# Private Water Supply Augmentation Project in

# KHANDWA

## A Study of Impacts of the Project


MANTHAN

# Manthan Adhyayan Kendra

Manthan Adhyayan Kendra was set up in year 2002 to research, analyse and monitor water and energy related issues, with a special focus on the developments resulting from the liberalisation, globalisation and privatisation of the economy.

In last several decades, resource use and developmental activities have given rise to fierce debates and intense struggles raising issues of social justice, equity, environmental sustainability, human rights. Serious concerns have been raised about the efficacy in delivering benefits of the existing developmental paradigm. In recent years, enormous transformations in the global and national economic and financial structures have made these concerns even more relevant.

It is necessary, for those working in the public interest and public policy arena to fully understand these transformations, along with the concerns of equity, human rights, environment and so on. Yet, most information, information sources and analytical capacity remain with governments, international financial agencies or private corporate sector.

There is a critical need for independent groups committed to public interest that can carry out high quality research and analysis. Manthan has been set up as an attempt to address this need.

The studies carried out so far include a comprehensive post facto evaluation of the Bhakra Nangal dam project and ongoing monitoring of privatisation and commercialisation in the water sector.

Manthan raises resources from people and institutions that share its political and ethical vision.

# Private Water Supply Augmentation Project in Khandwa

*A Study of Impacts of the Project*

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# About This Study

THIS report was initially drafted in Hindi in 2009-10. This English version has been translated and revised in 2010-11. The study of Khandwa Water Supply Augmentation Project began in September 2008. The project is funded through UIDSSMT, a Government of India scheme for infrastructure development in small and medium town.

The number of private water projects under UIDSSMT is increasing at a fast rate. Khandwa is the first town in Madhya Pradesh to execute a private water project under this scheme, hence the findings of this project would be important for other towns as well which are looking for implementing private water projects under UIDSSMT.

This report basically focuses on the issues related to the new private water supply augmentation project from Chhoti Tawa, a tributary of Narmada River, and a part of the backwaters of Indira Sagar Project[1] on Narmada. It gives a brief picture of the existing water supply system in Khandwa. It also discusses in details the impacts of the new private water supply project and question marks on the project efficacy.

During this study we received immense support from several people in Khandwa including local people's representatives, officials, journalists and residents. The long discussions held with them helped us in understanding the water supply system of the town. It was difficult to gather information about the new project and existing water supply system, however use of RTI Act helped us in collecting

important documents and information, it was a bit time consuming though, but in the end proved fruitful.

We thank the board members of Manthan for showing faith in our team and its work, since its inception, Manthan has been supported essentially by contributions of many individuals, and we would like to thank all of them, and in particular Arundhati Roy. Manthan is also currently being supported by Arghyam, Bengaluru and we would like to express our appreciation for this.

We further plan that the next part of this report would look into the alternative systems that could have been operated instead of the current private, long distance and expensive project.

We express our deep gratitude towards all the people who have supported us in this study.

**Badwani,** August 2011 **Gaurav Dwivedi / Rehmat**

# 1

# Background

TODAY, in general most of the urban areas in the state as well as the country water supply is based on a piped system. These pipelines are generally 40-50 years old, in some places these may well be 70-80 years old. Although, over a period of time with the increasing demand this system has been extended and improved, yet it comes across that a lot of areas have old and leaking pipelines and many others have not been covered by piped water supply.

One of the concerns with the old pipelines is the extent to which these can be repaired, and even after repairs water leakages occur in huge amounts. At many places water supply lines are adjacent to the sewage lines, this means that when water pipes burst and leakages happen they lead to drinking water contamination and consequently health related problems to the community.

It is important to note that in most of the urban areas the old pumping machines, filtering and treatment plants that are being used to treat water have low capacity and efficiency, compared to what is required at present. In the current circumstances the demand for treated water is increasing rapidly in urban areas due to varied factors like rising population, rural-urban migration, changing lifestyles, increased consumption, etc.

The other important aspect of the current urban water supply systems is about their growing dependence on long distance transfer of water - from reservoirs built in far off rural regions - to fulfill the needs of towns and cities. This is increasingly becoming a norm

rather than an exception, because of the fact that most booming towns and cities instead of protecting and conserving their own local water resources neglect, encroach, pollute and fill up these resources like lakes, streams, wells, etc.

To complicate the matters further, it is also being emphasised that the current model of drinking water supply which is predominantly run by public agencies is not being able to deliver efficient, financially sustainable and better service to the urban residents. The widely claimed solution for this public service delivery failure is to privatise services. It is argued that private participation in water services would bring in the benefits like much needed financial support, better efficiency, improved services and lower tariffs among others.

Due to all the above mentioned and various other reasons, it is now being stressed that urban water supply systems need full scale paradigm shift both in terms of how it is being managed and funded and who would managed it.

This report is a case study of a private water supply augmentation project in a small town, called Khandwa, located in south-western Madhya Pradesh. The private project is being implemented under UIDSSMT, a Government of India scheme for infrastructure development in small and medium towns.

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# 2

## Khandwa - An Introduction

KHANDWA is a disrict head quarter, located on the South-Western border of Madhya Pradesh. It has been an important town of central India, even before independence. The testimony to this is that the Britishers shifted the district head quarters of Nimad from Mandleshwar to Khandwa, way back in 1860. On 17th May 1867, municipal council of the town was created which was further upgraded as municipal corporation on 1st November 1991.

