

A Study on Water Resource Management: ‘Rejuvenating’ Water Sources

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ABSTRACT

It is said that the next world war will be fought not for money but for water. The main causes for the drying up of rivers are urban encroachment and deforestation as well as unsustainable extraction of ground water and loss of traditional knowledge. Urban encroachment led to the destruction of the catchment areas that feed the river, while deforestation has loosened the soil's water-holding capacity. Water resource management encompasses activities that plan, develop and rejuvenate the existing water bodies. Untenable water exploitation denotes irrational consumption of the resources, thus water management also encompasses, proper allocation of water supply. Water is indispensable kind of resource that we all need for every single activity so effort towards stop wastage is herculean task. Tradition knowledge can resolve this problem. In some states of India many NGO's, organizations and even Government officers have already took this challenge with the help of traditional knowledge. Art of living is one of the leading organizations among them because it has already resolved this issue even in remote areas with the help of local youth. Art of Living's project Jal Jagruti Abhiyaan has been trying to 'rejuvenate' water sources there by dredging dry riverbeds with heavy machinery to remove accumulated silt. The project has earmarked 17 Indian rivers for this method of revival, but follows a questionable model - which provides water in the short term but does little for water conservation in the long term - that is espoused by the Maharashtra government, and now drought-hit Karnataka wants to implement it too. "Over two lakh people have been benefited in the state since the launch of the project in 2013," This paper is an attempt to cover the stories of Jal Jagruti Abhiyaan. By taking example of this the author put forth a resolution to the very issues related to water.

KEY WORDS: Tradition knowledge Water resource management, Jal Jagruti Abhiyaan, water conservation, unsustainable extraction.

INTRODUCTION:

Development is a process and higher growth is the objective. Planning is the tool to acquire the goal. Moreover, development is: 'of the community, by the community and for the community', despite that human behavior is the least considered aspect in this process of development. Overlooking, the dynamics of human behavior result as corruption, inequality and climate-change. Evolvement of community person is quintessential for the planning. Need for water resource management is also a result of uncalculated human activities.

Declining groundwater level, water tanker mafia, drying up water bodies, low level of farmer's income and farmer's suicides are the consequences of unsustainable extraction of water. State

conflicts, riots and people dying because of water scarcity are common scenario of water dearth areas. The main cause behind this is not only the lack of supply of water but rather its mismanagement and unchecked overuse. Rain-fed rivers have dried because of disruption of the natural groundwater recharge mechanisms, thereby disabling rivers from replenishing themselves. This disruption in the water cycle is caused by several factors like reckless over-exploitation of groundwater resources, misguided agricultural practices, rampant deforestation, unplanned urbanization, and others causing the following events.

Art of Living's project Jal Jagruti Abhiyaan is an attempt of water resources management. The project has successfully performed in many areas which are suffering from lack of water. Here the insight behind studying this story is to spread awareness about the role of community, traditional knowledge and putting example i.e. collective effort of government and community can resolve even such big troubles.

HYPOTHESIS:

1. India is facing its worst water crisis.
2. The objective of Government plan multifold with community engagement
3. Community engagement can be helpful to resolve the acute problem.

OBJECTIVE OF THE STUDY:

1. Study the magnitude of water crisis in India
2. Observe the impact of climate change on water bodies.
3. Observe the life style of the people of water stressed areas.
4. Seek the chances of community engagement in this acute situation.
5. Study the efforts of Art of living's water conservation projects across India
6. Study the efforts of Art of living's Jal jagriti Abhiyan.

WATER CRISIS IN INDIA: India is facing its worst water crisis in four decades. Scorching summers have turned 54% of the subcontinent's area into a water-stressed dust-bowl. The situation is worse especially in southern India where many rain-fed rivers have gone dry over the last two decades. Although the average amount of rainfall has remained the same over the past 50 years, many rain-fed rivers have become dry. The drying up of rivers is already causing unprecedented consequences, tensions and widespread disputes over water. Armed guards are being posted at dams to prevent desperate farmers from stealing water. Thousands of villagers in drought-hit regions of Maharashtra depend on tankers for water. Authorities in 'Latur' district, fearing violence, imposed prohibitory orders on gatherings of more than five people around storage tanks. Special trains were made to run to supply water from as far as 375 Km away.

Nearly 80-85% of water consumption happens in the agriculture sector – and much of it is unnecessary. Farmers grow water intensive crops such as sugarcane and cotton to make more profit, even though it may not be suitable to particular lands. India's water table is falling on average by 0.3 meters and by as much as 4 meters in some places. Yet, the country continues to pump groundwater at will, drawing up more annually than China and America combined.

