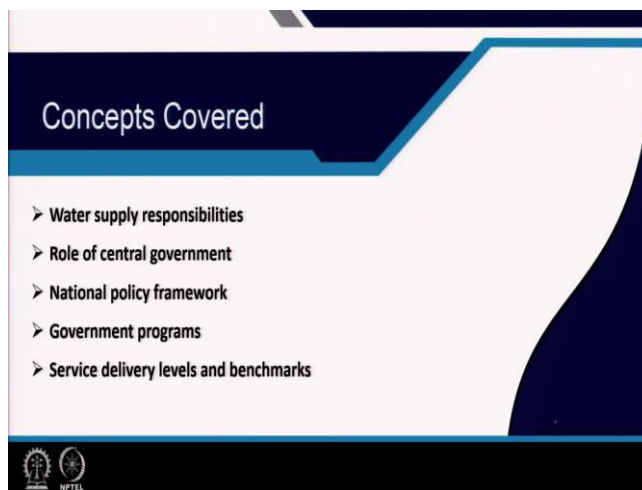


**Urban Utilities Planning: Water Supply, Sanitation and Drainage**  
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**Module - 02**  
**Urban Water Supply**  
**Lecture – 09**  
**Role of Government**

Welcome back. In lecture 9, ~~we will talk about~~ The Role of Government in Urban Water Supply is discussed.

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The different concepts ~~that we will cover~~ included are ~~on~~ water supply responsibilities, the role of central government, national policy framework, government programs, and ~~then finally~~, service delivery levels and benchmarks.

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**Water supply responsibilities**

- Water supply is a State subject.
- States assigns responsibility to **Urban Local Bodies (ULB)**.
- As per Constitutional both Center and State can plan, manage and finance water supply.

During 1970-80: duty of water supply provision (in many states)  
**ULBs to Water Supply Agencies**

Source: State of Urban Water Supply in India, 2018, Water Aid

**Currently water supply schemes:**  
**State** (plan, design and execute and often operate) through:  
**State Departments** (Public Health Engineering Department) or  
**State owned Corporations** (Uttar Pradesh Jal Nigam, Maharashtra Jeevan Pradhikaran, or State Water Boards, such as Tamil Nadu Water and Drainage Board, Delhi Jal Board)

Centre oversees the interstate distribution of water.

## Water supply responsibilities

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~~So, when we talk about the responsibilities in regards to water supply and particularly urban water supply, then~~ The wWater supply is is basically a State subject that means ~~state is~~ State Government is responsible for supplying water. ~~And the~~ State Government ~~actually~~ assigns the responsibility to the different ~~urban~~ Urban Local Local bodies Bodies (ULBs) like the municipal corporations, municipalities, ~~and~~ nagar panchayats, etc. ~~and so on.~~

~~So, as~~ As per Constitution, both Centre and State can plan, manage and finance water supply. ~~But what we have seen is, but for particularly for run for maintaining for even though we are managing management is there, but usually~~ However, the operation is taken care of by the State or ~~the~~ its agencies.

During ~~say~~ 1970s and 80s, it was seen that the duty of water supply provision in many states got transferred from the ULBs ~~that means from the Urban Local Bodies which are like municipal corporations and all~~ to specialized water supply agencies. ~~So, this could be such as~~ government departments or certain other corporations ~~that were formed.~~

~~And currently~~ Currently, we see that even though ~~state~~ State is the one which plans, designs and executes, and ~~also sometimes~~ often operate ~~this particular~~ water supply schemes in urban area, it is usually the state department such as Public Health

Engineering Department, which actually does the entire process of actually planning, designing and executing this ~~kind of~~ task.

In certain ~~other~~ states, ~~we see that~~ State owned Corporations or companies perform this task. For example, ~~Uttar Pradesh Jal Nigam, Maharashtra Jeevan Pradhikaran, and State Water Boards~~ such as the Tamil Nadu Water and Drainage Board, and Delhi Jal Board. ~~this~~ Even though ~~these agencies are~~ ~~it is~~ owned by the State Government, ~~but~~ they have got a little bit more independence like for example, in Uttar Pradesh, it is the ~~Uttar Pradesh Jal Nigam; Maharashtra~~ they work independently. ~~Jeevan Pradhikaran in Maharashtra, and State Water Boards~~ such as the Tamil Nadu Water and Drainage Board, Delhi Jal boards. The role of Centre is primarily to oversee the interstate distribution of water amongst the different states.

