

Combating Drought with a Haphazard Measure: A Story of Manjra River Rejuvenation

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Abstract

The paper analyses the Manjra River Rejuvenation work implemented in Latur (Maharashtra) under the leadership of Art of Living and RSS Jankalyan Samiti in the summer of 2016. The paper evaluates the validity of an approach of widening and deepening of Manjra river to quench the thirst of Latur city by analyzing hydrology of the basin. It critically investigates the process of implementation involving gross violation of multiple rules and regulations and uncovers the lacunas and inconsistencies existing at the policy level as well as in practices governing the management of rivers. The study analyses the contribution of the project towards its intended purpose and proves that the rejuvenation of Manjra river has not contributed even a single drop to the drinking water supply of Latur city, making all the efforts futile. After such massive work lauded as success and even after witnessing a good rainfall - 21% excess than normal rainfall in Marathwada (IMD 2016), Latur city is receiving water once in a week since past nine months. Moreover, the rejuvenation work raises concerns over increasing involvement of non-government organizations (NGOs) tinkering with the sensitive river ecosystem with their questionable knowledge claims towards mitigating water scarcity and role of government agencies who are custodians of rivers silently observing this process.

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1. Introduction

In summer of 2016, River Manjra was rejuvenated under the leadership of Art of Living (AoL) and RSS Jankalyan Samiti by deepening and widening its channel to meet drinking water demand of parched Latur city of Marathwada. The rejuvenation work was claimed as a permanent solution for the water crisis of Latur city. The citizens of Latur were appealed to contribute to the work with the assurance that Latur city will receive water every alternate day³. The rejuvenation was carried out by removing 4.3 million cubic meters of silt using more than 25 excavators operating over a period of two months costing around Rs. 70 million, donated by the people⁴. The massive excavation affecting the river ecology has already been criticized by the experts on the environmental grounds in the media (Chari and Sharma 2016; Jamwal 2016)⁵.

This study goes beyond and evaluates the validity of the approach of widening and deepening of the river by analyzing the hydrology of the Manjra basin. It critically investigates the process of implementation involving gross violation of multiple rules and regulations and uncovers the lacunas and inconsistencies existing at the policy level as well as in practices governing the management of rivers. The study analyses the contribution of the rejuvenation project towards its intended purpose and proves that the rejuvenation of Manjra river has not contributed even a single drop to the drinking water supply of Latur, making all the efforts futile. After such massive work lauded as success and even after witnessing a good rainfall - 21% excess than normal rainfall in Marathwada⁶ (IMD 2016), Latur city is receiving water once in a week since past nine months.

The study proves that the rejuvenation - as another attempt with the technocratic supply-side approach is not addressing the real issues of drinking water supply of Latur city. Moreover, it raises concerns over increasing involvement of non-government organizations (NGOs) tinkering with the sensitive river ecosystem with their questionable knowledge claims towards mitigating water scarcity and role of government agencies who are custodians of rivers silently observing this process.

We argue, the scheme of widening and deepening of channels widely implemented under Jalyukta Shivar in Maharashtra and now being promoted in the other states, as a promising measure for conserving water

³ Considering the past situation of Latur city even the assurance of alternate day of supply was big enough to catch the attention of citizen.

⁴ Interview with members of Jalyukta Latur Samiti (JLS) and Art of Living (AoL) volunteers Makarand Jadhav and Mahadev Gomare

⁵ A case was also filed in National Green Tribunal regarding the environmental damage caused by this work which was later on disposed of.

⁶ Normal rainfall of Marathwada region is 682.9 mm and in the monsoon of 2016, the region received 824.8 mm

needs to be scientifically studied considering the local context before implementation (Khapre 2017, 2016; Tol 2016). Moreover, while promoting public participation of NGOs and Corporate Social Responsibility (CSR) initiatives, appropriate policy measures need to be framed to monitor their work and hold them responsible. For this study, we have reviewed relevant policy documents, analyzed hydrology of the basin, interviewed government officials from various departments, local leaders and representatives of Art of Living (AoL) and Jalyukta Latur Samiti (JLS) and collected data from field observations during the implementation of the project and also in the post-monsoon season when the project was completed.