Since pre-independence era, Khandwa town has been self-dependent in terms of water resources. The District Gazeteer published in 1969 mentions its major water sources as Moghat (Nagchun) reservoir[2], Barud Nalla, Bhairo tank, apart from these old Bheem Kund, Suraj Kund, Rameshwar Kund and Padam Kund were also known as major water sources of the town.[3] There were also hundreds of wells located in the town. A *Kund* is a natural water fountain where a natural flow of ground water occurs.

The Gazetteer notes that in 1930s, "Affairs of the Khandwa Municipality were very well managed during that period, for the then Deputy Commissioner of Nimad has recorded great appreciation of its achievements in his annual reports to the Government".[4]

According to 2001 census data the population of Khandwa town was 171,976. In 2010 the population of the town increased to 2,15,373 out of this 14,089 were below povertyline families-ie around

70 thousand BPL individuals. Khandwa Municipal Corporation (KMC) data shows that, the water requirement of the town for the projected population of 2,15,373 in 2010 is 29 mld (million liters per day) calculated using 135 lpcd (liters per capita per day) as a base figure. However, the municipal corporation is able to supply only 17.20 mld[5] at present, a deficit of 11.80 mld. To overcome the problem of deficit for water required and water supplied KMC has decided to implement a new project which would pump water to the town from the Chhoti Tawa river which forms the backwaters of the Indira Sagar Reservoir, from a distance of 52 kms.

## Existing Water Supply in Khandwa

In terms of water availability in Khandwa - water is available from Bhagwant Sagar (Sukta) reservoir consistently throughout the year, however water supply from Nagchun tank and ground water sources goes down during the dry season. From the **Table No-1** below, it can be seen that 63 lpcd, water is supplied during the summer months and during the remaining months of the year water supplied is 97.5 lpcd. Considering this water supply as low compared to the standard 135 lpcd for urban areas, KMC has been preparing a new water supply augmentation project.

Table No-1

Water Availability from various sources

| Sr. No. | Season (mld) | Sukta Dam (mld) | Nagchun (mld) | Borewell (mld) | Total Supply (mld)/(lpcd) |
|---|---|---|---|---|---|
| 1. | Rainy | 11.25 (57.69%) | 1.80 (9.23%) | 6.30 (32.31%) | 19.50 (97.50) |
| 2. | Winter | 11.25 (57.69%) | 1.80 (9.23%) | 6.30 (32.31%) | 19.50 (97.50) |
| 3. | Summer | 9.00 (71.43%) | 0.00 (71.43%) | 3.60 (28.57%) | 12.60 (63.00) |
| **Avg. Water Supplied** | | **10.5** (61.05%) | **1.20** (6.98%) | **5.4** (31.40%) | **17.20** (86.00) |

* ***Source*** *- DPR, Khandwa Water Supply Augmentation Project, Page - 17*

***Would be neglected:*** *Filter plant at Jaswadi.*

The data available with the KMC shows that out of the total water supplied to the town 61% is from Bhagwant Sagar Project, 31% from the ground water sources and the rest comes from Nagchun Tank.[6] Currently, the town needs 29 mld water based on 135 lpcd water supply. However KMC is able to provide 15-19.5 mld water for distribution, depending on the season, rainy - summer, the water deficit is in the range of 8-14 mld. The municipal corporation claims that it is supplying water to 80% of the town. But large residential colonies like Vatsala Vihar, Ram Nagar, Kishore Nagar are not connected to municipal water system. Around 15 wards in the town do not have piped water supply, in these wards water is distributed using water tankers.[7]

## Efforts for Augmentation

During the summer months it is normal to augment the water supply in Khandwa through water tankers to fulfill the demands of the population. However, the efforts were also made by KMC to find a long-term solution to the water deficit problem.

The first water supply augmentation effort for Khandwa town after Nagchun tank[8] had been built, was undertaken in 1982. It was done by channelising water from Bhagwant Sagar reservoir.[9] Even today this reservoir is fulfilling around 60% of the water requirements of the town. In the year 2004-05, KMC thought to increase the quantity of water received from this reservoir. It was planned to lay

a pipeline from the reservoir to the filter plant for raw water transmission, in place of an open drain, and an additional 28 inch pipeline from the filter plant to the town for augmentation. Under the planned expenses for this work, Housing and Urban Development Corporation Limited (HUDCO) had also sanctioned a loan of Rs 13 crores. However, the Government of Madhya Pradesh refused to provide counter-guarantee to HUDCO for this loan, the municipal corporation was not able to get the loan.[10]

The second attempt was in November 2006, a plan was prepared to lift water from the main canal of Indira Sagar dam, close to Kalmukhi village (15 kms North of Nagchun Tank) and pump this water into Nagchun Tank for storage and distribution. The plan was to use Nagchun tank as the balancing reservoir and to be used for water distribution to the town. The estimated cost of the project was Rs 34.35 crores. It was claimed that this project would be able to supply sufficient water for the projected population of Khandwa town till 2022.[11] This scheme was proposed to be executed under Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT).

Generally, it is understood that irrigation canals are operated in the dry season, so that additional crops can be harvested apart from the wet season. However, with respect to the above mentioned project, the Narmada Valley Development Authority (NVDA)

***Still dependable:*** *Nagchun tank built in 1897*

informed that the canal would not be operated in the summer months and that the water would not flow in the canals during the dry season.

