

**Water Economics and Governance**  
**Prof. Manoj Kumar Tiwari**  
**School of Water Resources**  
**Indian Institute of Technology, Kharagpur**

**Lecture - 51**  
**Water Governance in India:**  
**Water Programmes and Policies**

Hi friends. This week we have been discussing about the various governance practices which are adopted in India. And primarily so far, we discuss what were the ancient practices of water governance, then some of the key features of water governance in the pre-independence India colonial phase, and how majority of those practices has been adopted even post-independence. We did talk about our evolution of some of the major water policies ok, the 3 major policies we have the latest one being in 2010. In this session, we will continue the discussions and we are specifically going to talk about some of the water programs and policies which has been adopted at different stages.

(Refer Slide Time: 01:17)



The water program and policies in fact, can be divided in various zones ok, we can have the water supply and sanitation sector. So, what are the various programs and government policies in water supply and sanitation sector, then there are irrigation sector different irrigation schemes, industrial sector, industrial sector very little work is done at particularly on a policy level. Then the management of surface water groundwater or the

overall environmental management. The policies or the programs that take care of the environmental management which again water is one of the prime component of the environment.

(Refer Slide Time: 02:12)

**Evolution of Water Supply Programmes and Policies**

- *The Environment Hygiene Committee in 1949* recommended the provision of safe drinking water supply to cover 90 percent of India's population in coming 40 years..
- *The Constitution of India in 1950* gave ownership of all water resources to the government, specifying it as a state subject.
- In the *First Five-Year Plan (1951–1956)* water supply and sanitation was added to the national agenda with sanitation first time mentioned under water supply.
- First *National Water Supply and Sanitation Programme* was launched in *1954* as a part of health plan.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/1/11\\_chapter%203.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/1/11_chapter%203.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI  
SCHOOL OF WATER RESOURCES  
IIT KHARAGPUR

So, this way we have variety of approaches to look at. Let us first start with the water supply programs and policies ok. Particularly the water supply will include sanitation as well over. So, how they have evolved from post-independence phase and what is the status at present or close to the present.

So, the environmental hygiene committee was in 1949 recommended the provision of safe drinking water to over 90 percent of India population in coming 40 years. So, that was the first target set, in around 19 50 close to 1950, that in next 40 years. So, by 1990, we should have had 90 percent of the coverage for safe drinking water supply. Of course, that has not been met.

The constitution of India when adopted in 1940 gave ownership of all water resources to the government. Specifically, to the state government ok, is specifying it as a state subject. Then from 1951 onwards we had 5 year plans ok, several 5-year plans have come. majority of them had some discussion on to the water policies as well. The most of them were concentrated to the enhancing the coverage area, enhancing the quality of supply integrating the poors into the supply as back as in the first 5-year plan which was for 1951 to 56.

The water supply in sanitation was added to the national agenda with sanitation, first time mentioned under water supply ok. Then in 1954, the national water supply and sanitation program was launched as a part of health plan ok.

(Refer Slide Time: 04:28)

**Evolution of Water Supply Programmes and Policies**

- In the *Second Five-Year Plan (1956–1961)* funding was provided to Public Health Engineering Departments (PHEDs) for water supply and sanitation facilities.
- In the *Third Five-Year Plan (1961–66)* the villages without drinking water source within appropriate distance or of appropriate quality were identified.
- States were given financial authority to sanction rural water supply schemes, which were expanded to include population units less than 20,000, in *1968*. Priority was given to villages with acute scarcity of drinking water.
- *National Rural Drinking Water Supply Program* was launched in 1969 with technical support from UNICEF and 254.90 crore was spent in the programme, with 1.2 million bore wells being dug and 17,000 piped water supply schemes being provided.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/1/11\\_11\\_chapter%203.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/1/11_11_chapter%203.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR 29

In second 5-year plan, funding was provided to public health engineering departments which are which basically takes care of the water supply and sewage management particularly in the urban areas or towns. So, the provisions for funding for these PhD ds were made in the second 5-year plan, for water supply and sanitation facilities.

Subsequently in the third 5-year plan from 1961 to 66 the villages without drinking water sources within appropriate distance or of appropriate quality who are identified. So, this plan focused on to identifying the problematic situations, or you can call that as a problem villages where the drinking water sources, or the drinking water sources were not in the appropriate distance whether they were too far I think 1.6 kilometer was the cutoff which was taken 1.5 or 1.6 kilometers something like that. And it was also considered the villages which had although they had drinking water sources, but the drinking water sources of were of very poor quality, the contamination with high with arsenic fluoride or some other toxic elements.