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~~So, these are the different agencies, which actually does the work of actually executing water supply schemes in urban areas. And the role of Centre, the role of Centre is primarily to oversee the interstate distribution of water amongst the different states.~~

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**Role of Central Government**

**Main responsibility:**  
Ministry of Housing and Urban Affairs (MoHUA)  
**Main role: Policy and Financing**

**Other stakeholders:**  
Ministry of Drinking Water and Sanitation, Ministry of Water Resources, Ministry of Health and Family Welfare, and Ministry of Environment, Forest and Climate Change etc.  
*Multiple stakeholders result in low accountability.*

**Major regulatory agencies:**  
Central Ground Water Authority, Central Water Commission, Central Pollution Control Board and Ministry of Housing and Urban Affairs

New ministry named as **Jal Shakti** (Ministries of Water Resources, River Development & Ganga Rejuvenation along with Drinking Water and Sanitation) has been set up in 2019.

- Provision of clean drinking water
- International and inter-states water disputes
- **Namami Gange** project (cleaning Ganga and its tributaries and sub-tributaries)
- **Nal se Jal** scheme (provision of piped water supply to every household by 2024)

## Role of Central Government

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~~Now, when we talk about the role of Central Government, we see that the~~ The main responsibility falls on the ~~Ministry of Urban and~~ Ministry of ~~Urban Affairs~~ Housing and Urban Affairs which is responsible for policy making and financing different water

supply schemes in urban area. ~~And even~~ Even though this ~~particular~~ department has got many divisions, ~~water supply is not taken up by the particular~~ actual execution of water supply projects is not taken up by this ministry, ~~but they usually finance it only it helps in financing the projects.~~

~~And the main role of this particular ministry is basically making policies and of course, financing, but there~~ There are other ~~Other~~ agency ministries/stakeholders that are involved ~~which is like the~~ policy making and financing include Ministry of Drinking Water and Sanitation, Ministry of Water Resources, Ministry of Health and Family Welfare, and Ministry of Environment Forest and Climate change ~~and so on, etc.~~

~~So, as you can see there~~ There are several ministries which are involved, and because there ~~is are~~ so many stakeholders, there was low accountability. As a result, And there and that actually was the result why this some of these ministries were combined, I will come to that. And Now, some of the There are also major regulatory agencies which that actually you know checks the water use and and pollution, etc. and so other things. These are the Central Ground Water Authority, Central Water Commission, Central Pollution Control Board and the Ministry of Housing and Urban Affairs. ~~So, these~~ These are the different regulatory agencies which are there which operate in this particular sector.

~~Now, as I was talking about there were~~ Regarding different stakeholders in terms of water supply and sanitation and all. So, currently in 2019, recently in 2019, some of these ministries ~~like the~~ such as Ministry of Water Resources, River Development and Ganga Rejuvenation and with Drinking Water and Sanitation were combined. The newly formed ministry was named as the Ministry of Jal Shakti.

~~So, these are the certain ministries which were combined. And these were termed as a it is a new ministry was formed this is called the Ministry of Jal Shakti. And some~~ Some of the ~~you know~~ primary work that this ~~particular~~ ministry is supposed to perform is provision of clean drinking water, ~~then~~ and resolution of international and inter-state water disputes. ~~So, the it is the job of this ministry to resolve all this.~~

~~Then a new~~ In similar domain, (Two new projects were taken up. ~~one~~ One project is the Namami Gange project which is deals with cleaning Ganga, its tributaries and its sub tributaries. So, this is one major project. ~~And other~~ Other project is Nal se Jal scheme, ~~so that means, in this particular scheme~~ in which the government ~~is~~ envisages to provide you

~~know~~-pipel water supply to every household by 2024. These are the different targets of this Ministry. Multiple stakeholders were combined and entire gamut of work in this particular sector has been taken up under the Ministry of Jal Shakti. Thus, this is the primary role of Central Government in terms of water supply.