The third attempt was when KMC decided to prepare a separate water supply project which would lift sufficient water from a distant reliable source to be funded under UIDSSMT. The processes for procuring funds through UIDSSMT had started at KMC including tendering and appointment of project consultant for preparing Detailed Project Report (DPR), Tender and Bid documents for the project.[12] On 17th April 2007, then municipal commissioner Shri Shivnath Jharia and the project consultant M/s Mehta and Associates, Indore located a spot on river Chhoti Tawa which is part of the backwaters of Indira Sagar Reservoir in between the villages of Selda Maal and Charkheda. At this location it was possible to draw water at the level of 236 MSL. Khandwa is located at a height of 307 meters from MSL. The estimated cost of this project was Rs 83.74 crores.[13] The distance of the water source from the town was around 40 kms.

However, the above mentioned project was rejected because of the fact that the access road and the pipeline to the water source was passing through a reserved forest (approx. 5 hectares). Further to reach the water source it was required to construct a bridge on the way to cross river Agni, increasing the time and cost of the project.

Later on, due to the reasons that the pipeline for this project was passing through the reserved forest, the route was changed. The change in the route was probably suggested by the project consultant, M/s Mehta and Associates, and it was decided to follow a different route from Charkheda via Khandwa-Chhanera Highway upto Khandwa, the length of this route was 52 kms. On this route too 3.1 hectares of reserved forest was being effected. The cost of this project was estimated at Rs 96.31 crores.[14]

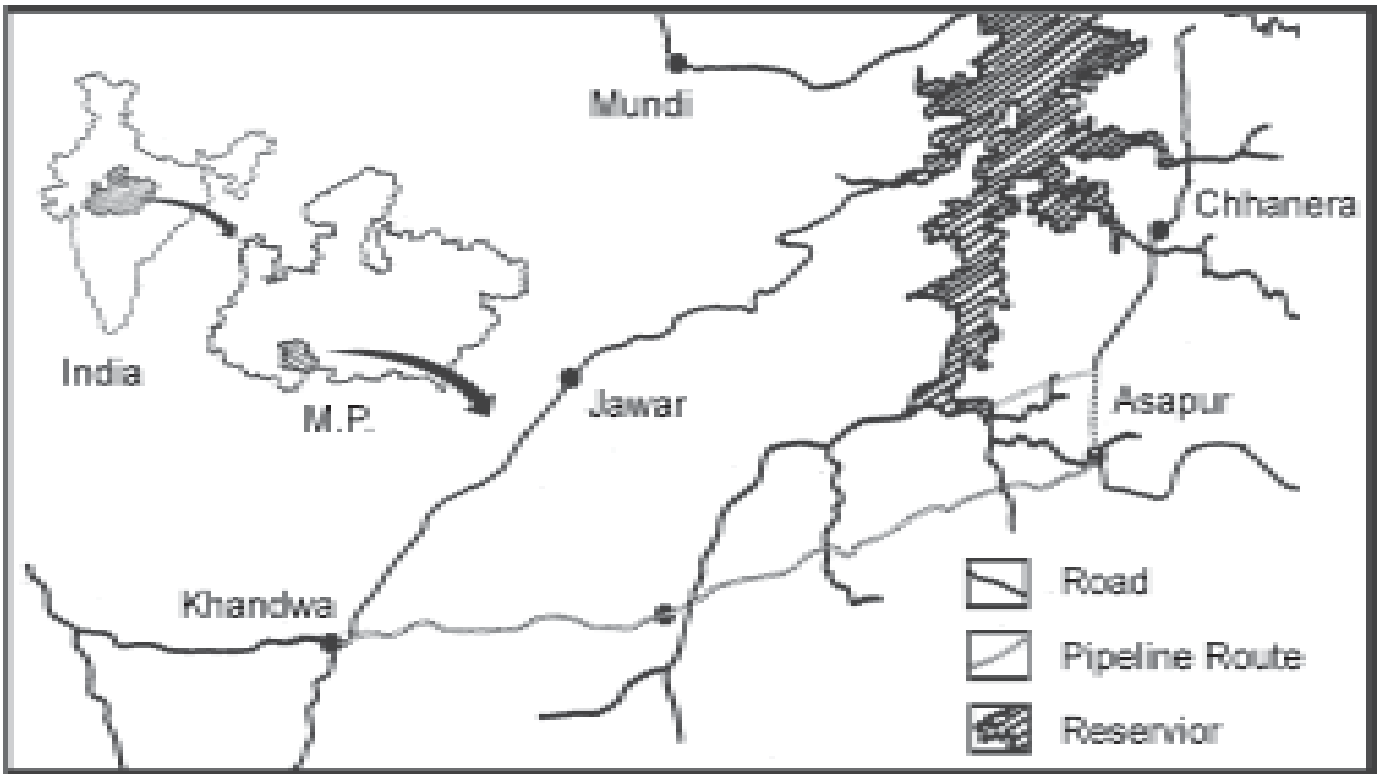
# 3

## PPP Water Project under UIDSSMT

THE project prepared on the third attempt was submitted and later got approved under UIDSSMT. It was approved on 17th September 2007 by Madhya Pradesh Vikas Pradhikaran Sangh[15] at the cost of Rs 106.72 crores.[16] Rs 103.61 crores (97%) of the total approved cost is meant as the actual project cost and the remaining Rs 3.11 crores (3%) as project preparation, consultancy and other contingency expenses. Rs 93.25 crores out of Rs 103.61 crores would be provided by KMC to the concessionaire (a private company) in the form of a capital subsidy for build-operate-transfer (BOT) project.