So, those water sources which were contaminated with these, and when they were the only available water sources for the villagers to use. So, those kind of villages were also identified and were categorized it was aimed like it was aimed that these kind of villages

will be identified and will be categorized as problem villages. Then states were given the financial authority to sanction rural water supply schemes which were extended to include the population units of less than 20,000 in 1968. So, this power has moved to the states, that are from 1968 or the law says that the state can sanction the rural water supply schemes or rural water supply projects for reasons with population less than 20,000 and the financial supports will be provided accordingly for all such projects.

Priority was given to the villages with acute scarcity of drinking water. So, where there was a complete lack of water supply or complete lack of drinking water sources. So, they were given the first priority, then national rural drinking water supply program was launched in 1969 with technical support from UNICEF, and around rupees 255 crore of the order of that were spent in the program with one point two million borewells dug, and 17000 piped water supply schemes were provided in India back in 1969. One of the major developments was in the form of setting up of Central Ground Water Board CGWB, which was set up in 1971 to look after the groundwater resources.

(Refer Slide Time: 08:09)

**Evolution of Water Supply Programmes and Policies**

- Central Ground Water Board (CGWB) was set up in 1971 to look after groundwater resources
- Accelerated Rural Water Supply Programme (ARWSP) was launched by the Government of India in 1972-73 to assist States and UTs to accelerate the coverage of drinking water. The programme targeted all rural habitations with population of 100 and above for minimum 40 lpcd supply of safe drinking water through boreholes, hand pumps etc.
- In 1975, ARWSP was replaced by the 20 Point Minimum Needs Programme (MNP) which aimed at full coverage of population with safe drinking water. However ARWSP was reintroduced in 1977-78, with provision of funds by the states through MNP.
- In the Sixth Five-Year Plan (1980-85), importance was given to the water supply sector in keeping with the UN de Mar del Plata declaration of March 1977 about the International Decade of Drinking Water Supply and Sanitation from 1981-90.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11\\_chapter%203.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11_chapter%203.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR 30

The accelerated rural water supply program, which were renamed as ARWSP was launched again by government of India in 1972, 73; and the idea was to assist the various union territories and states for accelerating their coverage of drinking water supply. So, as many population as many percentage of population could be covered under this

program, that was the basic idea, and that is why it was named as accelerated rural water supply program. This program targeted all rural habitation with population of 100 and above, for minimum 40 liters per capita per day of supply of safe drinking water through either boreholes or hand pumps, they are even piped water supply.

Now in 1975 around 2-3 years later, this program was replaced by 20-point millennium need program ok; which aimed at full coverage of population with safe drinking water. So, in earlier one, there was some criteria that particularly the rural habitations will be focused which are having population of 100 and above that way. But the millennium need program aimed a full coverage for the entire population with the safe drinking water; however, this like the earlier program ARWSP were reintroduced back in 77, 78 with provisions of funds from states through this under this millennium need program.

In between, quite a few 5-year plans came and more or less all of them stressed on to the need of drinking water sources or drinking water availability for the entire population; however, it was just restating this similar thing again and again. The development of course, has taken place, but the target the set goals were still far off. In the 6th 5-year plan again importance was given to the water supply sector in keeping with the un declaration of march 1977 about the international decade of drinking water supply and sanitation. So, the united nation declared this international decade of a drinking water supply and sanitation from 1981 to 90.

(Refer Slide Time: 11:15)

**Evolution of Water Supply Programmes and Policies**

- A national level apex committee was set up in 1981 to frame policies inline to the International Drinking Water Supply and Sanitation Decade.
- *Rural Water Supply and Sanitation*, which was under the Ministry of Urban Affairs and Employment, was transferred to the Department of Rural Development, then under the Ministry of Agriculture in 1985.
- *Central Rural Sanitation Programme* and *National Technical Mission* were launched in 1986. Further, the *National Drinking Water Mission (NDWM)* was also launched in 1986, which was renamed as *Rajiv Gandhi National Drinking Water Mission (RGNDWM)* in 1991.
- In 1987, *National Water Policy (NWP)* was drafted for the first time by the MoWR with an emphasis on domestic water supply, protection of groundwater sources and water quality monitoring and mapping. Drinking water was given first priority under this policy.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11\\_ch11.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11_ch11.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR SCHOOL OF WATER IIT KHARAGPUR

So, these 10 years were declared for the purpose, and India also aligned they are goal to like as a party to this mission.

