropriate BCC strategies (messages, materials, reach, etc.) and related institutional mechanisms, including the following:

At the community level:

- With the PHED in charge of bulk water supply and ULB in charge of water distribution (as per the 73rd and 74th Constitutional Amendment), community level work will be relevant in ULBs.
- Continual information, education and communication (IEC) activities through publications (brochures, pamphlets, newsletters and posters), folk media, print and electronic media, rallies, campaigns, workshops, interpersonal communication (IPC), street plays/puppet shows, public announcements, social mapping, etc. in relevant regional languages

Government officials:

- Expert-led workshops for the PHED staff to promote a spirit of social engineering and change management.
- Awareness generation and motivation by trained experts for PHED officials and officers at intermediary and grass roots levels.

21.3 Capacity building

The policy wishes to focus specifically on the efficient and effective water supply management for capacity building. The capacity building measures shall be carried out with explicit and separate focus on all aspects of water supply management such as NRW, energy efficient pumping machinery, etc.

The PHED / LSGD shall design and implement a support programme, in conjunction with other competent institutions and resource persons at state and district levels, to cover the following aspects of capacity building:

Government officials

- a. A training needs assessment (TNA) shall be designed and implemented through appropriate programmes for all state- and district-level officers of PHED involved in mainstreaming the approach to achieve the policy objectives.
- b. Training and capacity building to the PHED and ULB officials shall be provided to understand and design effective tariff adjustment procedure and mechanism involving full community deliberation and consultation.
- c. Training programmes shall be designed and carried out, based on the TNA, using high-quality training materials and resource persons, whose performance shall be evaluated.
- d. A specialised training institution for the PHED shall be set up to provide continual training for all staff using tailored and highly-specialised training materials on technical and non-technical issues (e.g. social, IEC, administrative, time management, legal issues, and so on).
- e. Exposure visits for all levels of technical and non-technical officers and officials shall be provisioned, with adequate preparation prior to the visit and feedback subsequent to the visit to share the lessons learnt.
- f. Regular induction and refresher trainings to all levels of the PHED staff shall be provided.
- g. Orientation to all new staff on a regular basis shall be provided.
- h. Capacity building performance shall be included as a criterion for annual performance appraisals and promotions.
- i. Training/orientation of personnel engaged in construction, testing/commissioning and O&M of water supply works shall be provided on regular intervals. The executing agency (PHED/ULB/contractor) shall take all precautionary measures to ensure the safety of the workers and the public.

Community and elected representatives

- a. The ULB/ PHED shall prepare training materials and organise resource persons and training programmes to build the capacity of community women and men to oversee their water supply schemes.
- b. Community capacity shall be developed to enable them to comment on tariff proposals and other matters inviting comments from stakeholders.
- c. The subject matter of these trainings shall cover all aspects of the pre-planning, planning, implementation, monitoring and post-implementation activities of water supply schemes, including issues such as operation

and maintenance (especially preventive maintenance), water management and conservation, accountancy and bookkeeping, hygiene awareness, behavioural change communication (BCC), etc.

- d. Women's participation will be encouraged and facilitated to attend training programmes by making special provisions (e.g. training near the town/city, non-residential trainings, and convenient timings) based on an assessment of their preferences.
- e. Regular induction and refresher trainings and orientation of all new ULB elected members shall be regularly provided.

21.4 Pre-legislative processes for urban sector legislation

The following steps shall be followed before the drafts of legislation are prepared:

1. Stakeholder consultations shall be held to determine the purpose, extent, and scope of the legislations.
2. A reasoned response to all comments received from the stakeholders shall be publicised on easily accessible media.
3. The first draft of the legislations shall be prepared based on these comments from the stakeholders.
4. Public and stakeholder consultations (including incorporation of views from civil society, corporates, academic institutions, government departments, independent institutions and the public) shall be carried out to finalise the draft of the legislation.
5. Updates shall be publicised by the concerned governing agency on the status of the legislation in the state assembly or at other relevant forums within the government as applicable.