2. Deepening and widening: Was it a right move for quenching thirst of Latur?

In early 2016, in the wake of second consecutive drought, all three sources of Latur municipal corporation's drinking water supply scheme - Manjra (Dhanegaon) Dam and Sai and Nagzari barrages went dry. As a result of the severe water crisis, the citizens of Latur under the leadership of Art of Living (AoL) and RSS Jankalyan Samiti (RJS) came together and formed Jalyukta Latur Samiti (JLS)⁷ involving local leaders to do something to strengthen the water sources of the city. The JLS selected Nagzari and Sai barrages constructed on Manjra river as they are located nearby city (see **Figure 1**) and the idea was to widen and deepen the river channel upstream of these barrages to create storage of 18 million cubic meters (MCM) which is according to JLS, sufficient to meet drinking water demand of the city (Ghadyalpatil 2016; Thomas 2016). According to JLS member Mahadev Gomare, who is also an active volunteer of AoL, the plan was to rejuvenate the river over a stretch of 18 km by widening and deepening the channel by 80 m and 3 m respectively. However, after interaction with AoL members, we found that JLS has not conducted any study to assess the feasibility of reducing water crisis of Latur city through an idea of widening and deepening of river channel between two barrages. Moreover, this project was executed considering it as an isolated project without assessing the hydrology of the basin.

2.1 Is there enough water?

Though JLS was intended to create 18 MCM of storage, the question is whether the basin has excess water to fill the additionally created storage. The analysis of water availability data and existing storage structures constructed on Manjra river indicates that there is no such excess water available. In fact, Manjra basin is an overdeveloped basin, the capacity of existing water storage structures and total allotted water use is much more than the available water in the basin.

As per the draft report of Godavari River basin prepared by Water Resources Department (WRD), Manjra basin is already facing water shortages. The total water availability in Manjra basin is 559 MCM, however, the live storage capacity of completed and ongoing projects is 628 MCM. The total allotted water use is 717

⁷ The complete name is Sarvajanic Jalyukta Latur Vyavasthapan Samiti but often referred as Jalyukta Latur Samiti (JLS)

MCM⁸, surpassing the total water availability by 158 MCM (WRD 2015). Therefore, the Manjra basin is a closed basin meaning the water usages have exceeded the quantity of renewable water available in the basin. There is no 'excess' water available that can be just stored by widening and deepening of a channel.

Figure 1 indicates the existing water storages in the Manjra basin. Manjra dam, the largest reservoir of the Manjra basin with a capacity of 250.7 MCM is located at the upstream of Latur city (CWC 2015) followed by series of total 14 barrages constructed on the river before it enters in Karnataka. Nagzari and Sai are two such barrages which were built to supply 4.26 MCM⁹ water for Latur city and JLS was focusing on