Since then the project cost has inflated to Rs 115.32 crores for supplying 45 mld water to Khandwa town in phases. The lowest submitted bid for the project was Rs 115.32 crores as capital cost and Rs 7.62 crores per annum as O&M cost @ Rs 11.95/KL by Vishwa Infrastructure and Services Pvt. Ltd. (Vishwa Infra). This bid was not brought into the General Assembly of KMC which constitutes elected representatives of various political parties and independent candidates, for approval. The bid was cleared by Mayor-In-Council (MIC). The MIC is dominated by Mayor appointed and ruling party corporators including eldermen.

The project has been awarded on PPP mode to Vishwa Infra, a Hyderabad Privatised Water Project under UIDSSMTbased company. The project company would execute it in two phases, during the construction phase of two years - the company would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Pipeline Route
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undertake construction of raw water pumping, treatment, bulk water supply, rehabilitation of the distribution system including laying pipelines and building overhead tanks in the town. After the construction phase it would undertake - the operations and maintenance of the bulk water supply system under the project for the next 23 years. It also looks likely that the water supply would be increased in a phased manner depending on the increase in demand in future, Phase I - 30 mld treated water supply till 2025 and Phase II - 45 mld treated water supply after 2025. The project work started in October 2009 and the construction period is expected to extend over the next two years till October 2011. The project components consist[17] of -

i. The intake facilities on the bank of the Chhoti Tawa river, at village Charkeda, including pumping facilities of 45 mld raw water up to treatment plant.

ii. Construction of electrical substation to be connected with High-Tension line of MPSEB for supplying power to project facility.

iii. Construction of treatment plant for raw water treatment having clear water capacity of 45 mld.

iv. Construction of clear water pumping plant along with sump and pumps to discharge clear water of 44 mld.

v. Providing and laying 51,400 meters long clear water pumping main from Treatment Plant to Over Head Tank (OHT) in Khandwa.

vi. Construction of OHTs at various places in Khandwa.

vii. The strengthening and extension of existing distribution network of the city so as to deliver required amount of water quantity to the consumers at a pre-decided pressure (12m).

viii. Provision of bulk flow meters for measurement of leakage and other losses at various places.

ix. Instrumentation and operating facilities as needed for the efficient operation and maintenance of the system for the design period and control and monitoring of the water quality to be delivered.

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# 4

## What is UIDSSMT?

IN the current urban water supply scenario, it is argued that the water supply systems require enormous capital injection to improve water services. But this is not possible for many Urban Local Bodies (ULBs), because of their poor financial conditions, it is not possible for them to invest funds from their own sources. However, for the last few years funds are being made available through JNNURM (Jawaharlal Nehru National Urban Renewal Mission), a country-wide central government scheme for infrastructure development in the urban areas. The grants sanctioned under this scheme have the central and state share of 80% and 10% maximum respectively, depending on the population of the ULB. The remaining 10% (or more depending on the size) of the funds are to be generated by the ULB.

A similar scheme for small and medium towns is also going on simultaneously, namely UIDSSMT (Urban Infrastructure Develop Scheme for Small and Medium Towns). In this scheme the share of the grants from the central and the state government has been fixed at 80% and 10% respectively. The share of ULB is the remaining 10%. As mentioned earlier, Khandwa Project has been approved under UIDSSMT.

UIDSSMT is supposed to carry-forward the current model of water sector reforms in small and medium towns. The objective of this scheme is to make the ULB operations financially sustainable and attractive for PPP projects. According to the conditionality

attached with the funds, ULBs and state governments accepting UIDSSMT would also have to accept the reforms agenda of the scheme. The reforms largely mean financial sustainability, full cost recovery, user charges and private participation in urban municipal services. The reforms have been categorised in two parts - (1) Mandatory and (2) Optional.

Mandatory reforms have to be implemented as accepted in the tripartite Memorandum of Understanding (MoU) between the ULB, state and the central government. The ULBs can implement optional reforms as per their convenience, but within a time-period of 7 years. This condition of putting a cap of 7 years for implementing the optional reforms, shows that there isn't much to differentiate between the mandatory and optional reforms apart from the period given for implemention.

## A. Mandatory Reforms

**i) Urban Local Body (ULB) / Parastatal level Reforms:** The mandatory reforms at ULB level[18] include adoption of modern accrual-based double entry system of accounting, introduction of system of e-governance, reform of property tax with GIS, levy of reasonable user charges by ULBs/ Parastatals with the objective that full cost of operation and maintenance or recurring cost is collected within next seven years, internal earmarking within local body, budgets for basic services to the urban poor, provision of basic services to urban poor including security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery of other already existing universal services of the Government for education, health and social security.

**ii) State Level Reforms :** The mandatory reforms at state level[19] include implementation of decentralisation measures as envisaged in 74th Constitution Amendment Act, repeal of urban land ceiling and regulation act, reform of rent control laws balancing the interests of landlords

and tenants, rationalisation of stamp duty to bring it down to no more than 5% within next seven years, enactment of public disclosure law, enactment of community participation law to institutionalize citizen participation and introducing the concept of area sabha in urban areas and assigning or associating elected ULBs with city planning function.

