

Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development & Ganga Rejuvenation  
(National Water Mission)

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National Water Mission (NWM) has initiated a seminar series- ‘Water Talk’ - to promote dialogue and information sharing among participants on variety of water related topics. The ‘Water Talk’ is intended to create awareness, build capacities of stakeholders and to encourage people to become active participants in conservation and saving of water. NWM had already organized five ‘Water-Talks’ on the topics - “Water for All”, “Groundwater” “Water Conservation”, “Ecology Inclusive Economy” and “Agriculture, Groundwater and Energy nexus” on 22<sup>nd</sup> March 2019, 1<sup>st</sup> May 2019, 24<sup>th</sup> May 2019, 21<sup>st</sup> June 2019 and 19<sup>th</sup> July 2019 respectively.

2. Sixth Water Talk in this series was held on 23<sup>rd</sup> August, 2019. Shri Popatrao Pawar, Sarpanch, Hiware Bazar, Maharashtra and Shri Umakant Umrao, IAS, Secretary, P&RD Dep, GoMP & CEO MPRRDA, Madhya Pradesh delivered the Water Talk. Shri U. P. Singh, Secretary (DoWR, RD & GR) MoJS; Shri Rajiv Ranjan Mishra, DG, NMCG; and Officers from CWC, CGWB, NMCG, CSMRS, NWDA and D/o WR, RD & GR attended the programme.

3. Shri U. P. Singh, Secretary, DoWR, RD & GR, Ministry of Jal Shakti started the 6<sup>th</sup> Water Talk by appreciating the work done by both the speakers in the water sector. He also extended gratitude towards both the speakers for coming for the Water Talk and presented a memento and a book named “Water Catchers”.

4. Shri Popatrao Pawar delivered the talk on ‘**Hiware Bazar – A Water Budgeting model**’ and discussed the dynamics of the village system and its governance. He said that good governance will lead to proper and sustainable management of natural resources in and around village. He started his talk by giving the earlier situation of Hiware Bazar. He explained that Hiware Bazaar in 80’s was water scarce village as it always has been a drought prone region. There was no source of income, no water, no fodder which resulted into huge migration and people started preparing liquor and selling it. The primary education and health facilities were also awful. Most of the villagers became alcoholic resulting in more number of criminals in village and no Government servants were willing to have posting in this village.

5. Shri Popatrao Pawar narrated his personal journey and how he was able to change the face of village and convert the blacklisted village into “*Aadarsh village*” with the help of villagers themselves. He said that in his earlier days he was into sports and an active student. In the year of 1989, the state govt. declared village Panchayat elections. Some of the visionary good people and youngsters invited him to the village Gramsabha and during the Gramsabha he addressed all villagers about development that was needed in the village and thus the village Gramsabha selected him as a village Sarpanch for five years. The Five years planning for period of 1990-95 was prepared by village Panchayat. The needs and

requirements were prioritized and first priority was given to the education facilities in the village Gramsabha and decided to implement it by concerned Govt. agencies viz. village Panchayat, youth club. Thus Govt. agencies decided to implement the different scheme and programme in the village Hiware bazar.

6. Shri Pawar explained the rules needed to do water budgeting and management in village. He explained how they allowed bore wells for drinking purpose only and banned bore well water consumption for irrigation. He said that there was complete ban on water intensive crop and land was not allowed to sell to outsiders. The annual rainfall was collected by installing 3 rain gauge stations at sub basin level. Different water conservation measures were taken like continuous contour trench (CCT), deep CCT, earthen bunds, percolation tanks, check dams, artificial aquifer blast and Plantation. The result of this was there was considerable increase in water level, increase in cropping intensity, increase in fodder availability and milk production. Families who migrated from village came back. Due to economic gain, standard of living of villagers improved.

7. Shri Pawar stated that the village in which no one wanted posting earlier became attraction to the people working in water and rural development sector. It became the learning center for Indian and Foreign research institutes and many big officers and celebrities have visited this model village. At the end, Shri Pawar concluded his talk by thanking the National Water Mission for inviting him and initiating the process of Water Talk.