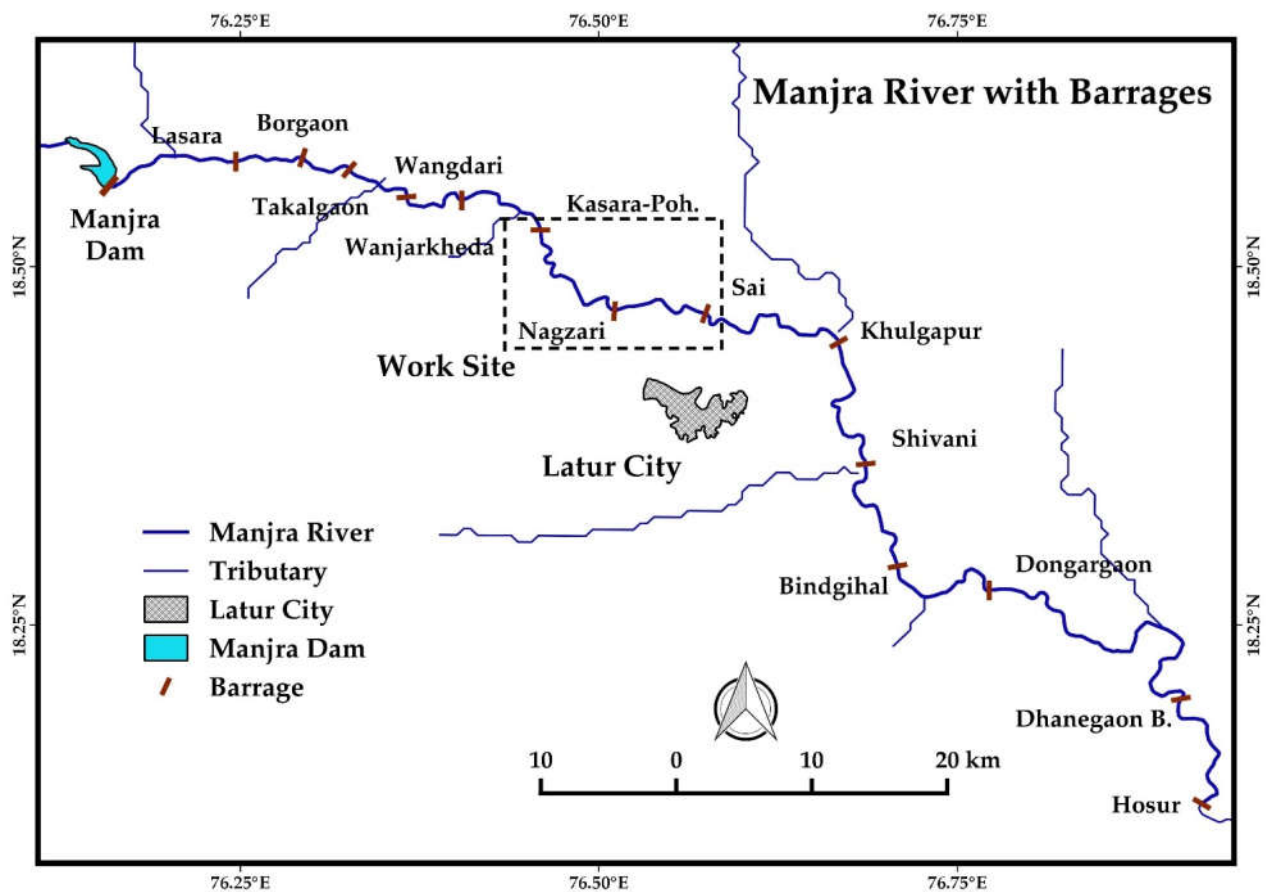


Figure 1: Map showing Manjra River along with barrages and work site (Source: Authors)

⁸ This does not include environmental water use - water needed for natural ecosystem

⁹ Interview with Water Supply Engineer of Latur Municipal Corporation

strengthening of these sources by widening and deepening. However, upstream of Latur, between Manjra dam and Nagzari, over a river channel length of 50 km, total six barrages already exist. No stretch of the river channel is left without an influence of a barrage. Also, there is no major tributary bringing additional water from the catchment to these two barrages. As a result, the inflow in Nagzari and Sai barrages is mainly controlled by Manjra dam and six upstream barrages. Unless and until upstream structures overflow or release the water, Nagzari and Sai will not get adequate water to fill the additionally created storage capacity by Jalyukta Latur Samiti. So, the question is: in absence of excess water in the basin, how do these barrages get water to fill additionally created storage?

If somehow, they managed to 'conserve' the water in these two barrages then Latur Municipal corporation (LMC) need to officially reserve that additional water from the water resource department before using it. Since the existing water reservations are exceeding total availability by 158 MCM and Latur city already has sufficient reservation in Manjra Dam (as explained in section 2.3), it is most unlikely that LMC will get the reservation as it is going to create conflicts among water users. Since the basin is closed, the conservation practice for storing water needs to be evaluated carefully before implementation, as it leads to reallocation of existing water usages. It means without official reservation Latur city will be using the water share of downstream users. It further means urban water users of Latur city are grabbing the water of downstream farmers and villagers and depriving them from fulfilling their drinking and irrigation water needs.

2.2 Can Latur use stored water?

The second important question is, if anyhow water is stored in the additionally created capacity, can Latur use the stored water to fulfil its current demand of 66 million litres per day (MLD)? Unfortunately, the answer is no. There is no arrangement at Nagzari and Sai barrages to pick up the additionally stored water, treat it and pump it towards the city. Without cross-checking the adequacy of required infrastructure, the plan of widening and deepening of the river was executed by damaging the river channel.

The interview with an engineer from water supply department of Latur Municipal Corporation revealed that the water supply department was not consulted at all while preparing and executing the entire plan. For extracting water, two independent intake wells¹⁰, water treatment plants and pumping stations are constructed at Nagzari and Sai barrages. Nagzari is bigger barrage and it is provided with a water treatment capacity of 19.2 MLD at village Warwanti and similarly, for Sai, treatment plant of capacity 9.8 MLD is installed at village Arvi. Now treatment plant of Nagzari (Warwanti) is not functioning since last ten years and treatment plant of Sai (Arvi) can barely work at half of its design capacity because of ageing and poor maintenance. Moreover, the pumping capacity is not enough to pump the additionally created storage.

¹⁰ The intake well is a constructed within a reservoir or river channel to take the water from the water body.

At Nagzari, the level of additional storage created with deepening is well below the existing jackwell. Thus, the additional arrangement is needed to extract the water which includes installation of a pump and a new pipeline. Even temporary makeshift arrangement to extract the water is going to cost Rs. 2-2.5 million¹¹ and if water supply department wants to plan a permanent measure by shifting the jackwell at a lower level, then it is going to cost approximately Rs. 30 million. Similarly, additional investment is needed at the Sai barrage.