A national level effects committee was set up in 1981 to frame the policies in line to the international drinking water supply and sanitation decade which was being observed from 81 to 90. Then rural water supply and sanitation which was under the ministry of urban affairs and employment earlier was transferred to the department of rural development ok, as a separate department and this department was later on basically made separate ministry though. And this department was then under the ministry of agriculture in 1985.

The central rural sanitation program, and national technical mission was launched in 1986 k the 80's, 1986 further there was national drinking water mission in NDWM was introduced which was later renamed as Rajiv Gandhi national drinking water mission ok, RGNDWM in 1991 . Now this is one of the landmark missions particularly in the drinking water assurance for the rural sector ok. although still it could not meet it is all target objective, but significant work related to the water supply coverage was done under this mission. In 1987 the national water policy was drafted for the first time.

So, that was the first national water policy by the ministry of water resources, where an emphasis was given on to the domestic water supply protection of groundwater sources, because that was also one of the very important point the groundwater depletion was taking place at a very rapid state by then. And water quality monitoring and mapping was another aspect which was sort of given emphasis in the national water policy the first national water policy in 1987.

(Refer Slide Time: 13:48)

**Evolution of Water Supply Programmes and Policies**

- *Accelerated Urban Water Supply Programme (AUWSP)* was launched in 1993 targeting the towns having population less than 20000 as per 1991 census with funding model of 50: 50 provided by centre and state governments.
- In 1994, *Panchayati Raj Institutions (PRIs)* were assigned the responsibility of providing drinking water as per the provisions of the 73rd Constitutional Amendment.
- In the *Eighth Five-Year Plan (1992-97)* emphasis was placed on treating water as a commodity. Privatization of water, responsibilities of local bodies for operation and maintenance and proper linkage between water supply and sanitation were the other important points of this plan.
- *Sector Reform Pilot Project (SRPP)* was launched in 1994 in 67 districts across the country on pilot basis.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11\\_ch](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11_ch)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR | SCHOOL OF WATER RESOURCES ENGINEERING AND MANAGEMENT | IIT KHARAGPUR

MANOJ KUMAR  
SCHOOL OF WATER RESOURCES ENGINEERING AND MANAGEMENT  
IIT KHARAGPUR

Drinking water was given the first priority under this policy. Now accelerated urban water supply program, which was AUWSP was launched in 1993 targeting towns having population less than 20,000 as per 1991 census, with funding model of 50-50. So, this was targeted for the population of 20,000 and over. And the funding model was that 50 percent would be provided by the central government and rest of the 50 percent would have to be bought by the state government. In 1994 Panchayati raj institutions were assigned the responsibility of providing drinking water as per the provision of 73rd constitutional amendment. Now it has basically been more the drinking water management has been more localized was given into the hand of Panchayati Raj institutions; which was a big breakthrough which took place in 1994.

Then in the 8th 5-year plan which was from 1992 to 97 emphasis was placed on a treating water as a commodity. So, from that point onwards, the talks came of the if looking after the financial sustainability of water system. So, treat water as a commodity privatization of water or responsibilities of local bodies for operation and maintenance of proper linkage between water supply and sanitation, all these programs were infused in the 8th 5-year plan. The sector reform pilot project SRPP was launched in 1994 in 67 districts across the country on pilot basis. So, this was a pilot project where in 67 different districts across the country the entire reform policies were introduced.

(Refer Slide Time: 16:00)

**Evolution of Water Supply Programmes and Policies**

- In the *Ninth Five-Year Plan (1997-2002)* targets were set to provide 100% water supply coverage in urban and rural areas, 60% sanitation coverage in urban areas and 30% in rural areas. Emphasis was placed on decentralization and privatization.
- RGNDWM programme scaled up the SRPP to the whole country in the form of *Swajaldhara Programme* in 2002, and the management of water supply and sanitation schemes became the responsibility of PRIs and local government bodies.
- The *NWP* was also revised in 2002, and India committed itself to the *Millennium Development Goals (MDGs)* under which the proportion of people without sustainable access to safe drinking water and basic sanitation was to be reduced by 50 percent in 2015 from the level of 1990.

Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11\\_ch](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11_ch)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR | SCHOOL OF WATER RESOURCES ENGINEERING | IIT KHARAGPUR

Then in ninth 5-year plan from which was from 97 to 2002 targets were set to provide 100 percent water supply coverage in urban and rural areas 60 percent sanitation coverage in urban areas and 30 percent in rural areas.

So, this was the coverage or the short after coverage in the ninth 5-year plan, it was targeted that the particularly for water supply perspective whether it is urban area or rural area the coverage should be 100 percent, while for sanitation purpose at least 60 percent of the population should be covered in the urban areas, and 30 percent of the population minimum 30 percent of the population should be covered in the rural areas for sanitation purpose. Emphasis was placed on the decentralization and privatization, in the ninth 5-year plan. The Rajiv Gandhi national drinking water mission program scaled up through SRPP to the whole country in the form of Swajaldhara program in 2002.

So, during the Atal Bihari Vajpayee regime, this Swajaldhara program was massively introduced in order to make the villages independent, and all fed with the proper drinking water supply sources. The management of water supply and sanitation scheme became the responsibility of Panchayati Raj institutions. So, that the, it could be managed at a local village level local panchayat level ok, and with support proper support of course, with proper support from the local government bodies. So, that was another major breakthrough which in the form of Swajaldhara program in 2002. The national water policy was revised in 2002; so, and India committed itself to millennium development

goal under which the like various the goals were set and one of the goals was to ensure the basic water supply and sanitation facilities, and it was in the and as in the millennium development goals was mentioned; that people without sustainable access to safe drinking water and base sanitation has to be reduced from 50 percent in 2015 from the level of 1990.

So, whatever was the level in 1990 of the people with people who are not having access to the safe drinking water and sanitation facility that has to be reduced by 50 percent by 2015. This millennium development goal particularly in the field of water supply was met in India; however, the sanitation sector there was still quite a few lapses ok, we have discussed this earlier. So, that way 2002 was a very prominent year in terms of the policy making we related to the drinking water supply, not only drinking water supply in the similar time period there was another very drastic step which was introduced and was taken in the form of river in interlinking project.

So, the government although the talks were from much earlier, but the Vajpayee government gave nod for the river interlinking project, and that although has not been completed till date, but that project would have been a landmark project. And in fact, it is under progression even now. So, that project if completes would be a very landmark project in order to the management of flood and drought if these river interlinking concepts were transferred to the field in proper manner.

In drinking water and sanitation sector, we had this Swajaldhara program, then national water policies was policy was devised in 2002, and the acceptability of millennium development goals. So, all these took place in around that period that year.

(Refer Slide Time: 20:50)

**Evolution of Water Supply Programmes and Policies**

- In the *Tenth Five-Year Plan (2002-07)* targets of 100% water supply coverage was reaffirmed with focus on institutional restructuring, people's participation, and also managerial improvement.
- All drinking water programmes were brought under the umbrella of the RGNDWM in **2004**.
- *Bharat Nirman Programme (BNP)*, was introduced in **2005**, which was a five year programme to build rural infrastructure, of which drinking water supply was one of six components.
- Pattern of funding under the Swajaldhara scheme changes from the previous 90:10 central-community share to 50:50 centre-state shares in **2007**.

Source: [http://www.rgnwdm.org/india/ocw/olcstream/10603/36784/11/11\\_chapter%203.pdf](http://www.rgnwdm.org/india/ocw/olcstream/10603/36784/11/11_chapter%203.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR

Then in the tenth 5-year plan, which was again from 2002 to 2007 targets 100 percent water supply coverage were reaffirmed with a focus on institutional restructuring, peoples participation and also managerial improvement. So, earlier plans were mostly focusing onto the technological aspect of enhancing the supply and coverage and financial management came in like around 8th or 9 5-year plan, decentralization things also came earlier.

However, this tenth 5-year plan, give due attention and due focus on to the governance and management of water. So, how the institutions particularly water institutions has to be restructured has to be framed properly, how to increase the stakeholders participation or the peoples participation in a water supply and sanitation sector ok, how we can improve the efficiency of managerial bench looking after the water supply and sanitation sector. So, all this was thought during the drafting of the tenth 5-year plan. All drinking water programs were brought under the umbrella of Rajiv Gandhi national drinking water mission in 2004. Then Bharat Nirmaan program was introduced in 2005 which was a 5-year program to build rural infrastructure of which drinking water supply was one of the 6 component ok.