~~So, these are the different targets that the ministry has got, and these are the overall responsibilities of the ministry. And as I told you it has reduced that multiple stakeholders and has brought the entire gamut of work in this particular sector under the Ministry of Jal Shakti. So, this is the primary role of Central Government in terms of water supply.~~

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**National policy framework**

**National Water Policy (Ministry of Water Resources)** : Planning and development of water resources

Formulated in 1987 and revised in 2002 and 2012.  
Accordingly, several States/UT have framed their State Water Policies.

**Actions as per third National Water Policy (2012) :**

- The Inter-State River Water Disputes (Amendment) Bill, 2019 (passed in Lok Sabha)
- Dam Safety Bill, 2019 (passed in Lok Sabha)
- Draft National Water Framework Bill and draft River Basin Management Bill by the Ministry of Jal Shakti
- Model Bill for the Conservation, Protection, Regulation and Management of Groundwater (May 2016)

National Water Informatics Centre under National Hydrology Project.  
Use of RS and GIS in studying water resources  
Master Plan for Artificial Recharge to Ground Water in India  
A web based Water Resources Information System (India WRIS)

Water scarcity has been identified as one of the biggest challenges.  
Further revision of the National Water Policy is underway.  
(Source: [https://pib.gov.in/PressReleasePage.aspx?PRID=1627166&next=The Inter-State River Water States %2F UTs for comments](https://pib.gov.in/PressReleasePage.aspx?PRID=1627166&next=The%20Inter-State%20River%20Water%20States%20UTs%20for%20comments))

## National Policy Framework

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~~So, what are the~~ This topic discusses about different national policy frameworks ~~that are used or to~~ that actually influences urban water supply. ~~One is the~~ National Water Policy ~~is one such policy, this is this that~~ was made by the Ministry of Water Resources. ~~And this is~~ in regards to planning and development of the different water resources in the country. ~~And this~~ This was formulated initially in 1987, and was subsequently revised in 2002, and 2012, and currently ~~it is~~ being revised as well.

~~And based~~ Based on ~~this particular you know~~ this water policyies, many of the State Governments also have devised their own policies ~~as well. And some~~ Some of ~~this as per~~

~~this National Water Policy 2012, many~~ the important decisions that were taken. ~~Some of the important ones are this~~ include amendment of Inter-State River Water Disputes Amended Bills ~~so this one of these bills~~ that was passed in 2019 ~~pretty recently~~. ~~So, is the Inter-state Water River Water Disputes~~ This was done because ~~we have had~~ there were several disputes between states regarding water use for particular rivers. In addition,

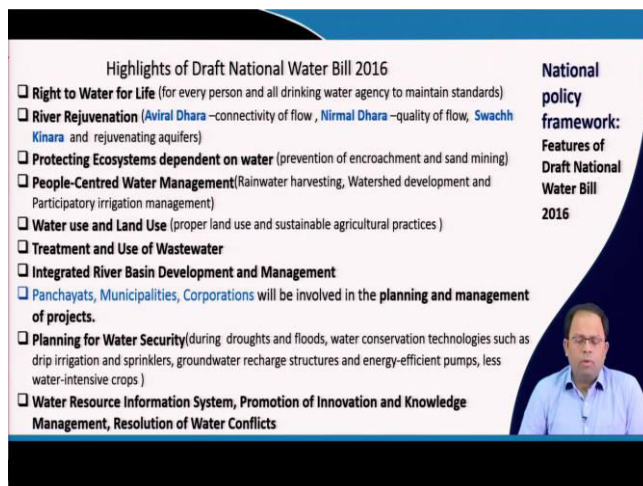
~~Then the~~ Dam Safety Bill, 2019, ~~this~~ was also passed. Then, the two draft bills have been circulated; one is the Draft National Water Framework Bill, and the ~~draft and the~~ River Basin Management Bill. ~~This was~~ circulated by the Ministry of Jal Shakti. Furthermore, ~~And then there is~~ the Model Bill for Conservation, Protection, and Regulation and Management of Groundwater was also circulated in May 2016. ~~So, this is another bill that is in circulation.~~

~~And in~~ In addition to these bills that has been circulated which will ~~wants to you know~~ reform the entire sector, there are certain other projects which have been taken ~~or certain other this as a part of policy some other efforts have been given in certain~~ for other dimensions. For example, the National Water Informatics Centre ~~has come up~~ was formulated with which is under the National Hydrology Project.