JLS did not consider these additional infrastructural requirements while planning rejuvenation to quench the thirst of Latur city. As a result, not a single drop from their work has been reached to the taps of citizens also while permitting such haphazard work which also caused environmental damage, nobody questioned its feasibility.

2.3 Is it logical?

Manjra dam alone which supplies 20 MCM water along with water treatment capacity of 80 MLD is more than sufficient to meet the existing demand of Latur city - 66 MLD of water. One of the misleading claims made by JLS members in support of this work is that - the additional storage created by them will help Latur in times of distress. This claim is no longer valid. Since Manjra dam is located upstream of Nagzari and Sai barrages and no major tributary is contributing water to these barrages, when basin face distress these shallow barrages will obviously dry first. Therefore, creating a storage within a river channel by digging cannot be the appropriate solution as it has more evaporation and seepage losses than water stored in the dam itself. Also, monitoring and protecting a shallow water storage made for the city stretched over 18 km of length and surrounded by farmland (mainly sugarcane) from irrigation water use (or theft!) is a difficult task. This situation questions the innocent assumption of storing water during monsoon and using the same in summer months that will survive after seepage and evaporation losses and irrigation water use.

Moreover, this entire approach of widening and deepening is a typical technocratic supply-side solution neglecting the real issues of water supply system of Latur. The distribution network of the city is old and leaky causing significant water losses. The non-revenue water (NRW) in Latur is estimated in the range of 50-55%. The water treatment plants are poorly maintained. Therefore, efforts of increasing water availability at source are questionable when half of this water is lost in the distribution network. Today, after witnessing a good rainfall year and more than sufficient water available in the Manjra dam, the municipal corporation is not able to use its own water quota from the dam because of bottlenecks existing in the network and treatment plants and supplying water only once in a week.

However, the activities like reducing losses and increasing efficiency of the system or increasing groundwater tables by rainwater harvesting in the city are not as attractive as a massive worksite where more than 25 excavators and 50 dumpers are operating and changing the landscape.

¹¹ It will include use of floating pumps and a pipeline

Surprisingly, after completion of widening and deepening, just before the onset of the Monsoon, rejuvenation is declared as a success and this success is celebrated in presence of RSS Sarsanghchalak Mohan Bhagwat (Samvada 2016) without measuring or evaluating the contribution of this work towards mitigating the water crisis of Latur City. Though initially the project was started with the objective of permanently tackling water scarcity of the city, towards the end, the pictures of deepened and widened channel with full of water (which was oblivious after rainfall) become the symbol of the success of the project. Later, no one questioned whether the intended purpose was met or not. Even in a booklet published by JLS after completion of the work does not mention anything about its precise impact on the water supply of Latur¹².

3. Jalyukta Shivar: Inconsistent policies of deepening and widening

In 2014, Government of Maharashtra announced ambitious flagship program - Jalyukta Shivar Campaign to make 25,000 villages of state scarcity free permanently by the year 2019 (GoM 2014). Stream deepening and widening is listed as one of the activities among the total 13 activities promoted by Jalyukta Shivar to improve the availability of water. In Maharashtra, the activity of deepening and widening of streams was first initiated by geologist Suresh Khanapurkar in northern Maharashtra by widening and deepening the streams along with construction of check dams to create big storages within the stream channel. Though it was highly criticized by some of the experts and environmentalist citing its excessive depth (Joy 2013), this activity was listed in the Jalyukta Shivar, as one of the promising drought proofing measures.

After a year, in December 2015, Government issued a new government resolution (GR) specifically emphasizing on the deepening, widening and straightening of the channel. However, the scope of work was suddenly widened without citing any reasons and rivers were brought under the purview of deepening, widening and straightening terming the activity as a River Rejuvenation (GoM 2015). The GR also encouraged seeking participation from people, corporate social responsibility (CSR) initiative and non-governmental organizations (NGOs) for raising funds and implementing river rejuvenation work. Moreover, for implementation of this activity, a district-level committee headed by the district collector was authorized to make all the decisions and carry out the work.

Therefore, in early 2016, when JLS members approached Latur district collector Pandurang Pole with the idea of deepening and widening of Manjra river, the collector following the directions of this GR, gave the permission for the work and himself inaugurated it on April 8, 2016 with the objective of increasing the storage capacity of the barrages supplying water to the city.

¹² Now some of the JLS member talk about increase in groundwater level and water made available for farmers, as an impact. However, it is like changing a goalpost! As these objectives could have been achieved by implementing other measures without damaging river e.g. watershed development.