## B. Optional Reforms[20]

Optional reforms common to State and ULBs/ Para-Statals include revision of bye-laws to streamline the approval process for construction of buildings, development of sites etc., simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes, introduction of property title certification system in ULBs, earmarking at least 20-25% of developed land in all housing projects (both public and private agencies) for EWS/LIG category with a system of cross subsidisation, introduction of computerised process of registration of land and property, revision of bye-laws to make rain water harvesting mandatory in all buildings and adoption of water conservation measures, bye-laws for reuse of recycled water, administrative reforms i.e. reduction in establishment by bringing out voluntary retirement schemes, non-filling up of posts falling vacant due to retirement etc. and structural reforms and encouraging public private partnerships.

As per the JNNURM guidelines, "any two optional reforms to be implemented together by State & ULBs/ Parastatals in each year and all the reforms (mandatory as well as optional) shall be implemented by State /ULB /Parastatal within the Mission period."[21]

Therefore, it is quite clear that all the above said reforms under JNNURM and UIDSSMT have to be implemented within the mission time period. The only difference between the mandatory reforms and optional reforms is that the mandatory reforms would be the first to be implemented after signing of MoU by the State and ULB because of the conditionality attached in accessing JNNURM/

UIDSSMT funds. Secondly, State and ULBs have an option to choose any two optional reforms each year on their discretion of priority for implementation, but the condition is all the optional reforms have to be implemented within seven years of mission period. Therefore, the word mandatory and optional does not have any significance as such in this context.

Under 10th and 11th five-year plans, the package of urban reforms for fast track development of urban infrastructure was recommended. The prescribed reforms under JNNURM and UIDSSMT have provided more space for private sector to invest in urban municipal services and thereby increased private sector role in providing services like water supply, sanitation, sewerage and solid waste management. To encourage the private sector role further under JNNURM and UIDSSMT, Central and State governments are also giving emphasis for creating regulatory bodies to ensure full cost recovery, encouragement of PPP, levy of user charges, tariff setting and to ensure implementation of all said reforms under JNNURM and UIDSSMT.

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# 5

## Status of UIDSSMT

AT present the financial condition of most of the ULBs is so poor that it looks quite unlikely that they would be able to raise their share of funds for executing the projects under UIDSSMT. This scheme however, gives them a seemingly easy way out of this financial mess - i.e. to run the urban municipal services through PPP projects, to encourage private companies to invest and take control of municipal service delivery including water, sewage, solid waste, etc. By receiving huge funds for projects from the central and state governments and also to escape the efforts required to secure their own funds and management of projects, the ULBs are jumping on the PPP band-wagon as an escape-route without second thoughts.

Recent trends show that the ULBs are quickly drawn towards UIDSSMT. Till August 2010, in the past 5 years under this scheme 979 projects with the cost of Rs 19,936 crores have been approved in the country. Out of these 524 are water supply projects costing Rs 10,478 crores. If we include in the above, projects related to sewage, sanitation, solid waste management, storm water drains and conservation of water bodies the number of projects increase to 843 costing Rs 18,506 crores. The data shows that under UIDSSMT 93% of the funds are being spent on projects related to water sector. Similarly, in Madhya Pradesh 35 projects, costing Rs 762 crores are being implemented in 33 towns. In 31 towns, 33 projects costing Rs 587 crores are related to water sector.

As of August 2010, 763 projects relating to water sector in 640 towns in the country have been approved under UIDSSMT. Out of these 501 municipal bodies have shown their readiness to accept PPP under the reforms agenda. However, 464 municipal bodies have already started implementing PPP projects.

In the states of Andhra Pradesh, Tamilnadu, Maharashtra, Orissa, Chhatissgarh, Karnataka, Gujarat, Madhya Pradesh, Uttar Pradesh and West Bengal out of 580 ULBs, 245 have already given approval for implementing PPP projects, in Madhya Pradesh 17 ULBs have chosen the PPP option for executing urban projects as of March 2009. This however, means that the projects implemented largely using public resources, would be handed over to private companies for earning profits from social welfare services like water and sanitation. For example in cities specifically under JNNURM/ UIDSSMT this is the trend, in Madhya Pradesh there are such water projects proposed or under execution in Bhopal, Khandwa and Shivpuri, and in cities in other states like Mysore, Nagpur, Anand, Guwahati, Latur, Kolkatta and others.[22] The studies and experiences of other countries show that private involvement in water supply and sanitation has not helped improve services on the contrary it has lead to profiteering by the private companies from such essential public services.[23, 24, 25]

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# 6

## Impacts of UIDSSMT

UNDER this scheme, since the public funds are fairly easily available, hence it is also observed as a trend that most of the ULBs are going in for long-distance expensive projects for water supply. For example in Khandwa and Shivpuri towns of Madhya Pradesh, the ULBs have gone for projects costing Rs 106 crores and Rs 80 crores respectively for water supply augmentation. As we will further see in this study that how such capital costs and subsequent high O&M costs can be prohibitive in future for both the ULB and the residents of small towns in maintaining the water systems and accessing water services, where income levels of the majority community are still on the lower side compared to the big cities.

This has lead to a situation where ULBs are ignoring their local water resources and are depending on distant sources for water supply. These local resources which had provided with low-cost and easily controllable water supplies are being ignored for long-distance projects. It can also be argued that even in cases where these resources were depleted and degraded, these could have been repaired, upgraded, restored and augmented at a fraction of the costs for continuing supply.

The other fall-out of long-distance, capital-intensive projects is that investment-wise these are such projects which the ULBs cannot afford to pay for. This has lead them to the doors of the private companies who are eager to get a share of the urban water projects pie. UIDSSMT encourages private participation in municipal services.

