

## Revival of Tanks: Boost to Rural Economy

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### ABSTRACT

India is a country in the world where water is worshipped. Starting from the time child is born to the last rites performed on his death water is invariably used. Equally worshipped are water sources like tanks and rivers. In India, hardly a village shall be found without a tank. Plight of people belonging to the villages not having tanks can be understood rather felt. Most of the tanks are centuries old need strengthening, cleaning and increased capacity. Tanks also need assured supply to fulfill the annual need. Tanks can be recharged and revived by diverting surface water during monsoon. Tanks can get assured supply from the nearby canal sources. Tanks are very much an integral part of social life, people gather around the tank and socialize. Overall tanks are contributing towards the economy of the village. Increased reliance on tanks and neglected maintenance has worsened the tanks conditions, which ultimately affects the eco balance. Tanks can be revived and made useful with zero investment in the materials. Use of local material and little awareness can be of much use to make the tanks fully active. Labour available in plenty, at village level and beneficiaries of tanks can be exploited positively and in a participatory way. If all the tanks in India are revived in a participatory way and subsequently maintained in a healthy way. Their cumulative effect can give big boost to the rural economy, on which major part of the national economy rests.



Figure1: A Village Tank

## **INTRODUCTION**

Tanks in India are very much integral part of village fabric. They are an important source of water. Most of the tanks are handled by village Panchayat as they fall within the periphery of village and most of the time centrally located. State Government owned tanks are generally big in size and get sufficient funds to carry out regular annual maintenance and repairs. The tanks that falls within the jurisdiction of village Panchayat, always run short of money for regular up keep. Shortfall of money and other reasons that are contributing to the negligence make the tanks either dead or they are performing at lower capacities. Revival of tanks that aims at making them workable with enhanced capacity is called perfect revival of tanks. At village level the tanks can be revived with locally available material and labour that can be arranged by way of public participation. Efforts on these lines can revive the tanks and made them as a part of the rural economy.

## **WATER**

Water is one of the five important constituent elements on earth. The day child is born and till his death water forms an important part of his life, none of the life chore goes without its use. In India water is so sacred that most of the rivers are revered as god and goddesses. This spirit goes with another important off river source and part of every village called tank. Tanks are integral part of village life. All the important rituals, be it a religious, be it a festivals are celebrated at the tank. Nearness to the tanks fills the villagers with the confidence and energy, much needed to push the life ahead. Villagers know the importance of tanks. Prosperity of village depends upon the village tank, how big it is? To what extent it remains filled throughout the year.

## **TANKS IN HISTORICAL ASPECT**

Human was drawn towards the source of water; cultures have developed around the source of water. Those who were not lucky to have natural source of water like rivers were drawn towards the natural source of water like tanks. Those who were even not lucky to have natural tanks tried to dig the source and made efforts to conserve the water. This natural instinct to be near water led the people dug the tanks. These efforts are clearly visible from the dug remains of ancient cultures like Harrapan and Mohanjodaro<sup>1</sup>, where tanks formed the important and central part of the city landscape.

Globally too, looking deeply in historic past people loved to be in proximity of water. Which water source had come handy, anonymously the answer will be the tanks, lakes and the ponds. So the tanks are universal source of countries' water need.

Various verses go in praise of water and water tanks, various folklores have been there in backdrop of tanks. Fairytales would end at the tanks with demon looking over and controlling the tank. Once again stressing the fact that tanks are universal and integral part of global civilization.

## **IMPORTANCE OF TANKS IN RURAL PERSPECTIVE**

Looking back into the history of civilizations, it will be seen that cultures have developed around the water bodies, we will find none of the city prominent or big without water body or river flowing by it. On the other side natural water bodies have drawn the people towards them. We know, in the villages how the life revolves around the tank most of the time that is situated centrally or at the edge of the village. Villagers not only draw water for their daily consumption, but most of the village level professions are water oriented, giving people their daily bread. Animals also rely on them and love to take dip in the tanks.

These water bodies are the places where the people meet to get their daily quota of energy, information and peace that they become fresh for the day ahead. Most of their social problems are solved. They get proper solution to their day to day domestic problems. Some times the solutions are very effective for the problems that are otherwise looming large. This socializing pumps the much needed adrenaline in their bodies for the time to come.

Proximity to Water bodies not only refreshes the people. Some times its water carry medicinal values, people get miraculous cures for their disease.

Tanks are very much important tools in containing floods, and reducing flood based damages. Advantages wise looking they are used for irrigation, drinking water for human as well as animal consumption, providing silt and sand, sanctuary for birds and more importantly migratory species of birds. Lastly but not least they can be used for tourism and aqua sports. Maintaining flora and fauna and creating positive environment. Fishes can be reared in the tanks.

They are very good tools for under ground water recharge. Very important social aspects of the tanks are that they maintain women's health. In the absence of tanks they go on fetching the water throughout the day from far off sources.