3.1 Conflicting policies

The Maharashtra Government has issued multiple decisions pertaining to deepening and widening of the streams. These inconsistent decisions caused confusion during the implementation of the scheme. Though, the GR of December 2015 permits rejuvenation of rivers, it also states that all the work under rejuvenation should be carried out as per the instructions given in government resolution released in May 2013 (GoM 2013). The GR of May 2013 provides the detailed technical and implementation guidelines provided by Groundwater Survey and Development Agency (GSDA) and Department of Agriculture¹³.

However, the recommendations of GSDA and guidelines of agricultural department clearly states that the main objective of stream deepening approach is to remove silt and increase groundwater recharge and not to create surface storages, as surface storages cause significant evaporation losses. These guidelines strictly recommend deepening of the only 2nd and 3rd order streams and strictly discourages widening of the streams as it disturbs the naturally stable river banks. Moreover, the guidelines restrict deepening up to 3 meters only from stream bed or till the layer of sand whichever strikes earlier. Thus, these guidelines restrict widening and straightening of the streams and do not permit deepening of higher order streams and the river is essentially higher order stream. On one hand, GR of December 2015 promotes rejuvenation of the river and suggests to follow the guidelines of GR of May 2013 which itself does not permit deepening of rivers and widening of any stream. Thus, by issuing conflicting GRs a grey zone is created while framing the policies and later this grey zone is exploited while granting a permission for deepening and widening of a Manjra River - which is a 6th order stream.

4. Implementation of Manjra Rejuvenation Project

During implementation, AoL started directly earth-moving work. However, as per the guidelines (GoM 2015; GoM 2013), before the beginning of the work, implementing agency need to carry out series of activities which broadly includes - surveying existing river channel to measure existing depth and width of the channel after a certain interval, taking sample pits on river bed for assessing the underlying strata to decide the depth of deepening, assessing available runoff from the catchment to decide the length of deepening, preparing a detailed estimate of the project etc. Since, Manjra river's natural channel depth is more than three meters, as per the guidelines, the implementation agency should carry out the work under the guidance of GSDA (GoM 2013). However, in reality, none of the above-mentioned things was carried out.

While implementing, excavation work was started without preparing a feasibility report, detailed project report or detailed estimate of the work. The supporting explanation provided by AoL was - these activities

¹³ The GR is based on recommendation made by a technical committee headed by the Director of GSDA appointed to study the stream deepening approach propagated by Suresh Khanapurkar and suggest guidelines considering the different geological and topographical settings across Maharashtra.

are not essential as they are mere 'wastage of time' and they wanted to complete the work speedily to manage the water crisis. According to Mahadev Gomare, AoL had done similar deepening and widening work on other rivers in Marathwada (e.g. Rena and Tawarja) and they had *enough practical experience* of doing these things and therefore the above mentioned technical things are not required as they unnecessarily cause delay. AoL seeks to differentiate itself from the government department by doing the things speedily. Moreover, after an inquiry, it was discovered that AoL has not prepared any kind of feasibility report, detail project report or impact evaluation report of their earlier projects¹⁴. Therefore, their practical experience is itself questionable.

Ideally, the district collector should have verified these documents with the help of appropriate department before providing permission instead of bypassing standard procedures and inaugurating the rejuvenation work.

During implementation, JLS found to be violated some of the critical technical norms provided by GSDA and Department of Agriculture (GoM 2013). Though, JLS officials claiming that they have not deepened the river beyond three meters, during our actual site visit in May 2016, we found deepening carried out up to 6-7 meters at some places. While deepening, the slope of river bank and slope of the constructed embankment was kept too steep¹⁵ compromising on its stability. The gap of one meter (berm) was not provided between the river bank and the embankment and soil of embankment was not compacted. These technical norms assist in stabilizing newly constructed embankment. These violations of technical norms made embankment susceptible to erosion. When inquired about the loose embankment, AoL members reacted with an explanation saying they are going to implement - *Vanyukt Latur* (Forest-led Latur) and going to retain the soil by broadcasting grass seeds to establish grass cover.

However, during post-monsoon study visit, at many places, the loose and steep embankments were found to be collapsed and eroded by the river flow. We could not find grass cover at many places and anyways, the broadcasted grass seeds cannot protect erosion in first few rains, as it needs time to establish itself. Thus, the significant portion of the silt that was excavated to increase the storage of channel was washed off again into the channel causing siltation.