~~And here there has the if~~ It is proposed to use remote sensing and GIS extensively in the study of water resources. ~~And accordingly~~ Accordingly, Master Plan for Artificial Recharge of Groundwater in India is being prepared. Then, a web based Water Resources Information System; (India WRIS) ~~has been also being prepared,~~ is also being prepared. ~~So, these are the~~ Thus, these are the ~~different things that are also going on~~ formulated along with these different bills which plan to reform this entire sector.

~~So, what is the one~~ One of the primary ~~things that has happened in recent years is~~ the concerns that the government Government has identified is water scarcity. It is as one of the biggest challenges that India face, ~~and accordingly~~ Accordingly, ~~the water policy is being revised~~ the National Water Policy is being revised currently. ~~And one and it is revised use and several of these bills are actually come up because of that.~~

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### Highlights of Draft National Water Bill, 2016

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National Water Bill, 2016 shows the change in the way people think about water resources, and the change in the mindset of the decision makers. And one of the bills this is the Some of the highlights of the National Water Bill which was circulated in 2016 are given below. This is one of the bills which shows the change in the way people think about water resources, the change in the mindset of the decision makers and so on right. So, some of the new things that are now being considered are in the which are primary highlights for this particular bill are, now it is now the bill talks

- This bill talks about the Right to Water for Life; – that It means; every person has got the right to have water. This was not included in the earlier bills/laws/policy framework. According to the Right to Water for Life, all drinking water agencies are liable to maintain certain standards for drinking water provision.

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So, this is something which was not there earlier in the bills in the law in the you know in the frameworks. And all drinking water agency should are liable to maintain certain standards for drinking water provision. So, it cannot be like one agency would be giving less, another agency more. So, everything has to be brought to certain standards.

- Then rivers need to be rejuvenated. And how? River rejuvenation: There are different ways it has to be done. Aviral Dhara ensures the the first part is ensure

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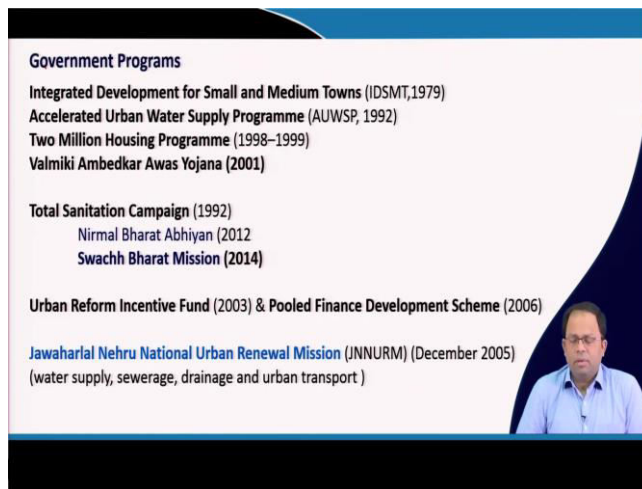
connectivity of flow ~~which is Aviral Dhara, then~~ Nirmal Dhara ~~which~~ looks into the quality of the water flow. ~~quality of water, then~~ Swachh Kinara ~~this is like how to make the~~ ensure cleaning and development of river banks ~~cleaner, river bank development projects and all these things are being thought under this, and then rejuvenating banks.~~ Rejuvenation of the aquifers is also ensured to which recharge ~~this particular~~ rivers.