This creates a situation wherein the projects being executed are not according to the needs of the local conditions and requirements. Sometimes also translating into unnecessary cost escalation of projects. In towns like Shivpuri and Khandwa, conversations and discussions with the local people have shown that - one, local people do not have much information about such projects; two, there are not enough efforts from the local authorities to impart information and awareness about such projects to the local people and three, without any meaningful information there is no discussion and debate on the merits and demerits of such public services projects. In Khandwa we have noticed that even the representatives in the municipal council did not know about the project and its impacts. Since most of the service delivery projects would be privatised, the impacts of such private projects would be directly on the residents.

The impact of such long-distance capital-intensive private water supply projects on the residents is two fold - one they have to pay more for the water supply and distribution by the private companies because of huge capital injection in these projects and profit seeking nature of private companies in the form of steeply increasing water charges. Two, the dependence on long-distance resources is also leading to a disconnect from the locally-owned common water sources like tanks, streams, dug-wells, handpumps, etc.

On the other hand the private control on water supply services in small towns would have multiple and long-term impacts. The distribution, O&M of water supply would be like a commercial product rather than a social obligation. While doing so the responsibility of the government towards the poorest section of the society would be in denial. Under the private projects like in Khandwa public stand posts would be disconnected and removed. There would not be any other source of water from which the people would be allowed to source water other than that of private operator. The private operator would have the right to stop the use of even the handpumps, even those installed before the contract was signed.[26]

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# 7

## PPP - A failed model?

THE changes in the Indian economy that began in the early part of the last decade of the previous century with policies of liberalisation, privatisation and globalisation coming into force. The power sector saw these policies being implemented quite some time back. However, in the water sector these are being implemented since the last few years.

Over the period of these years the process of privatisation in essential public services has changed. This has largely happened due to the political and social backlash that the direct privatisation model had to face across various countries in the world. The direct privatisation model was then remodeled and brought forward in the form of Public Private Partnerships (PPPs). The PPP model is basically meant to increase the profits of the private companies by encouraging their participation in municipal service delivery, but keeping the risk and responsibility of social obligation services away from them by making the public sector responsible and accountable for it.

One of the characteristics of the direct privatisation model is that the private companies invest their own funds to build the infrastructure required for delivering a municipal service. This investment mechanism at least in theory has the possibility to put the onus on the private company to be more accountable, efficient and properly managed since it needs to deliver better services, in an efficient manner and with improved management to attract the

users which would generate revenue and returns on the investment. But in practice the way private projects are designed, to profit private companies, this is rarely possible.

However, under PPP model major part of the funding comes from the public sources which makes it easy for the private company to overlook the factors like accountability, efficiency and better management since their own investment is not big, hence the risks are low.

For instance the financial structure of PPP projects under UIDSSMT like Khandwa Project is such that 100% (80: Central, 10: State and 10: Municipal Council) of the funds invested are being sourced from the public exchequer. It is another matter that some ULBs like KMC ask a private company to invest its share of 10% projects costs, citing lack of funds and hence surrendering control of water system and revenues to the private operator.

Under PPPs post-contractual negotiations become the norm when companies are not able to deliver what was promised in the original contracts. And to top this all we observe a trend that the public sector agencies are not able to regulate, monitor and supervise the private companies effectively when it comes to delivering public services. For example in sectors where we have regulatory agencies like telecommunications, power, petroleum and natural gas, roads and highways, etc experiences and evidence show that regulatory agencies do not have the desired capacity, resources and power to monitor, control and penalise private companies.[27]

Further more, PPP projects are designed in such a way that the project company takes on minimum risks and responsibilities under the project. More often than not, the major risks and responsibilities like financing, resource, revenue risks, are shifted on to the public sector. Concession agreements are drafted keeping in mind the profits of the private concessionaire. These agreements broadly take care of the technical and operational aspects of the water system. Governance, equity, justice, sustainability and human rights issues remain with the public agencies and despite all the

time, effort and money put in to execute PPP projects the public sector largely remains responsible for service provision, access and distribution.

In Khandwa, even though the earlier plans were to hand-over distribution and O&M of water supply to the private concessionaire. However, under the final negotiated agreement these will remain with KMC and the private concessionaire would only construct the project facilities, treatment of raw water, bulk water supply to KMC and collect the fixed charges for bulk water treatment and supply.

Several PSP/ PPP projects in water sector and others are facing troubles in India and other countries, where governments have been forced to bail out private projects in public services because of poor operational and financial management, since if they had failed it would have created a crisis especially in an essential service like water.[28]

# 8

# Evaluation of the Khandwa Project

AS mentioned earlier, Khandwa Water Supply Augmentation Project has been awarded to Vishwa Infra on PPP mode. The private company has estimated the project cost to be Rs 115.32 crores. KMC, through the central and state government sponsored scheme UIDSSMT, is providing the private company with a subsidy of Rs 93.25 crores to execute the project. This is essentially the grant that the KMC is receiving from the central and the state governments for its willingness to implement municipal reforms under UIDSSMT. This subsidy amount provided by the central and state government would be deposited by the state nodal agency into the bank account of the private concessionaire for executing the project. The first installment of the subsidy was Rs 24.127 crores deposited on 31st December 2008.

The remaining Rs 22.07 crores would be invested by the private company in lieu of operating and earning profits from the water project for the period of the concession contract i.e. 25 years (including the period of construction).