While constructing embankment, no provision was made to allow the flow of excess water from adjacent farms to the river. As a result, in many places, farmers had to break the embankment or suffer from the waterlogging issue (it is similar to waterlogging problem observed in North Bihar because of embankment). Some farmers in Nagzari village could not cultivate during monsoon season because of waterlogging on the farm. Even after multiple enquiries, JLS officials refused to clarify on the quality of work done under this

¹⁴ Interview with senior AoL volunteer Makarand Jadhav

¹⁵ As per the technical guideline, the slope of river bank should be 1:0.5 and the slope of embankment should be 1:1.

project. Later, we met some of the retired engineers who were assisting JLS in this process and during the interview, they admit that the technical irregularities were maintained during implementation. At some places, especially near Nagzari village, JLS has deepened the river bed up to 10 meters and even widened the channel up to 200 meters encroaching on government owned common grazing land though officially they are claiming widening figure as just 80 meters.

On one hand, JLS has carried out the work in a haphazard manner violating all the guidelines and damaged river ecosystem and on other, after digging it is not able to fulfil its intended purpose. Therefore, it raises the questions over the knowledge claims made by organizations like JLS, Art of Living and RSS Jankalyan Samiti who are projecting themselves, as experts in the domain of water conservation and tinkering with the rivers and streams.

Still, JLS officials claim that they have done the work which is technically correct, as many government officials including Mr. Chishti, executive engineer of water resources department and Mr. Shaikh, senior geologist of GSDA visited the site and inspected their work multiple times and never objected.

5. Role of government: Who is the custodian of a River?

Since the beginning of the work of Manjra rejuvenation, the rules and regulations were grossly violated and yet none of the government department intervened to stop the work. Since Manjra is a notified river under Maharashtra Irrigation Act 1976, Water Resources Department (WRD) is in-charge of the river. Yet, in this case, neither JLS has not taken any permission from WRD, not WRD has taken any action against deepening and widening. When the executive engineer of WRD, Mr. Chishti was approached to seek clarification, surprisingly, he explained - he can only control the water flowing through the river and not the river channel. The deepening of river channel come under the purview of the revenue department and since the collector is heading the revenue department, he has an authority to provide permission for the work. It indicates an approach of irrigation officials perceiving river as a mere a flow of water and restricting themselves to the water, neglecting the river channel. It clearly indicates, how a river is fragmentedly perceived by different departments segregating the management of the river water and river channel.

In reality, section 93 of MIA 1976 empowers the water resource department to intervene in the work of modifying channel and prohibit the act of damaging, altering, enlarging and obstructing a notified river. Moreover, when RTI application was filed in May 2016 seeking information about the work being carried out by JLS, the WRD replied saying, the department has no connection with the work. Then the question is how irrigation department who is an in-charge of the river can distant itself from the work.

However, when asked about his visit to work site as reported by JLS officials, then he responded -

"I am not officially involved with this [Manjra] case. The collector office never consulted with us [irrigation department] regarding this work... I visited the site as an individual citizen of Latur... I also used to visit the Nagzari barrage to ensure the safety of barrage structure

and especially its foundation as deepening was going on. I did not monitor the activities of deepening and widening of the river bed.”

It indicates while managing a river, the structure (barrage) has given more importance than the river as a whole.

While carrying out the work, officially GSDA had provided the guidelines to JLS. Moreover, the senior geologist from GSDA, Mr. Shaikh also visited the site multiple times. However, when all the guidelines were violated right from choosing a river - 6th order stream as a site for deepening and widening, Mr. Shaikh never raised a concern over the work. When interviewed about his silence in this entire episode, he reported that -

“Yes, I was visiting the site but as a citizen of Latur with concern for city water supply... My visits were not official... During that period people were so enthusiastic, even I would have intervened, none of them would have listened to me including the collector.”

This raises several questions. First, though the GR has given an authority to the district level committee headed by the collector to grant permission for such work, the collector had exploited his powers and did not consult with the officials from two important departments - Water Resources Department and GSDA, who are members of the district level committee. Then how the decisions were taken without involving concern department having expertise. Second, how professionals like an executive engineer and senior geologists ignore the gross violations of rules and regulations at a worksite in their jurisdiction, where earthmoving was going on at massive scale for two months and at the same time support the organization violating the rules in their individual capacity as a citizen of Latur.