## **REVIVAL OF TANKS**

Most of the tanks were dug in the past some of them are over a century old, the most that affect the health of the tank is its capacity that has been reduced or has become almost nil, is silting process. Tanks need to be de-silted on annual basis or as the situation permits. This desiltation process can be taken up on participative way, or taking tank deepening during the state run scarcity programs, when villagers get paid for digging the tanks.

NGOs are also helping in this. Some of the social groups like Athavale Pandurang Swadhyay Pariwar<sup>2</sup> take up this works on purely voluntary basis. They happily take up this sort of works that are useful to humanity.



**Fig. 2: Wadhvana Tank: Fully Revived**

More seriously government can know the silting trend of tanks well in advance by adopting remote sensing technique in which imageries over the tanks tells the trend of silting and sometime tells the rate of silting that is serious in nature.

One of the methods of tank revival is getting the permanent source of water for tanks during lean period. All the tanks that are coming in the command areas of canal system can be connected with the nearest minors of canal to get water during scarce period / summer. Mostly states fill the village tanks during lean period on priority basis. However the channel that needs to be dug for receiving water shall have to be dug by village authority. Even this channel digging can be on participative way involving zero material and zero labour only the vigorous efforts.

Gujarat state is an example where, tanks falling in Narmada Project command are getting water from Narmada canals. One such example is of Wadhvana tank that falls in Vadodara district, where irrigation /drinking water targets for which the tank was planned were never achievable. As the tank is getting assured supply, targets are over realized. Not only that, tank is now attracting off season migratory birds. Credit of this success goes to the villagers.

Where the tanks are not part of command in such case supply to them will be monsoon oriented, in such case tanks inlet and outlet conditions along with its capacity should be good enough to have natural water in its fold.

## **METHODS OF REVIVAL**

Tanks in India are owned by state, village Panchayat and privately owned. Tanks owned by state are of big size. They serve mainly two purpose first irrigation water is derived from them secondly they cater to general water demand of the villages. These tanks are lesser in numbers and they get assure maintenance from the state funds.

Panchayat owned tanks are large in numbers, at least one tank per village. They run short of funds for maintenance. Private tanks are to be maintained by owner. Such owners at least allow the villagers to use water after their own use.

Revival of tanks that comes under the jurisdiction of Panchayat are large in number and their revival will can turn the village economy bright. Panchayat though running short of funds , can play very important role in mass awareness and motivating the people towards revival by adopting methods that are participative in nature.

## **WHAT AILS THE VILLAGE LEVEL TANKS?**

### **Technical Reasons**

- Low capacities as tanks are silted rendering them dead.
- Damaged safety structures like weirs.
- Inlet channels silted up, making it unfit to carry water.
- Inlets to the tanks are blocked.
- Water spills the banks of tanks due to inadequate capacity and excessive income of water that erodes the banks.

### **Administrative Reasons**

- Centralization of power.
- Lack of funds.
- Breaking down of local institutions.



**Fig. 3 : Tanks Dumping Ground**

## Social Reasons

- Tanks are used as dumping grounds.
- Feeder channels are cause of dispute amongst villagers.
- Villages having alternative water supply, like tube wells, making tanks secondary source.
- Tanks not being used as *chaupals*, alternative source of entertainments and meeting places.
- Professionals no longer need tank water, mass migration to cities and foreign countries.
- Private and public encroachment.
- Decline in tank based irrigation.
- Collapse of village unity.

As the ailment so is the treatment. Tanks can be revived to its full capacity with de-siltation and further by adopting tank deepening. Tanks can be checked for its out let and inlet structures, with proper working of its gates if there. Approach channels to the outlet verified and de-silted and broadened to carry discharge from the catchments. Outfall conditions verified, and tail channel to the structure made active to avoid back water effect, outfall conditions smoothed. Gates operated timely and effectively during floods. Banks of the tanks rose to increase the capacity or washed out or breached banks brought up to the designed / safe levels.

Going Participative way, villagers can acquire the power to administrate the things. Formation of village level *mandalis* solves many problems, even well formed and run *mandalis* can attract the finance and donations. Mandlis can go to the industries around the villages to ask them to adopt tanks and its revival in lieu of the precious environmental resources these industries eating up, or say in lieu of the pollution they are spreading. This way villagers are seeking their right. This is their (Industries) share of social responsibility that to be fulfilled. Local institutions that have served the villages may be survived and respected.

Tanks are to be kept clean; they are no longer dumping grounds. Similarly waste channels of villages are diverted downstream of tanks or suitable route. Tanks need to be considered common property. Its maintenance to be seen as alternative source of supply even if primary source in the form of assured water supply is there. Tanks to be used as meeting points so as to create affinity towards the tanks. Village level mass activities encouraged so as to attract the people close to its periphery. Mass migration can only be stopped if amenities and chances are available at village level. Water is the primary need that expels or attracts the people in its fold. Revival of tank is more cost effective and result oriented than creating new structures.