The pattern of funding under the swajaldhara scheme was changed from the earlier concept of 90 percent from central and 10 percent from the community or the Panchayat Raj institutions. that share was changed to 50-50 percent from center and state share in

2007. So, the local contribution or the community share which was there at 10 percent was revoked, it was revoked in a sense that it is not, it does not stop community contributing in the funds in the form of funds, but that mandatory thing was waved off that earlier it was mandated that 10 percent share has to come from the community, and 90 percent will be provided by the central government.

So, that 10 percent mandatory share was relaxed, and the community participation or the community share has been made voluntarily. So, if some community is willing to chip in with some funds they were welcomed; however, if they are not willing to provide funds or the community is not able to provide funds for the drinking water and sanitation facility, then also it was fine as the 50 percent funds were promised from the central government and remaining 50 percent contribution has to come from the state government.

(Refer Slide Time: 24:17)

**Evolution of Water Supply Programmes and Policies**

- In the *Eleventh Five-Year Plan (2007-12)* 63 cities and 5098 towns were aimed to be covered under the JNNURM. The main areas of importance in the plan were to strengthen ULBs, encourage private sector investment in the urban infrastructure and also to establish a more acceptable regulatory framework.
- Department of Drinking Water Supply was renamed as Department of Drinking Water and Sanitation in 2010, and was further upgraded as separate Ministry of Drinking Water and Sanitation in 2011.
- In the *Twelfth Five-Year Plan (2012-17)* included the reform agenda with focus of investments in water supply on demand management, reducing intra-city inequity and on quality of water supplied. A regional planning approach for provision of drinking water supply and wastewater treatment and disposal was also considered as necessary so as to meet needs of both the rural and urban areas.
- Revised *NWP (2012)* was prepared and drinking water was given utmost priority.  
Source: [http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11\\_chapter%203.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/36784/11/11_chapter%203.pdf)

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR 33

In 11th 5-year plan, which was from 2007 to 12, 63 cities and close to 50, 100 towns were aimed to be covered under the jnnurm, the main areas of importance in the plan were to strengthen the urban legislative bodies, local bodies which were basically municipalities or at a smaller level it was the Panchayat Raj institutions ok. The other aim were to basically encourage the private sector investment in the urban infrastructure, and also to establish a more acceptable regulatory framework. So, that was emphasized in the 11th 5 year plan, then the department of drinking water supply was renamed as the

department of drinking water and sanitation in 2010 and was further upgraded as a separate ministry of drinking water and sanitation in 2011. So, our that way our ministry of drinking water and sanitation is only 78-year-old.

In the twelfth 5-year plan which was from 2012 to 17 ok, the reform agenda was set with a focus of investment in water supply and demand management. So, you see if you follow the basic agenda in the various 5 year plan, it has shifted from a various label it has shifted from a just ensuring the coverage just ensuring the providing the water supply by digging bore holes or providing hand pumps or in urban setups providing the piped water supply, earlier plans focused on to these only, but slowly there was up gradation of the issue of considering water as a as a commodity good issue of privatization, the issue of governance, issue of the management the stakeholder participation. So, they slowly, slowly, slowly keep getting emphases.

And in the twelfth 5-year plan, it does not remain only till the concept of supply or coverage, there were due attention given on the demand management as well. So, how can demand be managed? Ok.

Then there was again on a like talk about reducing the intra city inequity various urban areas have great degree of inequity in the supply of drinking water. Some reasons get up to 354, 100 many liters per capita per day water, while some other communities in the same city may get very little water 30, 40, 50 ml d that sort of inequity was there in the cities and across the cities also. So, this was also given attention in the 25th 5-year plan.

The attention was also paid on to the quality of water supplied. So, what quality of water is being supplied particularly through the piped water system, that was also looked upon, and a regional planning approach for provision of drinking water supply, and wastewater treatment and its disposal was also considered which was in fact, necessary to meet the needs of both the rural areas as well as the urban sectors ok. In 2012 only we had the third revision of our national water policy which was prepared and drinking water was given the atmost priority in that, we have already talked about the various national water policies the 3 understand water policies ok, the latest one being 12 and the earlier one being the 2002.