Third, during the implementation of rejuvenation project, the work site was visited by many experts and ministers including Minister of Rural Development, then Guardian Minister of Latur district and then Minister of Water Conservation Pankaja Munde, water expert Rajendra Singh, Cabinet Minister of Water Resources Girish Mahajan, Chief Secretary of Government of Maharashtra Swadheen Kshatriya and engineers from various departments (Scroll 2016; Sakal 2016)¹⁶. All ministers and government officials praised the project and participation of people. Yet, nobody objected the nature of work and the way it was carried out. In fact, Chief Minister Devendra Fadnavis announced the support of Rs. 54.7 million for this project. As a result, 3 km stretch of the river out of 18 km was handed over to water resource department and engineers started deepening a 6th order stream violating all the rules. The concern irrigation engineer reported that it was the first project where they received the money before any technical sanction. So finally, before Monsoon, JLS completed digging over a stretch of 15 km and WRD managed to dig 2.8 km.

¹⁶ Based on data available on Jalyukta Latur App

Surprisingly, when asked to WRD engineers, what kind of expertise is needed to carry out the river rejuvenation work. The engineers plainly responded – ‘why expertise is needed, it is just a digging using excavator and contractor can do it’. It clearly indicates the approach of custodians of rivers towards river management. The river is still perceived as a channel carrying water that can be haphazardly modified and its ecology and associated hydrology (or ecohydrology¹⁷) not factored in while managing the river.

5.1 Utter confusion

When Jalyukta Latur Samiti was probed for violating the guidelines of Jalyukta Shivar, the JLS responded saying - their work of Manjra rejuvenation has no connection with the Jalyukta Shivar Campaign and government of Maharashtra as well, as they have collected the required fund from the people, they have not taken money from the government¹⁸ for the implementation and they had implemented it on their own. This led to utter confusion - as district collector granted the permission assuming it is under Jalyukta Shivar (because GR of Jalyukta Shivar grants him authority to give a permission), the other government departments - WRD and GSDA did not intervene assuming JLS work is permitted by the collector. Though many ministers and engineers visited the site and praised this work done under Jalyukt Shivar, still the question is whether is this a part of Jalyukt Shivar or not?

The preliminary reason for this utter confusion is though, the government encouraged NGOs and CSR organization to participate in Jalyukta Shivar Campaign, it never clearly stated the modus operandi between government agencies and private organizations who are implementing the projects with their own funds. In absence of such procedure, at many places in Marathwada and Vidarbha, the river rejuvenation work had been undertaken by NGOs with people participation which was not monitored by any government agency and at many places the prescribed guidelines are not followed. This policy gap has created further complications, it has provided private organizations a free hand to work however there is no way by which they can be held responsible for the kind of work they have been doing - damaging the ecosystem, not fulfilling the assurances made while collecting money from the people and maintaining transparency in handling the huge funds collected from the people.

6. Conclusion

The evaluation of widening and deepening of Manjra indicates that the entire work was planned and implemented in a haphazard manner without assessing the availability of the water in the basin. The lead

¹⁷ Ecohydrology is an interdisciplinary field studying the relationship between ecological and hydrological processes,

¹⁸ The district collector had provided one excavator for the deepening and widening purpose. It is the only government contribution in the entire project.

organizations including Art of Living (AoL) and RSS Jankalyan Samiti even did not verify the feasibility of their work in reducing drinking water crisis of the city. Though JLS spend total Rs. 70 million collected from the citizens of Latur by assuring permanent solution to their water crisis, they could not deliver a single drop of water to the citizens. This not only put all their money into the drain but also caused irreversible damage to the river ecosystem because of excessive deepening and widening of the river channel. It also raises the questions about the capabilities of these organization projecting themselves as experts in the domain of water conservation.

The study has uncovered the lacunas existing in the policies of Jalyukta Shivar - a flagship program of the government of Maharashtra. First, the Jalyukt Shivar, on one hand, encouraged the private organizations to participate in the scarcity mitigation efforts but on other failed to provide a mechanism to monitor their activities and to hold them responsible for kind of work they are doing. Second, the government issued conflicting guidelines for implementing river rejuvenation which created a grey zone that has been exploited while deepening and widening of the Manjra river.

Third, the government has been emphasizing on public participation and speedy implementation of the work and neglecting the quality of work. The AoL and RSS Jan Kalyan Samiti are claiming their success in terms of people's participation they received while collecting funds and praising themselves for speedy implementation of the work, for which according to them, the government would have taken years to complete. The study shows that people's participation is good, however, public support does not certify the project on the technical ground. The technical and environmental assessment cannot be bypassed. The study points out that, there is a growing perception of seeing the essential technical procedures such as feasibility studies, technical surveys, preparation of detail project report and ongoing monitoring as hurdles in the speedy implementation. Manjra is a classic case that shows how speedy implementation bypassing the essential processes can lead to a disaster.