How a little thinking and vision at planning stage of irrigation projects pays later is evident from the following case. Targol Tank in Vadodara district is acting as a balancing

reservoir, this tank is falling on 29th km of the 38 km long main canal of the Sukhi Project (Major) of Gujarat State. Earlier the tank which was hardly catering till Rabi irrigation is now catering Hot whether full irrigation. At the instance of villagers and assured supply of water has forced the authority to modernize the tank canal system.<sup>3</sup>

Main canal of this project is also supplying water to various tanks falling enroute, making them all whether tanks. Integration of these tanks was thought in the planning of the project and successfully implemented. Assured supply of water to these tanks not only has made them self sufficient with water supply, some of tanks are now part of eco tourism (Targol Tank) and wild life sanctuary (Jambughoda Tank). These tanks are now coming up as tourist destinations of Gujarat. This is how the revival helps the villagers.

### **Public Participation**

Participation is simply the action or state of taking part in something, and public participation is when public is involved that take part in planning, construction and maintaining the projects.

In India, whatever state we are talking. In every village a Panchayat handles day to day affairs (this Panchayat is sometime differs from the official Panchayat, run by government norms), this Panchayat is headed by group of eminent villagers, whose dictates the villagers follow. Sometimes their (Panchayat) voice is revered as god voice and respectfully followed (Panch Parmeshwar). Panchayat can play very important role in motivating people towards public participation. Public participation will work in the context of tanks as none of the authority power is challenged. Instead authority would love the development in this way.



**Figure 4: Village Chaupal in Progress**

Still in India people believe in religious heads of numerous sects, their involvement can be very useful as people trust them more than politician and village level social heads.

## **MASS AWARENESS**

Tanks are situated in rural areas, where majority of people live below the poverty line (BPL) and are illiterate. These people form the targeted group where mass awareness is to be created. Here big speeches decorated with ornamental words will not create magic. Instead the grass root leadership with liberal dose of motivation will work. Even the motivators to come from their own class and level, who can feel the smell of soil and pulse of villagers.

Audio visual media tops in creating awareness at village level. People love movie and it creates lasting effects on their mind. Next comes the stage acts (drama), done by village level comedians / actors. They tell serious things with a dose of humour involved. Speaking their own language what villagers can easily grasp. Simple posters constantly remind them the importance of the message.

Chaupal is a most common place owned by all villagers. It is a place most of the time situated under the thick and shady tree and at the bank of the village tank. It is the place where village panch (elders) meet and solve the social problems in front of social gathering and deliver the judgment as per the societal norms and within the laws of the lands. Lok Adalats are the extended forms of these chaupals. Chaupals are the good places/points of spreading message and motivating the people to be readied for the revival of the tanks. Chaupals are the places to initiate the social change at the village level.

After awareness comes the motivation and right push (a leadership), masses can be easily driven, and instinctively they want to be lead. Lastly volunteers at village level can spread message on one to one basis. School and college going kids may be hammered mentally in the school and colleges regarding the importance of tank preparing them to be future caretakers of the tanks.

Watch dogs created amongst the society so as to take care of tanks and creating pressure on society to revive and upkeep the tanks individually and collectively.

## **FUTURE OF THE TANKS**

Nothing is impossible, future of the tanks is bright. Taking examples of grass root works done world around success is sure. Will is required and the will driven with right fuel in the form of awareness and right direction given by local leadership can turn the things around.



At present urbanization is going on full swing. Developers are targeting urban areas. Planners are looking at cities. Neglecting rural areas actually from where the wealth, food and health are flowing. Mindset shall have to be altered, giving attention and starting parallel development from the rural areas and going towards cities. Tanks are common property even if non poor are not taking its direct advantages, they enjoy the positive environment thus taking advantages of tanks and morally bound to contribute towards their revival.

Depleting under ground water sources shall force the villagers to revive tanks in future. Once their worth is realized they will become prized possession of villagers.

Tanks will be the handy source of water than creating big water bodies like reservoirs that are difficult to construct due to environmental problems, resettlement of villagers and interstate disputes. In case of big projects delays are common increasing project costs. They can not fulfill the water demand timely. Tanks will always be the ideal source of water in Indian context.

## **CONCLUSION**

Rural economy is water based and tanks are the prime source of water. That needs to be revived with balancing approach with zero or little cost involving local material and participative approach. Bigger the water filled tank so is the prosperity of the village. Tanks can be revived to make them bustling with activities and use. They can be maintained with least of money, with most of efforts that are physical in nature and participative in spirit. Tanks revival does not require a big fortune. Sometime they require just efforts to revive them with zero material cost. Participation of villagers with constructive attitude can turn the things around. Revived tanks make not only the local economy strong, but make micro environment of the village positive and clean. They form source of livelihood for many and give character to the village. Tanks are eco friendly and Useful for drought mitigation during long spell of dry period.

## **REFERENCES**

1. Mohenjo-Daro!, by Jonathan Mark Kenoyer, University of Wisconsin, Madison (<http://www.mohenjodaro.net/greatbath25.html> )
2. Swadhyay Parivar, (<http://www.swadhyay.org/>, water conservation).