## Financial Evaluation

The investment of private concessionaire is about 19%, which includes the share of KMC. KMC had stated that it did not have funds to invest its own share. The investment jumped from 10% to 19% due to the supposed additional costs of the material used, due to high inflation. While investing limited funds in this project the private company would be taking control of the water supply for

next 23 years (2 years construction phase plus 23 years operating phase). As is clear from the agreement it would also have the first charge on the revenues of KMC from water services and other sources by using mechanisms like escrow for its profits.

The estimated internal rate of return (IRR) for the project is 12%. Price Offer II submitted by the company states - "This will be done through the bid price of the treated water/ KL offered by the company to recover the total cost of the project excluding the share of GOI and GOMP as per UIDSSMT provision and the return till the completion of the concession period".[29] Meaning that the concessionaire would recoup its own costs and the estimated return through the bid price of treated water.

The investment by the concessionaire would be in the form of Rs 5.5175 crores (25%) equity and Rs 16.5525 crores (75%) debt. The private operator has calculated the annual operation and maintenance cost as Rs 7.62 crores or Rs 63.5 lakhs per month.[30] **Table No-2** gives a break-up of this cost. The financial bid states - "It is expected by the end of 4th year almost all the connections in different categories like domestic, non-domestic, commercial,

Table No-2
Private Khandwa Water Supply Augmentation Project
Operation & Maintenance Costs

| S. N. | Description | Cost/Month (Rs) | Annual Cost (Rs) |
|---|---|---|---|
| a) | Personnel and Administration | 600000 | 7200000 |
| b) | Consumables | 2200000 | 26400000 |
| c) | Raw Water and Energy Charges | 3050000 | 36600000 |
| d) | Insurance | 100000 | 1200000 |
| e) | Misc. Costs | 400000 | 4800000 |
| **Total Operations and Maintenance Cost** | | | **76200000** |

*Quantity and units are Lumpsum

***Source** - Format 15 B, Cost estimates - Price Offer II, submitted by Vishwa Infra to Khandwa Municipal Corporation*

industrial and bulk supplies will be released based on this, the total water to be supplied to all the customers shall be about 30 mld". It is understood from the bid document that during the initial 4 years the concessionaire would supply same amount of water as KMC. This can be interpreted that once the full 30 mld supply starts annual O&M costs would increase proportionately. Although, at the moment it seems quite unlikely that by October 2011, when the construction phase ends, the private operator would start bulk water supply services.

KMC has projected that @ 135 lpcd water required for the population of 2,18,774 in 2011 would be 29.53 mld. The concessionaire has conceded that distribution losses would be 15%, hence 5.21 mld additional water would be required to cover losses. The actual total quantity required to be supplied would be 34.74 mld.

In the approved financial bid the private concessionaire has set the water tariff @ Rs 11.95/ KL. This means for 30 mld water supplied at this rate by the end of 4th year as planned, the annual chargeable bill would be Rs 13.08 crores.[31]

However, the track-record of KMC shows that its performance is not good - a common scenario with the ULBs across the country - when it comes to recovering water charges. As **Table No-3** shows, for the year 2007-08, it was able to recover only Rs 94.25 lakhs under the water supply head, even though it had spent Rs 3.18

Table No-3

Recovery by KMC (Water Supply Charges)

| Year | Expenses on Water Supply (Rs) | Income from Water Supply (Rs) | Recovery (%) |
|---|---|---|---|
| 2005-06 | 2,62,65,689 | 65,44,294 | 24.92% |
| 2006-07 | 2,75,41,706 | 1,17,84,974 | 42.79% |
| 2007-08 | 3,18,28,403 | 94,25,115 | 29.61% |

***Source*** *- Information made available to Manthan Adhyayan Kendra, Badwani by Khandwa Municipal Corporation, under RTI application.*

crores on water supply system during this financial year. (This figure is excluding capital expenses, since most of the expenses during a financial year on the existing system have largely been treated as operations and maintenance expenses.) The recovery was less than one-third of the total expenditure.

In this context, the crucial question that arises is that when KMC is not able to recover its own costs which are quite low compared to what the private operator has estimated for the new

Table No-4

Proposed Charges under private water supply

| Year | Population Projection | Demand @ 135 lpcd (MLD) | Proposed Charges/KL (Rs.) | Charges to Concessionaire (Lakh Rs.) |
|---|---|---|---|---|
| 2011 | 218744 | 29.53 | 11.95 | 1288.04 |
| 2012 | 222172 | 29.99 | 11.95 | 1308.22 |
| 2013 | 225659 | 30.46 | 13.15 | 1461.63 |
| 2014 | 229206 | 30.94 | 13.15 | 1485.17 |
| 2015 | 232815 | 31.43 | 14.47 | 1508.56 |
| 2016 | 236485 | 31.93 | 14.47 | 1686.15 |

**Note**

1. Based on the price calculations in the price offer II submitted by the project concessionaire, it seems more likely that for the given amount of Rs 7.62 crores it would only supply 17.47 mld @ Rs 11.95/ KL against the demand of 29.53 mld till 2015.
2. A brief note in the price offer II also mentions that the full 30 mld supply would start only after the 4th Year of operations, once all the connections, distribution and rehabilitation related works are over.
3. The price offer II shows that the expenses (Rs 7.62 crores per year) and the revenues (Rs 7.70 crores per year) are almost equal to each other, this could put aside possibility of the company supplying more water than 17.47 mld. Since it would not be prepared to supply more water without taking into account the increased expenses and revenues.
4. The 10% price rise would kick in every 3rd year, the calculations for the proposed charges/ KL in the table for further years have taken this into consideration as well.