- ~~Then protecting~~ Protecting the ecosystems ~~and~~ which are dependent on ~~this particular~~ water. ~~And usually it~~ It also incorporates prevention of encroachment into the river beds, and prevention of sand ~~mining~~ this mining. ~~This actually~~ is one of the ways of protecting the overall ecosystem.
- ~~Then it has to be people~~ People-centred water management, ~~so~~ This includes rain water harvesting, watershed development, and participatory irrigation management. ~~These are also proposed in this particular Water Bill.~~
- ~~And then water~~ Water use and land use: Water use is ensured as per proper land use and sustainable agricultural practices. ~~For example: It is not to plant~~ which draw in too much that require large volume of water should not be planted in water-deficit areas, ~~there is lot of water deficit. So, these are the different challenges, these are the different things that this particular bill propose.~~
- ~~Then treatment~~ Treatment and use of wastewater-
- Integrated river basin development and management-
- ~~And then~~ Incorporation of Panchayats, Municipalities and Corporations ~~will be incorporated into this~~ in the planning and management of water-related projects. ~~So, this~~ This is a something new which is now being thought of unique step in this regards.
- Planning for water security: Water security is considered during droughts floods, ~~then use of water~~ It also includes incorporation of water conservation technologies such as drip irrigation and sprinklers, groundwater recharge structures, energy efficient pumps, and less water-intensive crops, ~~these are other things this actually is being thought of.~~



- In addition all this, new water Resource information system: It involves the resolution of water conflicts. all these things are also being talked about in this particular Water Bill. So, this is the new direction the government is thinking about how to the water management water in our country India.

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### Government Programs

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So, what are the There are different government programs that are available? So, historically we have seen that for water supply there has been several programs that have been undertaken in India. starting from Integrated Development of Small and Medium Towns (IDSMT) it was launched during in 1979. And then we had this Accelerated Urban Water Supply Programme (AUWSP) around was launched in 1992.

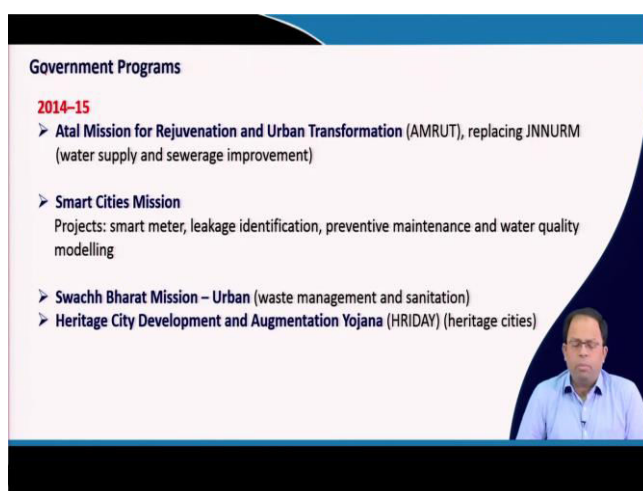
Then The Two Million Housing Programme was launched during 1998-99, where in which water supply was also one part part of the objectives. In same direction, Valmiki Ambedkar Awas Yojana was launched in 2001, again water supply is one part of it. Total Sanitation Campaigns even, was launched in 1992. though Though it is concerned mostly about sanitation, water is also water supply to the toilets is also one of the objectives. and all is also part of it, so that is The Total Sanitation Campaign was there also launched in 1992.

~~Then it got~~ This campaign was renamed as Nirmal Bharat Abhiyan in 2012, and finally, Swachh Bharat Mission in 2014. ~~So, more or less certain~~ Certain parameters ~~of this programs has~~ have changed, but ~~more or less the~~ target is ~~more or less~~ mostly same ~~that is we have to~~ that ensures ~~provide~~ provision of proper sanitation and water for the people; ~~we have to provide water for this to ensure sanitation and so on.~~

~~Then there~~ There were ~~are~~ two other schemes/funds: ~~also urban reform in~~ or funds you can say that are Urban Reform Incentive Fund ~~of~~ (2003), and Pooled Finance Development Scheme ~~of~~ (2006) which were used to fund certain water supply projects as well. ~~And then~~ Later, in ~~around~~ December 2005, the ~~JNNURM~~ this Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched which ~~actually had~~ proposed several projects ~~which that~~ involved urban transport, drainage, sewerage and water supply.

~~So~~ Thus, ~~this was~~ these are the ~~ways of this was~~ several projects ~~were~~ proposed for different urban areas, ~~and you can get that help to procure~~ funding under this scheme to actually improve water supply in different urban areas of India.

