

## A Geographical Analysis On Latur District Drinking Water And Watershed Management

**Dr. Sunita Shinkarrao Shinde**

HOD & Asso.Prof.

Smt.Sushiladevi Deshmukh Mahila Mahavidyalay, Latur

### Abstract:

On the 16th of January 2016, when Latur City in the heart of Marathwada was receiving drinking water once in 15 days and when plans of bringing water from Ujani Dam, about 300 kms away were being mulled upon, I was standing on the wall of the Lower Terna Reservoir in Osmanabad, about 40 kms from Latur. The dam has been at dead storage for the past 3 years. There are a string of jackwells inside the dam, to take water to rural drinking water supply schemes in Osmanabad and Latur for Nilanga, Killari and recently Ausa in Latur and Makani and Omerga in Osmanabad. Water Filtration System which is supposed to supply drinking water to 14 villages in osamanabad lies defunct for years, even as the Revenue Minister inaugurated a brand new system for Latur City. Villages supposed to receive water from the dead stock stay thirsty. This is also the same Lower Terna Dam from where water is being taken for the Latur city in tankers now.

**Key Word:** Drinking Water, watershed Management.

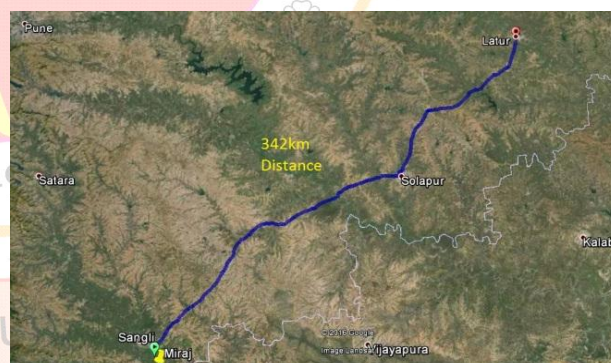
### Introduction:

The Water Train arrived in Latur on 12<sup>th</sup> April, carrying 5 lakh liters of water for the more than 400,000 people of Latur City. Both Union Water Resources Minister Uma Bharti and the Maharashtra government are taking pride in achieving this train for Latur, when it should have been option of last resort, and could be eminently avoidable if prior and planned actions required were taken at least since Sept 2015 when the huge rainfall and hydrological deficit in addition to agricultural calamity for rained farmers was clear.

The water train comes all the way from Meeraj, on the banks of Krishna River in the prosperous Western Maharashtra but today, Krishna as she flows down to Karnataka, is a parched and poor river and Karnataka is clamoring for more water in Krishna from Maharashtra for its dry regions.

As India faces one of its biggest droughts since Independence, such stories and surrounding conflicts are the new normal. Especially for Marathwada, a region which received 42% deficit rainfall in 2014 and 40% in 2015. Before settling at 40% deficit in 2015, Marathwada showed the highest deficit in the country at 52% for a long time during monsoon 2015.

**Study Area:** Latitude and longitude coordinates are: **18.407957, 76.576767**. Latur is a very old city, one of the most populous ones of Maharashtra state (with the population of about 390,000 people). It has a very long history and plenty of attractions to see.



### Objective:

The Research Paper Mainly Focuses On The Important Water Management As Well As Their Effect On Regional Development. This Is Paper In Mainly Based On Following Objective.

1. The Study of Latur District Drinking Water.
2. Watershed Management in Latur District.

### Methodology:

Secondary data which is necessary is collected from Latur District. Magazines, Newspaper and other related books are also referred to get secondary information.

**Discussion:**

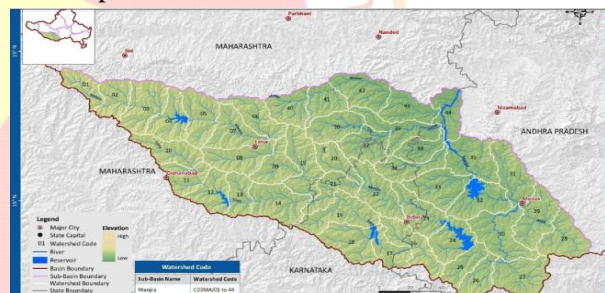
In 2015, Latur which is now in the eye of the storm, received less than 50% of its average monsoon rainfall: mere 361 mm as against monsoon average 723mm. In July 2015, Latur received an unbelievably low rainfall of 28 mm as against the July average of 192.7 mm and had mere 2 rainy days. In 2014 too, monsoon rain was just above the 50% mark. It is interesting to note that Solapur received much lesser rainfall than Latur, just 193.9 mm in the monsoon months and although it is not without serious scarcity problems, its drinking water crisis is not as severe as Latur. According to reports, "The north-eastern belt ,Jalkot, Ahmedpur, Deoni, Nitur, Udgir faces more of a hydrological drought and scarcity. The slightly better-off and greener north-western belt Renapur, Latur City and AUSA is hit by both agricultural and meteorological drought."