21.5 Legal arrangements

The ULB / PHED shall carry out the following activities to prevent vandalism and to be able to penalise offences:

1. Review the existing legal framework to identify amendments necessary in existing laws and new legal documents necessary to support the reform policy.
2. Draft new legislation based on the needs identified in the review of existing legal provisions.
3. In the interim period while new legislation is being drafted, include penal provisions in relevant existing legislations against offences such as the theft of water, illegal connections and pumping equipment, and non-payment of water bills.
4. In the absence of such legal documents, executive orders by the government are to be issued to penalise offenders and protect state water supply infrastructure.

LSGD shall be responsible to ensure that the process is carried out in a transparent, accountable, and participatory manner. This will also enable the agencies to work in concurrence with 74th CAA.

21.6 Financing support/ arrangements

To achieve the objectives of this policy, GoR shall plan to devolve water supply and sewerage function to all ULBs in a phased manner. Initiatives to strengthen financial management shall be encouraged, such as:

- a. All ULBs shall be encouraged to make best effort to recover water and sewerage charges from all eligible consumer connections.
- b. To improve sustainability, funds for operations and maintenance, and capital works for the water supply system may be provided by the Local Self Government (LSG) Department to the ULB, in case of shortfall in cost recovery from water and sewerage charges by the ULB. The funds required will be assessed and revised every year by LSG Department based on various parameters such as electricity costs, cost required for O & M, area of operations, bulk water charges, revenue from water charges, etc.
- c. Finance Department may provide financial support to the concerned ULBs on an annual basis to the extent of net expenditure (total expenditure – establishment expenditure – receipts from water supply and sewerage) on water supply and sewerage system including the amount paid to PHED for bulk supply.
- d. All ULBs shall rationalize the water tariff in accordance with GoR tariff roadmap, move towards volumetric billing, verify and update its consumer database, reduce non-revenue water thereby reducing its dependence on State Government Grants.

Further, the GoR shall explore all possible funding sources including (but not restricted to) the following:

- a. Departmental funds of the PHED, where PHED continues to be the nodal agency.
- b. District-level pooled funds on IEC and BCC from different departments such as education and health.
- c. Allocations from the Gol, including the funds allocated under the National Urban Drinking Water Programme.
- d. Financial assistance including grants from various multilateral agencies such as the World Bank, ADB, JICA, etc.
- e. Loans from financing institutions such as NABARD, LIC, etc.
- f. PPPs
- g. Regulatory escrow accounts and regulatory fees paid by the service providers in wake of the establishment of independent regulatory authorities.
- h. Viability gap funding: Under Viability Gap Funding scheme of Gol, the Gol provides 20% viability gap support for PPP projects to the extent of 20% of the project cost. The state will also provide additional viability gap funding up to 20% of the project cost, subject to other conditions of the financing being met.

21.7 Monitoring the implementation of schemes

The state water supply policy envisages “a rolling programme of water auditing for all industries to compile a register of industrial water usages”. Water audits shall be used for monitoring water consumption. In order to monitor the implementation of water supply schemes and to evaluate the feedback, the PHED shall take the following initiatives:

State level

1. RWSSMB shall check the overall performance (including financial and physical) of all water supply schemes handed over to ULBs in the state, and to take remedial action as necessary.
2. Third parties shall be contracted to carry out performance verification, water audits, and social audits.

City/town level

1. Setting up a city-level monitoring committee to check the overall performance (including financial and physical) of water supply schemes handed over to the respective ULB.
2. Contract third parties to carry out performance verification, water audits, and social audits.
3. Ensure regular visits to ULBs by the local government’s staff (e.g. junior engineers and sub-divisional engineers of the PHED) to attend meetings at ULBs and to address local problems.

21.8 Communication and dissemination

1. The PHED shall formulate and implement a communication and dissemination strategy, through its communication and capacity development unit (CCDU). This shall cover issues such as implementation status and progress of water supply initiatives, water quality, grievance redressal, tariff rates, collection and cost recovery, BCC, PPPs, climate change, and case studies of best practice and special studies.
2. Methods of dissemination shall include the print and electronic media, video documentaries, websites and blogs, and social media, in English and local languages. Successful and long-running advertisement campaigns such as Amul shall be considered as examples.