8. Shri Umakant Umrao also delivered the talk on “**Beyond Rivers**”. He started his talk by giving introduction to the Dewas region which lies in the western part of Madhya Pradesh and when he joined as collector in 2006, the region was facing drought for more than 3 to 4 years. He said that people then living in Dewas were already migrated people from Rajasthan and all were worried of converting Dewas into Rajasthan like place, where water scarcity is the major problem. Around 20 years back, first time in the country, water was delivered by train to Dewas. Groundwater level dropped from 100 ft to 800ft and people had around 70 to 80 bore wells each family. In this region, cultivation land was around 4 lac ha and canals used to irrigate only 50,000 ha of land.

9. Shri Umrao explained that there are various models to combat water scarcity, one of which is watershed development, another is community centric models, but the most effective one is leadership centric models. Because such leaders are able to pull out the positive energies from the people and divert it into successful solutions. But this needs consistency and sustainability of a leader and this requires time.

10. There is need to develop a model for Government officers who are posted for 1 or 2 years and had to make change on ground, said Shri Umrao. He stated that in today’s materialistic world the only thing which can drive people to do something on ground is “Profits”. In India, there are more than 4 crores of bore wells, which are formed not by the initiative taken by Govt. but due to peoples’ mind set to gain profit. The cost required to dug 4 crore tube wells is around 8 lacs to 10 lacs crore rupees and if this money had been diverted to create water harvesting structures in that period of time, then we would have not faced the

problem of water scarcity now. Hence, India requires a business model which can harness profits by rain water harvesting.

11. Shri Umrao highlighted the fact that, out of 100 litres of water which we receive from rain water, only 15 to 20 litres reached to field through canal network and therefore the problem of water scarcity exists. Hence, we need to develop a model through which we can utilise 30 to 40 litres of water from the rain fall received. He stated that on an average our country receives around 35 crore-ha-m of water every year and our consumption in today's date is 12 crore-ha-m only, thus making India a water surplus country. Water use efficiency of rain water is very less because we only focus on water available at river basin level.

12. Due to high temperature, less water efficiency demand of water is more in India compared with countries like Australia, Brazil, Canada, China and USA, stated Shri Umrao. Hence, India needs a model which is individual centric, profitable and acceptable to Indian farmer. He emphasised on emergency to take further actions and to do demand side management as few recent research studies says that only 25% groundwater is available and in next 10-15 years it's going to exhaust completely. In Latur, only 7% of groundwater is available which was recharged from the last 100 and 1000 of years and in last 30-40 years we have exhausted it all. The water problem is not by drinking or civic needs, but due to Agricultural water demand i.e. 80-90 % and this is linked directly to profits. He said that we are utilising almost 50 % of cultivable area, out of which 70-80 % is irrigated by groundwater and rest by river basin water. We have already harnessed 100% water available in river basins by constructing large number of dams and still are able to irrigate only 20% of cultivable area. So there is no scope in improving the capacity at basin level.

13. Confined aquifers require hundreds of years to recharge and in India almost all confined aquifers are depleted. Dewas has river basin which is based on confined aquifers. All rivers which are confined aquifer based are nearly 80-90 % depleted or lost, said Shri Umrao. Narmada has 123 tributaries and in today's time no tributary has water. He said the solution to this problem is increasing "Pond"ering efficiency. A well designed pond can ensure availability of 30 to 40 litres of water out of 100 litres of rainfall water for irrigation. A pond can be used to collect water from 1<sup>st</sup> order stream and pass the water to field. He added that we need to have a technical model for water conservation cum harvesting which is economically viable option for individual to invest. To make pond profitable the pond should be located at right place, should have right depth and size.

14. Shri Umrao stated that there are 15000 irrigation tanks in one Dewas district only. Water table has risen by 6 to 40ft in different locations. Irrigation potential generated is 200000-250000 liters. Milk production and crop production has also been increased due to this initiative. Shri Umrao concluded his talk saying that we can live without God but not without "Water".

23. Earlier, Dr C V Dharma Rao, Adviser, NWM welcomed the Speakers, dignitaries, participants and briefly discussed the purpose and aim of Water Talk and informed that the next Water Talk in this series will be delivered on 20<sup>th</sup> September 2019.

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