**Groundwater** As per Groundwater Survey and Development Agency (GSDA), in March 2016 25 of 27 taluks in Marathwada, recorded a **groundwater level fall of more than 3 meters as compared to 5 year averages**. This is significantly higher than the previous year. In Latur, Jalkot Taluk shows the deepest level fall in all Marathwada at 7.7 meters deeper than 5 year averages. As is true across the country, groundwater is the real water lifeline of Latur. Reports state that there are over 90,000 borewells in the district alone. Even today, most of the 600 odd tankers that ply on Latur's streets use groundwater. Latur residents survived on groundwater when water was supplied once in 15 days and then once in a month. But most of the bores in the city too are going dry. Unlike the neighboring Solapur where a massive groundwater recharge and protection movement took shape leading to remarkably better groundwater condition throughout the district, no such thing happened in Latur, despite the acute drought.

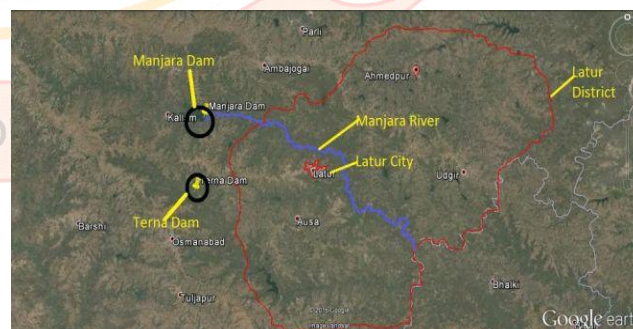
Latur City, with a population of more than 400,000 receives water mainly from the Manjara Dam, or Dhanegon Dam about 60 kms from the city. The 25 meters high dam was built in 1982 and has a Live Storage of 177 MCM according to Maharashtra Govt. (However, according to Water Resources Information System of Central Government, its live storage is 154 MCM. Its submergence area is approximately 4300 hectares. Manjara River on

which Manjara Dam is built is by no means small. It is a 724 kms long tributary of Godavari arising from the Balaghat ranges of Maharashtra and meets Godavari in Andhra Pradesh. It is also a unique river which originates in low rainfall region of Balaghat and flows onwards to higher rainfall regions of Andhra Pradesh before joining Godavari. Other main rivers flowing through the district are Tawarja, Terna, Rena, Gharni, Dev, Minar and Tiru. The South West part of the district is made up of Manjara basin within the district the length of Manjara is 130 kms, Terna – 91.25 kms, Tiru – 52.8 kms, Tawarja – 50 kms, Manar – 50 kms, Gherna – 38 kms and Dev – 35 kms.

Manjara forms the major river basin in the district which includes Terna, Tawarja, Rena, Gharni and Dev as tributaries. The big towns such as Latur, AUSA and Udagir are situated on the raised plateau while Ahmedpur and Nilanga lies on sloping ground of these plateau.



Manjara Sub Basin including parts of Maharashtra, Karnataka and Andhra Pradesh Source: WRIS, Govt of India



Location of Manjara and Lower Terna Dams, Latur City and Latur District.

According to Government of India's Water Resource Information System Report on Godavari Basin, Latur's population in 2011 was 24.54 lakhs. Its area is 7009.52 sq km of which 7007.07 sq km is in Godavari basin. It says Manjara project has a Culturable Command Area (CCA) and Ultimate

Irrigation Potential (UIP) of 23690 ha. Lower Terna dam has CCA of 22170 ha and UIP is 18500 ha. The ongoing Upper Manar dam (also benefits Latur dis in addition to Nanded) has CCA of 9980 ha and UIP of 12420 ha. Tawarja Med Project (Completed) benefiting only Latur dist has CCA of 3600 ha. Renapur Med Project (Completed) benefiting only Latur Dist has CCA of 3050 ha and UIP of 2450 ha. Deorjan Med Project (Completed) benefiting only Latur dist has CCA of 2850 ha and UIP of 1880 ha. Sakol Med Project (Comp) benefiting only Latur dist has CCA of 2570 and UIP of 2800 ha. Raigavan Med Project (Comp) benefiting Osmanabad and Latur dist has CCA of 2270 ha and UIP of 1700 ha. Whatti Med Project (Comp) benefiting only Latur dist has CCA of 1360 ha and UIP of 1820 ha. Mesalga Med Project (Comp) benefiting only Latur dist has CCA of 1360 ha and UIP of 1660 ha.