21.9 Interdepartmental coordination

The following steps shall be taken to ensure seamless interdepartmental coordination:

1. The health department shall guide urban communities on ways to control the health impacts of contaminated water and environmental pollution.
2. The education department shall inform school students regarding water quality and hygiene (including menstrual hygiene).
3. The Women and Child Development Department shall create awareness of water quality and hygiene among urban women.
4. The LSGD shall coordinate with PHED, PWD and UDHD to optimise the construction of roads, laying down of

water supply pipes to minimise digging and reducing disturbance to existing systems and services.

5. The PHED shall forge inter-sectoral linkages with other line departments such as health, education, women and child welfare, urban development and housing as well as Jaipur Development Authority (and other local development authorities as applicable) through multilateral MoUs for cost-effective, efficient and integrated delivery of water supply and hygiene-related programmes. This may include BCC including IEC, community mobilisation, capacity building and awareness generation at the household, town/city, or institutional level (e.g. schools and colleges).
6. For water bodies that fall in urban areas, but with catchments in rural areas outside the jurisdiction of ULBs (or vice versa), it is necessary that ULBs coordinate with respective agencies for restoration, protection and sustainability of water bodies and their ecosystem. It is a multi-agency, multi-departmental exercise, which needs to be pursued for improvement in and sustainability of water structures.

21.10 Career paths

Measures shall be taken by all the departments and organisations concerned to ensure a progressive career path exists for professionals aspiring to contribute to the water sector of the state. For instance, grievance redressal mechanism can hire entry-level graduates from non-engineering fields who can grow to become IEC, BCC, grievance redress or other non-technical experts. These initiatives shall supplement the existing career paths of engineering and other fields.



22

Procurement and private sector participation

1. Informed investment decisions shall be made through thorough analysis that considers financial, social, and environmental impacts (positive and negative) and implementation risks throughout the life cycle of the project to be implemented through private sector participation.
2. Analysis of planning options shall identify the long-term financial impact (e.g. recurrent costs, including depreciation and customer charges) of all planning outcomes before proceeding with capital investment decisions.
3. All feasible potential options to meet service levels, including non-asset solutions shall be considered in the options analysis. The assumptions underlying the analysis of options shall be justified and clearly documented in detailed project reports.
4. Stakeholders, including asset owners, shall be made aware of issues and risks associated with the implementation of projects proposed through a planning study.
5. PPPs shall be considered and designed with a long-term perspective to avail new opportunities for the rapid expansion of urban water supply services, and to merge the skills, expertise and experience from public and private sectors to improve the services delivered to beneficiaries.
6. The PHED shall explore and adopt appropriate options under the PPP model. Such PPP contracts shall be actively explored and adopted for options such as:
 - Build, operate, and transfer (BOT) contracts for the installation and O&M of highly technical systems, such as RO plants and other systems.
 - Management contracts of O&M of groundwater and surface water supply schemes.
 - PPPs involving the government, private sector, and the communities to deploy locally tailored models for effective and sustainable service delivery.
 - E-procurement of all works under national competitive bidding.
7. Appropriate level of private investment shall be attracted and its efficiency to provide quality treatment facilities and services at optimal costs shall be leveraged.
8. Criterion for selection of PPP/revenue-sharing operators: One or a combination of the following criteria may be adopted for PPP operator selection through competitive bidding:
 - Lowest bid in terms of user fee from consumers
 - Highest upfront fees
 - Lowest present value of subsidy
 - Lowest capital cost and O&M cost for projects
 - Highest equity premium
 - Quantum of state's support solicited in present value

23

Climate change

Given the potential impact of climate change on water supply sources and usage pattern in the state, the PHED shall commission studies and formulate an appropriate climate change adaptation strategy for water supply either as a standalone strategy or as a part of a larger climate change adaptation strategy for the state as a whole.

Water availability will be impacted due to climate change, either seasonally or throughout the year. To augment the water availability, state water supply policy, and state environment policy envisages planning at state and river basin level as well as importing water from water-rich regions. For augmenting water availability at the urban level and in-situ use of treated water shall be incentivised (using tariff or any other mechanism as applicable), wherever potable quality of water is not required in accordance with applicable rules and regulations.