The study has brought forward the fragmented approach existing in the management of our rivers, a river channel and river water are considered as two separate things to be managed by two different departments without any coordination. The river is perceived as a conduit carrying a water without acknowledging its relationship with the aquatic and terrestrial ecosystem and therefore, it is believed that the river channel can be easily modified by digging which does not need any expertise. The study highlights the lack of coordination existing between the district collectorate office, WRD and GSDA and raises concern over silence maintained by the departments who are custodians of the river when the rules were violated in the light of day. The study demands an urgent policy intervention to avoid the replication of such disaster before promoting channel widening and deepening in Maharashtra and as well as in the other states.

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7. References

Chari, M and Sharma, S (2016): "Can Maharashtra prevent drought by digging rivers? The government and some NGOs think so. But ecologists disagree", Scroll, August 9. Retrieved from: <https://scroll.in/article/812718/can-maharashtra-prevent-drought-by-digging-rivers>

CWC (2015): "National Register of large Dam", Central Water Commission.

Ghadyalpatil (2016): Water train and beyond—how Latur is tackling drought. Retrieved from <http://www.livemint.com/Politics/JddufMwmfdkAjuVYEJ8oNL/Water-train-and-beyondhow-Latur-is-tackling-drought.html>

GoM (2013): "Guidelines: Nullah deepening and desiltation of existing cement nullah bandh and construction of new cement nullah bandh with deepening", Government Resolution No. RaKruYo-2011/Case No.72/JaLa-7, Mumbai: Water Conservation Department, Government of Maharashtra.

GoM (2014): "Water for all - Drought-free Maharashtra 2019: Regarding implementation of Jalyukta Shivar Campaign to permanently overcome internal drought situation", Government Resolution No. JaLaA-2014/Case No.203/JaLa-7, Mumbai: Water Conservation Department, Government of Maharashtra.

GoM (2015): "Implementing River Rejuvenation program with people participation under Jalyukta Shivar Campaign by convergence of different schemes", Government Resolution No. NaPuYo-2015/Case No203/JaLa-7, Mumbai: Water Conservation Department, Government of Maharashtra.

IMD (2015): "2016 Southwest Monsoon End of Season Report", Pune: India Meteorological Department, Earth System Science Organization (ESSO), Ministry of Earth Sciences.

Jamwal, N (2016): "Playing with water: Karnataka's controversial river rejuvenation plan", Hindustan Times, May 23. Retrieved from <http://www.hindustantimes.com/india/playing-with-water-karnataka-s-controversial-river-rejuvenation-plan/story-ZRTPnQaamPVY1cVlhYPC6K.html>

Joy (2013): "The much talked about Shirpur Model in Maharashtra", Down to Earth. Retrieved from <http://www.downtoearth.org.in/blog/the-much-talked-about-shirpur-model-in-maharashtra-42205>

Khapre S (2015): "Rajasthan seeks to replicate state's Jalyukt Shivar Abhiyan", Indian Express, July 27. Retrieved from <http://indianexpress.com/article/cities/mumbai/rajasthan-seeks-to-replicate-states-jalyukt-shivar-abhiyan/>

Khapre, S (2017): "PM asks states to replicate Jalyukta Shivar to tackle water crisis", Indian Express, April 17. Retrieved from <http://indianexpress.com/article/india/pm-asks-states-to-replicate-jalyukta-shivar-to-tackle-water-crisis-4616038/>

Sakal (Marathi) (2016): "Laturachaya Kamasathi Tin Kotinchi Madat", 6 May.

Samvada (2016): "RSS Sarasanghachalak Mohan Bhagwat appreciates #JalayuktLatur Project, a successful water conservation initiative at Latur" Retrieved from <http://samvada.org/2016/news/jalayuktlatur/>

Scroll (2016): "Maharashtra minister draws criticism for clicking 'insensitive' selfie in drought-hit Latur", Scroll, April 18. Retrieved from <https://scroll.in/latest/806799/maharashtra-minister-draws-criticism-for-clicking-insensitive-selfie-in-drought-hit-latur>

Thomas (2016): "Let down by govt, Latur's thirsty residents step up", The Hindu Business Line, April 15. Retrieved from <http://www.thehindubusinessline.com/news/national/let-down-by-govt-latur-thirsty-residents-step-up/article8480462.ece>

ToI (2016): "Experts worry over state's extended 'river rejuvenation' programme", Times of India, August 14. Retrieved from <http://timesofindia.indiatimes.com/city/pune/Experts-worry-over-states-extended-river-rejuvenation-programme/articleshow/53690945.cms>

WRD (2015): "State Water Resource Plan: Godavari Basin - Draft Plan", Water Resources Department, Government of Maharashtra.