Manjra Sub Basin Source: Irrigation Commission Report, Government of Maharashtra

Before Manjara Dam, Latur City used to receive water from Nagzari and Sai sources located on the Manjara River itself. The jackwells here are dry today. According to Vijay Divan, an environmentalist born and brought up in Latur city, of the 109 MLD water that was supposed to come to Latur from the Manjara Dam, only 30 MLD supply could be achieved successfully.

**More shockingly, Manjra Dam has been at dead storage for at least 3 years in a row now.** Same is the case with neighboring **Lower Terna Dam** with a Live Storage Capacity of 91 MCM about 35 kms away from Latur. Terna is a tributary of Manjra River, which in turn is a tributary of Godavari River.

Both these dams have not irrigated any farmland through their canals in the last 3 years, neither made any releases in Manjara or Terna Rivers. While this can be blamed partly on failing

rains, that is not the full story, as 2013 monsoon was satisfactory.

Environmentalist and journalist Atul Deulagaokar, who stays in Latur and calls it the “battle front” told me that since **September 2015 itself, water was being supplied to Latur City once in 10 days, which fell to once in 15 days and then to once a month.** In February 2016, all water supplies from Manjra Dam came to a standstill. From here on, people have been dependent on bore wells and hundreds of private tankers. Even on this count, Solapur, which has received much less rainfall, has been successful in controlling the tanker mafia to a large extent. But the only step envisaged by Latur Collector is “*Tankers should charge fair rates*”. At the same time, bottling plants in Latur continue to bottle at least 20,000 liters of water daily.

While drinking water availability is not a question of only arithmetic, this is to indicate the massive costs of concentrating a water intensive crop in drought affected areas of the state and absence of water allocation policies on the part of Water Resource Department and District and City Administration.

While there was no canal irrigation through Manjra Dam, there was back water lifting with pumps, abstraction from Manjra River itself, through 9 irrigation barrages on Manjra and mainly Groundwater use. **If looking at the scarcity issues, farmers were compensated in time and sugarcane irrigation was curtailed in January 2015 itself or even in June 2015, when monsoon failed resoundingly, drinking water scenario would have been different now. Many organizations including SANDRP had been raising this for long. We had also written to the Government.**

But there is no system in place with the State Water Resources Department, the Agriculture department or local self-governments to enforce such a decision, when badly needed. Even the existing Laws like Maharashtra Irrigation Act (1976), Maharashtra Water Resources Regulatory Act (2005) or the Groundwater (Management and Development) Act (2009) which have clear provisions of restricting perennial crops in drought areas, are not being implemented by the agencies.

As Climate Change and recurrent droughts are underlining, there is a deep folly in concentrating

sugar and sugar industries in a region which is drought prone, with sharply falling groundwater levels and experiencing frequent droughts. Sugar leaders are openly stating that Government should have banned crushing if it was a problem. I was a part of one such public discussion. Did the Political leaders of Latur themselves bear no individual responsibility towards their district? Did they not see the crisis for themselves? Why did the district administration not restrict use of water for sugarcane cultivation and their crushing in this drought year? Why did MWRRA not take action in this regard?

Sadly, at least 20% cane crushed in Latur's factories using Latur's water has come from outside, and not Latur. So to increase factory profits, industries used water from a stressed place to process sugarcane from outside the district.

**Farmer is the loser** Latur district had 46 000 ha under sugarcane in August 2015 when I talked with the Sugar Commission rate. About 20% of this cane burned out in the absence of water, or was diverted to cattle camps, with hardly any profit to the farmer. This means that cane that was watered in December 2014, and then in the harsh summer and failed monsoon of 2015 could not be harvested. **So the farmer spent an extremely precious resource for keeping his cane alive for at least 8-9 months, but then had to forego even cost recovery, forget about income or profit... This is a shocking picture, and I have seen several such instances in Omarabad and Solapur this year, highlighting the fact that Farmer is always vulnerable, not the sugar factory.**

I had talked with the Collector of Latur in September 2015, with reference to Government's announcement that collectors will decide if there is water to allow crushing and if so how much, depending on water availability. I was simply told by the Latur Collector that no such instructions were received by him. No *sue motto* action was taken by the Collector himself, although he had powers under drought manual and it was a part of his duty.