Traditional water harvesting structures can be very helpful in coping with seasonal variation. Given that knowledge for their sustainable use is relatively simple, communities can be empowered for their sustainable use in distress situation. Their restoration shall be promoted and awareness for the same shall be generated among the people for the importance of their up keeping and sustainable use.

Water demand will increase due to climate change and associated temperature increase. For accurately accessing water demand, water audit shall be promoted in all units, residential or industrial. Water audits shall be implemented as an effective water-demand management measure. These audits should also be able to provide inputs for restricting unnecessary water consumption and water heavy devices such as rain shower, swimming pools, etc. in water stress areas.

Water need (in terms of both quality and quantity) for ecological systems shall be accessed for their sustainability, so that appropriate measures can be taken for water availability. Water ecosystems shall be restored and new ones will be generated. Awareness, for impact of climate change and coping strategies, shall be generated among stakeholders and beneficiaries.

Coordination among agencies responsible for urban water supply and climate change mitigation is necessary. Wherever possible, the channel of communication with larger public for participation of various stakeholders and beneficiaries is also a need of the hour. State Environment Policy, 2010, along with Rajasthan Environment Mission and Climate Change Agenda for Rajasthan (2010-2014) lists down the efforts that need to be taken for mitigating the impact of climate change. Such efforts shall be adhered to by executive agencies in the urban water sector, wherever they fall under their jurisdiction.

24

Gender mainstreaming and social safeguard measures

24.1 Gender mainstreaming and integration in the policy

Projects designed and implemented to improve water supply cannot be assumed to benefit women automatically. Improved access to water supply may affect men and women differently and not always positively. Insufficient consideration of gendered needs in these programmes can inadvertently exclude or further constrain the access of some groups if projects are not designed to be gender and socially inclusive. To avoid this, the policy recognises the importance of promoting gender equity in the management of water at all levels of the government. To achieve this, while designing projects, the state government has to develop a gender strategy covering the following:

- i. Stakeholder / Community consultations: Identification and mapping of key stakeholders including but not limited to PHED, ULBs, NGOs, and women's groups.
- ii. Gender analysis: A systematic assessment understands the gender roles, power relations and a disaggregation of women's and men's specific interests, needs, and priorities.
- iii. The gender issues identified from the assessments should then be integrated into the technical analyses and into the project activities.
- iv. Develop appropriate gender sensitive indicators that can be integrated into the project design.
- v. Project design: Project components that are designed based on gender analysis and with an aim to benefit women.
- vi. Development of Gender Action Plan: This includes the development of concrete targets for women's participation in the project.

24.2 Social safeguard measures

To deal with the social safeguard issues and impacts that may arise during the implementation of projects to be taken up by the state government using funds received from various sources, a social management framework (SMF) should be developed. The objective of developing SMF is to ensure that all projects to be undertaken in the future including land needed to build infrastructures and other physical works are:

- i. To enhance positive social development outcomes.
- ii. Avoid/minimise and mitigate adverse social impacts, including loss of livelihood that may result from loss of lands and common property resources.
- iii. Ensure participation of local communities and stakeholders in the whole process of project development.
- iv. Ensure compliance with the relevant GOR policies on social safeguards and other social issues, including gender integration.

The SMF should have the following components:

1. **Social safeguards screening & mitigation guidelines** to identify the possible potential social safeguard issues and impacts that may arise during the implementation of projects.
2. **Community participation and consultations** using participatory planning approach at all stages of the project implementation. Focus of consultations will be on specific groups who have direct stakes in the projects.
3. **Social impact assessment** through surveys to arrive at the identification of project impacts and affected populations.
4. **Resettlement Action Plan** (wherever required) covering compensation framework; detailed budget, implementation schedule, organisational responsibilities, and monitoring, evaluation and reporting.

25

Revision and refinement of the policy

This policy document shall evolve based on the feedback collected from various stakeholders. The policy shall be revised every five years through a comprehensive consultative and deliberative process involving all stakeholders in the water sector.