ROLE OF JAL JAGRUTI ABHIYAAN': Art of Living's project 'Jal Jagruti Abhiyaan' is a highly effective customized community organizing framework that ensures effective, impactful, long-lasting and sustainable outcome. Its community change maker framework consists of citizen engagement strategies and skills to architect a transformational community intervention and facilitate empowerment training. The frameworks of project provide community organizers with strategies, tools and design expertise to integrate the social change. There are distinct phases in this strategy, and they are as follows:

SCIENTIFIC PLANNING :For scientific planning, the program begin by performing systematic study of the thematic maps of the entire river basin for the factors like slope, drainage network, soil texture, land use, geomorphology, lineaments, groundwater prospects, village boundaries, etc. using remote sensing data and satellite imagery. In addition to these GIS based thematic maps, long term rainfall patterns are also analyzed to approximately estimate the availability of surface water for groundwater recharge. This holistic understanding of the project area enables in the identification of the suitable locations for constructing artificial recharge structures.

COMMUNITY ENGAGEMENT: Community ownership is very crucial for the long-term success and sustainability of these projects. Therefore, undertaking targeted campaigns to build awareness in the local community and conducting extensive capacity building training programs to raise motivation levels, leadership skills and a sense of belonging amongst local communities, provide ground to the mission. It engage in comprehensive efforts to transform the society by following a step-by-step sustainable community revitalization model

RIVER REJUVENATION PROJECTS UNDER JAL JAGRUTI ABHIYAN: Here are some of the major river rejuvenation projects across the nation performed by Art of Living Organization:

VEDAVATHI RIVER REJUVENATION: This, project (**INR 150 crore**) has been undertaken under the ambit of MGNREGA scheme. The success of the project prompted a visit by the Joint Secretary, Ministry of Rural Development, Govt. of India. The Government is now regularly monitoring the project to learn, and initiate similar projects across the country to revive many of the dying rivers.

KUMUDAVATI RIVER REJUVENATION: This project aims to reduce Bangalore city's water dependence on River Cauvery, addressing the impending water crisis which very recently lead the city descend into violence and chaos. The spirit of volunteerism has been the hallmark of this project with a total of 2,700 volunteers engaged (**including Corporate Employee Engagement**). Over the last three years, 12 crores of funds have been mobilized under corporate social responsibility benefiting 70,000 people directly.

MANJARA RIVER REJUVENATION: A unique example in community ownership where humble citizens of Latur responded to the acute water shortage in the city, by contributing 5.25 crores from their household savings. In the first phase of the project, a 14 KM stretch of the Manjara River was de-silted, in a span of merely 5 months, to mitigate the immediate water crisis. The Art of Living is working with the State Government, District Administration, and the Hans Foundation to scale up the project to cover the entire basin of the Manjara River.

PALAR RIVER REJUVENATION: Is an ambitious interstate river rejuvenation project, which when completed will not only bring back water to the parched districts of Karnataka, Andhra Pradesh and Tamil Nadu but will also create a model in interstate river management, 348 Sq KM of Chikballapur District has already been treated under the project, and the interventions are now being carried on in Kolar district of Karnataka and Vellore district of Tamil Nadu.

OTHER WATER INITIATIVES UNDER JALJAGRUTIABHIYAN: This mission not only stops at making communities water secure. It also works to ensure that communities know how to use it wisely, safely and sustainably. The mission invest in developing the latest technologies and undertaking policy research to bring about widespread and path breaking changes in the water sector. The holistic approach of project encompasses an all-rounded model which besides river rejuvenation includes sanitation and hygiene, drinking water provision, sustainable agriculture and livelihood generation, which makes the project effective and impact long lasting.

Sanitation and Hygiene: The problem of water contamination owing to poor sanitation infrastructure is rampant in India. About, 600,000 lives per year in India are lost to diseases caused due to open defecation, and roughly 60% percent of the country's 1.2 billion people still defecate in the open. The team also works in rural and peri-urban areas to build smart and low-cost toilets with local communities, and gram panchayats. Over 8000 toilets have been installed under this mission in rural and peri-urban areas and transformed many villages into open defecation free zones.

Primary Impact of the Project: The primary impact of the project has seen improvements in groundwater levels in the 7,500 Sq. km implementation area, over 65% of which is classified semi critical, critical or overexploited by GSDA. Extensive forestation, and construction of water recharge structures, has increased the base flow in all streams and water bodies in the region. This has rejuvenated rivers that flow through the region.

- The consistency in water supply augment farmers' incomes through improved agricultural yields and increase in the number of crops per year, directly reducing farmer suicides.
- The water shortage disproportionately affects young girls and women, as girls under the age of 15 are twice as likely as boys to sacrifice their education to fetch water for the family. A drastic change in this social situation was observed, as water sources within the village were rejuvenated.