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~~So, let looking into the current government program starting from~~ From 2014-15 onwards, ~~we can see that~~ certain changes have ~~been~~ happened. The JNNURM program is not currently being pursued. ~~Instead we have got~~ and it was replaced with Atal Mission

for Rejuvenating and Urban Transformation (AMRUT), ~~replacing JNNURM to some to certain extent. It involves water supply and sewerage improvement.~~

~~Within this program, we have water supply and sewerage improvement programs. Then we have got the For Smart Cities Mission where, certain cities are being selected and certain projects including water supply projects are being approved under that for development.~~

~~And where in In these particular projects, the focus is on smart metering, leakage identification, preventive maintenance, and water quality modelling. The smart system for water supply is one of the novel approaches that have been implemented. These are the new things which are coming, so that means, these are the things when for certain cities, for certain showcase cities this kind of smart system in for water supply is being thought of. So, this could be fine later on be replicated in other cities as well.~~

~~Then we have the The Swachh Bharat Mission urban of course which looks into the deals with waste management and sanitation, and, Heritage City Development and Augmentation Yojana (HRIDAY), though does not directly deals with the so these are the two other programs which looks into not exactly into water supply, but it looks into sanitation it looks into and funding for heritage cities where water supply is also involved.~~

~~So Thus, these are the different government programs through which funding for water supply has been is made available or different programs which is looked into directly implementing different forms of water supply projects are implemented in Indian urban areas.~~

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**Service delivery levels and benchmarks**

Sl. No.	Indicator	Benchmark
1	Coverage of water supply connections	100%
2	Per capita supply of water	135 lpcd (cities)
3	Extent of non-revenue water	20%
4	Extent of metering	100%
5	Continuity of water supplied	24 hrs
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%

Source: Ministry of Housing and Urban Affairs (MoUHA), Government of India


**Gov service level benchmarks for water supply:**

- > A minimum set of standard performance parameters
- > Performance-based grants to ULBs

**Gov norms for per capita supply of water:**  
As per IS 1172:1993 (Indian standard code of basic requirements for water supply, drainage and sanitation)

Individual state norms.

Water demand is catered to by both Municipal supply and personal sources.



### Service delivery levels and benchmark

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~~So, currently government has also we as we have discussed earlier that service~~ Service level delivery levels and benchmarks have currently been prepared by Government for water supply in different urban areas. ~~And for water supply also, we have service levels and benchmarks. And these~~ These are a minimum set of standard performance parameters using which ~~we can actually~~ it can be determined if a particular urban area is performing within given standards. ~~it its task. And based~~ Based on its performance, ~~it can further great grants so that to implement other schemes and so on~~ grants are allocated to implement other schemes. ~~So, this~~ This is ~~actually~~ a way to-of comparison between urban areas to see-determine where the urban area fall is in terms of water supply. In the given Table,

~~And as you can see in this particular table, the~~ different parameters that are shown which are used for determining these benchmarks ~~are for~~ like coverage of water supply connections in an urban area. ~~The coverage of where the benchmark value is something around 100 percent that means, the entire urban area should have~~ water supply connections should be 100 percent that means the entire area should have water supply connections.

~~Then~~ The per capita supply of water should be at least ~~has to be~~ 135 lpcd for cities, for all cities ~~right~~. ~~And then~~ The extent of non revenue water ~~around~~ should be 20 percent.

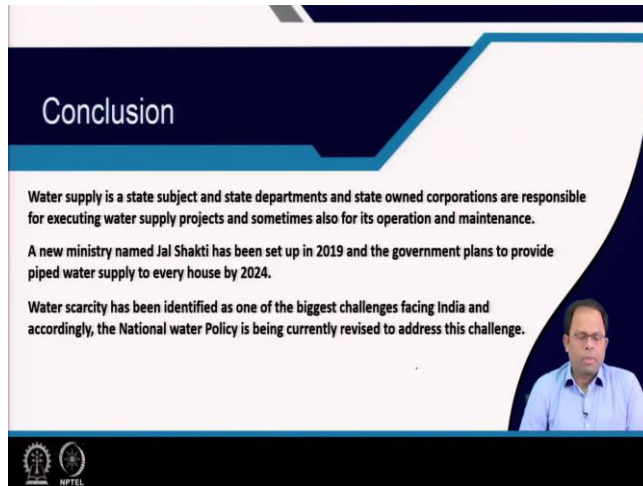
~~and extent-Extent~~ of metering should be around 100 percent, ~~and continuity-Continuity~~ of water supply should be 24 hours ~~—that means it should not be an it is not going to be~~ intermittent supply, it has to be 24 hours. Similarly.