26

Implementation arrangements

It should be noted that the policy is not a justiciable document that can be enforced to the letter. It is a document where the GoR has put in the best of efforts to: (a) envisage the future of the state's urban water sector; and (b) identify the roles that various stakeholders can play in realising the vision.

In this context, it will be crucial to note that in addition to a few 'new responsibilities' that may be required to be carried out by the stakeholders, they will have to dispense their existing responsibilities in 'new ways' of mutual coordination, by incorporating the principles of transparency, accountability, participation and capacity building. In addition, the policy envisages enhancing technical capability to establish an exclusive state-level design centre for identifying standardised technical parameters and levels by engaging with technical institutions and academia.

Based on this, the following broad aspects are considered important for implementing the policy:

- a. The RUIDP's Policy Support Unit (PSU) will be the anchoring entity for the policy. That is, the PSU will compile the comments from various stakeholders and ensure that the policy is revised accordingly.
- b. The PHED, LSGD and ULBs will work fully in accord with each other. The stakeholder inputs, media campaigns, and routine decision-making shall be managed by fully coordinating with each other.
- c. According to the roles defined by the 74th CAA and this policy, the focal points of the decision-making will be entities that will 'host' or 'house' the processes required for decision-making. For example, ULBs will host the processes needed for rationalisation of the tariff as described in the policy. The other stakeholders (GoR, PHED, LSGD, as well as the public) shall be made parties to the decision-making through transparent, accountable, and participatory mechanisms as described in the policy. A similar approach shall be taken for carrying out other responsibilities described in the policy for PHED, LSGD, ULBs, and the public.

26.1 Monitoring mechanisms for the policy

The first step in the monitoring mechanism is to agree upon parameters to define 'successful' implementation of the Policy. These parameters shall then be used to understand the progress made in regard of the policy and its implementation.

These parameters can be on-

- a. Time line basis
- b. Parameters that are geographical in nature
- c. Extent in terms of population covered in the principle of the policy

Once the monitoring parameters have been agreed upon, and promulgated or published, the various departments that are in-charge of various functions under the policy, as envisaged in "Section 26. Implementation arrangements", shall monitor the parameters for their functions. The implementing agency would then be required to monitor their own performance and implementation in regard of the policy, of the specific function that is their responsibility. In the current institutional structure, it means that these responsibilities will be with PHED, LSGD, and ULBs, for the implementation and monitoring the implementation. Those organisations will be in charge of taking stakeholders' comments on achievement of those parameters for the successful implementation of the policy. The progress should be regularly published by the implementing agency.

RUIDP (or any other agency, as the government see fit) can be in charge of collating the parameters from various implementing agencies, to form a coherent set that represents the overall progress made in implementing the policy. The result of that monitoring should be published regularly, in social media as well as conventional media.

27

Endnotes on reference documents

National Water Policy, 2012, Ministry of Water Resources, Government of India

State Water Policy: <http://waterresources.rajasthan.gov.in/>

International Finance Corporation, 2013, Rajasthan: Water Assessment, International Finance Corporation, pp. 38

Groundwater management- Rajasthan Perspective, Central Groundwater Board, Accessed at cseindia.org/userfiles/ranachatterjee_ground_management.pdf last on 13 August 2015 at 4:45 p.m.

Swachh Bharat Abhiyan: http://pmindia.gov.in/en/government_tr_rec/swachh-bharat-abhiyan-2/; <https://swachhbharat.mygov.in>

Benchmarking of Urban Water Supply Schemes Of Rajasthan, Final Report, April 2013, SMEC International Pty. Limited, pp. 76-77, pp. 192-199, pp.205

State Five Year Plan, Section 22.18-22.37, Chapter 22, 12th FYP, Government of Rajasthan

Ministry of Urban Development, <http://moud.gov.in/>

Rajasthan Urban Infrastructure Development Project (RUIDP), ruidp.rajasthan.gov.in/,

Central Public Health And Environmental Engineering Organisation, cpheeo.nic.in/

<http://www.cmie.com/kommon>, last accessed at 8:55 p.m. on 13 August 2015

<http://gwadi.org/sites/gwadi.org/files/CaseAlwar2.pdf> last accessed at 5:30 p.m. on 13 August 2015