This led to Water Supply Minister Vijay Shivatre also claiming in the Assembly that: "*At Latur, water supply is once in 21 days. Even during monsoon water supply is once in eight to ten days. Yet, there are several sugar mills prospering with highest production of cane and sugar. At Latur,*

*sugar mills directly lift water from Manjra River to their fullest capacity. As a result, it leads to shortage of water for drinking purposes. Today, Latur with 5 lakh population is demanding Rs 700 crore for bringing water to city from Ujjani dam. There is no water storage in Manjara dam and river. We have to set our priorities and plan for public at large and not serve only sugar mills' interest. We have to first store water for drinking purpose and then use the rest for sugar cane. But exactly the opposite is happening in Latur.*"

**City Water Supply Problems:** Sugarcane is not the only culprit behind Latur's drinking water supply crisis. The Latur Municipal Corporation Water Supply System is also old and extremely inefficient. Atul Deulgaonkar talks about how the storage tanks in the city can leak upto 30,000 liters water in a single night.. about how thousands of taps do not close at all, keep flowing constantly when there is water. Irrigation Engineer on the condition of anonymity talked about how water supply is not metered, which makes it impossible to find out where leakages exist. The Engineer firmly believed that it was the responsibility of the City Administration, Municipal Corporation and Collector to stringently manage Drinking water since the monsoon itself, which was not done and which snowballed in the current drinking water crisis.

Inefficiencies in the system, leakages, wastages and no metered supply is a reality for most Indian cities today. Latur has sugarcane added to the equation. A look at discussions about water allocations for Cricket matches of Indian Premium League following the High Court orders even in these conditions indicates that equitable water allocation is still not a moot point for Collectors, Water Resource Department, MWRRA or even the Judiciary.

#### **Conclusion:**

- ⇒ Latur crisis is but an indication that most Indian Cities are standing on this precipice. Many questions arise here.
- ⇒ Will accountability be ensured in administration when it comes to protecting Drinking Water sources at least in the time of severe drought?
- ⇒ Will the Rules of the Maharashtra Irrigation Act (1976) be passed now, there are none till date?
- ⇒ Will the Rules of Groundwater Management and Development Act (2009) be formed and

implemented to protect groundwater from depletion and make recharge mandatory?

- ⇒ Will the Rules of Maharashtra Water Resources Regulatory Act (2005) be formed, which have a provision of limiting perennial crops during drought?
- ⇒ Will a transparent and accountable water allocation policy and mechanism be put in place?
- ⇒ This epic drought is also an opportunity of putting things right. Jalyukta Shivar Program of water harvesting, last minute decisions to secure drinking water from far off sources, etc., can be effective only in the framework of better water governance in Maharashtra and not in vacuum. In the last 4 years of drought, we still have to see a single policy decision made and implemented to steer water management in the state to a new direction. We are clearly wasting our crises.

**References:**

1. Wolff, G.; Gleick, P.H. 2002. The soft path for water. Chapter 1. In: Gleick, P.H.; Burns, W.C.G.; Chalecki, E.L.; Cohen, M.; Cao Cushing, K.; Mann, A.; Reyes, R.; Wolff, G.H.; Wong, A. 2002. The world's water 2002-2003: the biennial report on freshwater resources. Island Press, Washington, D.C. pp. 1-32.
2. Vernooy, R.; Baltodano, M.E.; Beltrán, J.A.; Espinoza, N.; Tijerino, D. 2001. Towards participatory management of natural resources: experiences from the Calico River watershed in Nicaragua. In Lilja, N., Ashby, J.A., Sperling, L. 2001. Assessing the impact of participatory research and gender analysis. Consultative Group on International Agricultural Research, Cali, Colombia. pp 247-262.
3. Mark L, Mark S, John T and Mihriye M (2002); Watershed Partnerships and the Emergence of Collective Action Institutions American Journal of Political Science, Volume 46 No.1 Page 148-163
4. Dhakal, K. P., & Chevalier, L. R. (2016). Urban Stormwater Governance: The Need for a Paradigm Shift. Environmental management
5. Ewalt, J. G. 2001. Theories of Governance and New Public Management: Links to Understanding Welfare Policy Implementation. Paper Presented at the Annual Conference of the American Society for Public Administration.