~~Efficiency-efficiency of-in~~ redressal of consumer complaints should be at least 80 percent, ~~The~~ quality of water supply should be at 100 percent. ~~The,~~ cost recovery should be 100 percent, ~~and the~~ efficiency in collection of water charges should be 90 percent. ~~SoThus, this-these is-are~~ the targets, ~~these are the or~~ benchmarks. ~~All that all~~ urban areas should achieve or try to ~~reach this particular targets~~achieve. ~~And based on~~ ~~their performance they could be also their performance their the amount of grants that~~ ~~should be given to them, this all could be decided.~~

~~So,~~ Government of India norms for per capita water supply is also determined based on IS ~~1172-1172:1993~~1172:1993 ~~that we have discussed earlier. So, this-This~~ is the Indian Standard Code of basic requirements of water supply, drainage and sanitation that should be followed. ~~So, this is the standard code that we should follow. And-Though~~ individual states ~~has gothave~~ their separate norms. ~~Sometimes they have introduced their own norms, but,~~ this is the primary norm that ~~we have to~~should be followed. ~~And water-Water~~ demand is catered ~~to~~ by both municipal supply and personal sources.

~~So, Thus, when we dowhile performing the~~ estimates of amount of water resources that are being used in a particular urban area, ~~we-one~~ should ~~think~~ not only consider about the municipal supply that is being provided, but personal sources like wells ~~and all people~~ ~~actually use in their buildings and all that they use within their~~are being used within ~~particular-residential plots that they dig up or they put in some deep tubes in certain~~ ~~apartment buildings, so this also has to~~should also be considered.

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**Conclusion**

Water supply is a state subject and state departments and state owned corporations are responsible for executing water supply projects and sometimes also for its operation and maintenance.

A new ministry named Jal Shakti has been set up in 2019 and the government plans to provide piped water supply to every house by 2024.

Water scarcity has been identified as one of the biggest challenges facing India and accordingly, the National water Policy is being currently revised to address this challenge.

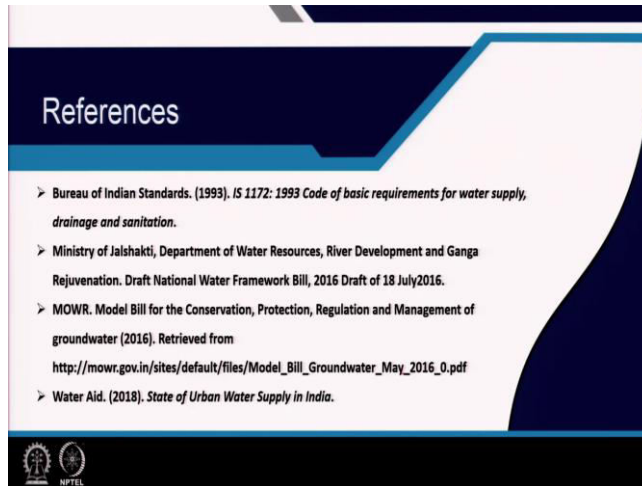
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### Conclusion

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~~So, to~~ To conclude, water supply is a state subject and state departments and state owned corporations are responsible for executing water supply projects and sometimes they are also ~~they are~~ responsible for its operation and maintenance. A new ministry named Jal Shakti has been set up in 2019 and the government plans to provide pipe water supply to every house by 2024. ~~And water~~ Water scarcity has been identified as one of the biggest challenges facing India and accordingly, the National Water Policy is being currently revised to address this challenge.

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## References

~~So, these are some of the references that you can follow.~~ These are some of the references that can be followed.

~~Thank you.~~

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