COMMUNITY ENGAGEMENT AND EMPLOYMENT GENERATION: The significant proportion of project executed under MGNREGA generated approximately 6.5 lack days of direct rural employment. Many villagers got better opportunity after getting trained through capacity building workshops, around 30,000 people were further sensitized through multi-level engagement, consisting of trainings, meetings and mass media use. This approach of

community engagement facilitated social equity - in Naganadhi River Rejuvenation project in Tamil Nadu nearly 90% of the ongoing project workers are women.

MULTIPLE PARTNERSHIPS WITH THE GOVERNMENT: The success of the projects undertaken in partnership with the Government have resulted in major changes to water policy and current Government structures. The River Rejuvenation projects in Karnataka are now being closely monitored by the Rural Development and Panchayati Raj Department, Government of India, to learn, and replicate similar models elsewhere the Jal Jagruti Abhiyaan has been trying to 'rejuvenate' water sources there by dredging dry riverbeds with heavy machinery to remove accumulated silt

THE JAL JAGRUTI ABHIYAAN IN LATUR: Latur is a parched district 400km east of Mumbai, is one of worst drought-hit districts in the nation. Government has prohibited the gathering of more than five persons around water tanks to prevent possible violence in the region. Latur's municipal corporation had deployed 70 tankers in the city and the rural development department 200 in the district. Municipal official described how the acute water shortage had already forced an estimated 1.5 lack people to migrate to neighboring districts.

The Art of Living coalesced to various gram Panchayats to discuss the issue of water. Through its community engagement framework consisting of leadership coaching, group facilitation, project management and community organization, AOL motivated one of the villages to implement a grass roots water project by creating gablion structures around the Shooroonantpar village in Latur. When neighboring villages noticed how the Shooroonantpar started having its bore well recharged to full capacity in 3 days instead of 15, they began to request the Art of Living to revive water bodies in their regions as well. Soon, these small mini-projects turned into a grand project to restore the river bodies around Latur. Disappointed by the government inefficiency, the citizens of Latur stipulated that only if community participation is there, only then the project would take place.

As a result the 20km project finished over 2 years instead of 5 years as predicted by the government. Because the local people drove the project, the Satara River was revived at 25% of the government cost. It was the community effort that made the project efficient, impactful and successful. The residents of the different villages of Latur transformed into engaged citizens as every member of the society contributed money to the project and ultimately collectively raised 5 crores in 3 months.

Mahadev Gomare, Maharashtra Project leader for River Rejuvenation. Says "Everyone felt a part of the problem and for the first time, the solution too',everyone contributed from the richest person in the district to the tea man, the vegetable vendor, the retired pensioner and even the school student- everyone gave their share". Not only that, but farmers were willing to give their lands too. YogeshPatil, a local farmer in Latur says "Usually in government projects, the officials have to argue or give the local people money to give the land, but for this project, people were giving their land freely- because they saw the tangible real impact it was making". The Manjara river in Latur district, an abandoned basin now is running with water. "Previously we could only grow one crop, but now we are having cycles of even second and third crops and can sell them in the market", beams Mangalram Venkatlal Patil, another farmer in Latur.

The Art of Living's Community Revitalization Framework empowered the villagers of Latur, to act for the first time, as a community. The organization's focus on personal empowerment

and community revitalization led to close partnerships with villagers to ensure efficiently execution and sustainable solutions to water problems around Latur.

CONCLUSION:

Reeling under extreme water crisis for the last several years now, India has been facing the consequences of neglecting the practice of water conservation. A significant number of its over 1 billion population has been severely affected by depleting water levels across the nation. Several man-made activities, water pollution, and consistent poor rainfall rate has put immense pressure on India's water resources. Ground water levels, which provides for 54% of plummeting. Rivers that were once crucial for agriculture and served as major resources for nearby villages and cities have dried up. Many farmers are committed suicide. There is an evident imbalance in flora and fauna rise in unemployment and disharmony in the society. In this trying time, Art of living has initiated projects to reduce the disparity between the supply and demand of water in India. The Jal Jagrutti Abhiyan under the banner of Art of Living has initiated water conservation projects across India. Initial results of water conservation projects have been overwhelming and encouraging. Volunteers sprung into action to revive dying rivers and people have been benefited from the art of living's water conservation projects across India. Several villages in India have indigenous mechanism for rainwater harvesting, thus creating a grassroots model for environment sustainability.

By observing and studying various factors of the water stressed areas. It has been founded that the water crisis in any area is mainly created by the miss-management of the water resources. Government of India is contributing in its better manner but without the community involvement it is likely impossible to resolve such a pity situation because, it is man who is miss using the water resources. Here the contribution of Jal Jagriti Abhiyan is admirable because it involved community. The awareness campaign multiplied the effect of the project. We can see that, many of the projects of Art of living were government funded but the way it was performed was unique. Thus it is concluded that whether the problem is big or small can be resolved by the collective effort of the government and the community person.

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