(Refer Slide Time: 28:45)

**Evolution of Water Supply Programmes and Policies**

- The Prime Minister of India launched the *Swachh Bharat Mission (SBM)* on 2nd October, 2014 coordinated by the Ministry of Drinking Water and Sanitation (MDWS)
- The Mission has two Sub-Missions, the *Swachh Bharat Mission (Gramin)* and the *Swachh Bharat Mission (Urban)*, together, aiming to achieve Open Defecation Free (ODF) nation and a Swachh Bharat by 2<sup>nd</sup> Oct, 2019.
- Sanitation Coverage at the launch of SBM(G) on 2<sup>nd</sup> Oct, 2014 was **38.70%**. This has increased to **74.15%** as on 18<sup>th</sup> Dec, 2017.

Source: <http://swachhbharatmission.gov.in/SBMCMS/about-us.htm> & <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1513284>

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR 16

The prime minister of India launched Swachh Bharat mission on the second October 2014 which was coordinated by ministry of drinking water and sanitation. So, it was not much nothing much has to do with the water supply program, but major focus was given on to the sanitation aspect under the Swachh Bharat mission, and this mission particularly had 2 sub missions. So, one was named as Swachh Bharat mission Gramin, while the other one was named at Swachh Bharat mission urban. So, we have such Bharat mission Gramin and such Bharat mission urban, which jointly aim to achieve the ODF nation, ODF means open defecation free.

So, that there are lot of campaign from the government side on to the ODF nation towards the ODF nation or towards stopping the open defecation ok. So, this was like both this Swachh Bharat Mission Gramin, and urban together jointly aimed to achieve the ODF free status for the entire country and declare it as a Swachh Bharat by the second October which is the birth date of Mahatma Gandhi. So, by second October 2019 so, the like they took 5 years of duration for achieving the targets, it was launched on the second October 2014 and the target was that by second October 2019, the nation should be ODF free.

This program in fact, has been well on the track and in our current age if you see it is one of the most talked about schemes of the government, which is the Swachh Bharat mission or Swachh Bharat scheme. And as per the record from the ministry which are

available on the website of the ministry, the sanitation coverage at the launch of Swachh Bharat Mission Gramin was 36.7 percent which has increased to 74.1 percent as on 18th of December 2017 ok. So, we are still around a year and half, and the target is to make 100 percent ODF nation. So, completely open defecation free nation, and as of the December 1917 we are at around 75 percent, although it has it is still a great improvement moving from close to 40 percent to 70 percent. So, 35 increasing the entire coverage for the sanitation or the toilet facilities for the nation by over 35 percent is still a very big achievement that way.

(Refer Slide Time: 32:02)

**Evolution of Water Supply Programmes and Policies**

Some on-going schemes by Govt include:

- Swachh Bharat Mission
- Swachhata Pakhwada
- Namami Gange
- Swachhta Action Plan (SAP)
- River Interlinking
- Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
- Smart City Scheme

Source: <http://swachhbharatmission.gov.in/SBMCMS/about-us.htm> & <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1513284>

IIT KHARAGPUR | NPTEL ONLINE CERTIFICATION COURSES | MANOJ KUMAR TIWARI SCHOOL OF WATER RESOURCES IIT KHARAGPUR 37

There are various ongoing schemes by the government of India ok, on this aspect by the minister mostly by the ministry of drinking water and sanitation, some other in the collaboration with ministry of urban development or other aspects also. So, of course, Swachh Bharat mission is one of the plan, then we keep having Swachhata Pakhwada, Namami Gange scheme is for the water quality improvement. And in fact, the holistic improvement of the river Ganga ok. So, that is under the Namami Gange, then we have Swachhata action plan which sort of promotes the research and R and D work in the aspect of the cleanliness. There are river interlinking projects ok, which is again ongoing by the government of India. There is Atal mission for regeneration of urban transformation. So, which is Amrut, that also has water particularly urban water supply as a very prime component and of course, the smart city scheme will also have the important will also have the upgradation of the urban water supply systems to smart

water supply system ok. Because in order to make a city smart you should have various the various facilities in the city also smart. And in that order the conversion or the modernization of the water supply system existing water supply system is a priority under the smart city.

So, many places or may in the we discussed earlier in the week one, when you are discussing this status we know that we lag far behind there are very few places which are having the 24 7 water supply most of the water supply is still in the intermittent form. There is no proper metering, there is no proper atomization in the water supply system so for smart cities we need a smart water distribution or system as well smart sanitary system or sanitation management system as well, and that will also be sort of need this also will be required while upgrading the existing cities or towns to smart cities. So, with this we will end this session here, and continue the subsequent discussion in the next session.

Thank you.