***Source** - *Detailed Project Report of the project and the financial bid submitted by Vishwa Infra.*

Table No-5

Existing Water Connections and Recoveries Possible

| Type of Connection | Total Number | Proposed Monthly Rates | Yearly Recovery |
|---|---|---|---|
| Domestic | 15664 | 150 | 2,81,95,200 |
| Commercial | 259 | 300 | 9,32,400 |
| Industrial | 20 | 2400 | 5,76,000 |
| **Total** | **15,943** | **- - -** | **2,97,03,600** |

project, how it would be able to force its residents to cough up Rs 14 crores 81 lakhs per annum for payment to the company as water charges?[32] Would it be practically feasible for the municipal corporation? Even if KMC is able to pay this amount annually, what would be the financial burden on the local population? It also needs to be noticed that out of the total 14,089 families in Khandwa 40% families live in the slum areas of the town.

The initial proposal to meter all the household water connections under this project has been dropped by KMC. Now there would be no metering and billing would be as per the latest proposed flat rates, domestic and commercial connections would be charged Rs 150 and Rs 300 per month respectively. The poor families would be charged Rs 100 per month.

Even though there is a proposal to charge industrial connections at the rate of Rs 2400 per month, this would not make much difference because of two reasons - one, the number of industrial connections in Khandwa are negligible (as the figures in **Table No-5** show) and two, there is already a plan to provide industrial water supply from Nagchun tank in future. In Khandwa, Indian Railways could have been a big industrial consumer however it has its own water supply system and treatment plant.[33]

Even if we assume that at the above mentioned proposed water tariffs, the recovery would be 100%, then too the annual income from water supply would not go beyond Rs 2.97 crores

Table No-6

The Total Number of Properties within the limits of the KMC and Recovery Possible

| Type of Connection | Total Number | Proposed Monthly Rates | Yearly Recovery |
|---|---|---|---|
| Domestic | 23,510 | 150 | 4,23,18,000 |
| Lifeline (for poor families) | 14089 | 100 | 1,69,06,800 |
| Commercial | 2,427 | 300 | 87,37,200 |
| **Total** | **26,072** | | **6,79,62,800** |

based on the existing number of water connections. As shown in **Table No-5**.

On the other hand, if we assume that in future all the properties falling within KMC and the Below Poverty Line (BPL) families would also be given water connections and the recovery of charges from them is also 100%, even then total recovery of water charges would not go beyond Rs 6.80 crores. As shown in **Table No-6**.

It is seems quite an impossible task for KMC looking at its earlier track record, but even if it manages to achieve this feat with help from the project concessionaire, in that scenario too its total bill would not be recovered. The actual payable water bills to the concessionaire and the recovered charges would still have a huge difference. It would take almost 4 years (as estimated in the financial bid) to regularise all the water connections in the town including domestic, non-domestic, commercial and industrial.

So as **Table No-5** shows, against the billing of Rs 7.62 crores from Vishwa Infra for the initial 4 years the municipal corporation would be able to recover Rs 2.97 crores from the existing connections in the town when all the connections are regularised and @ 100% recovery rate. This is for the existing supply of 17 mld water which is well below the demand of 30 mld @ 135 lpcd. The shortfall in revenue for the 17 mld supply would be Rs 4.65 crores.

In another situation if the private operator supplies 30 mld its billing for water supply would jump to Rs 13.08 crores. This would mean that the shortfall would increase to Rs 10.11 crores. And even if all the connections are regularised and the revenues increase to Rs 6.97 crores the shortfall would still be Rs 6.11 crores.

This shortfall would either be covered through raising the water tariffs and pushing the financial burden on the residents. Or this would be covered by KMC using revenues from its other sources. The total budget of KMC for the year 2009-10 was Rs 10.14 crores. The budget included expenses on various activities like education, health, urban development, roads, lighting, water, sanitation, sports, administration, building and construction among others. It is quite likely that with a budget in the range of Rs 10 crores if Rs 6 crores would go for only subsidising private water supply operations ie 60% of the budgeted funds, then the investment on other activities would be cut down drastically and would suffer in providing other services to the residents.

Even in case of full-recovery of the water supply charges, KMC would have to cough up huge funds to fulfill this gap. Since it seems likely that KMC would not be able to recover 100% costs. These funds, most probably, would come from other expenditure heads, like education, health, roads, etc. The deficit could be huge for this project - because of the increased O&M expenses, long-distance water transfer involving more expenses and the recovery of the water charges would not meet the operating expenses - the amount of funds pulled from the other heads could be far greater than in the earlier scenario, impacting the town's overall development further.

This subsidy for annual O&M expenses provided by KMC to the private concessionaire would be over and above the subsidy provided by the central and state governments under UIDSSMT to the private concessionaire towards 90% of the total capital costs of the project as approved by the state nodal agency.

On a different note the question that arises in this context is - from where will KMC generate the funds to pay to the private company? Consider for a moment a similar situation, wherein KMC is required to pay royalty to the state water resources department for the raw water pumped from the Bhagwant Sagar Reservoir. The royalty to be paid is Rs 0.28 per kilo liter, but KMC has not able to pay even such low charges for raw water. The state government had to wave-off the royalty amount till the year 2002-03. Even after this KMC has not been able to pay royalty for the raw water. As on 1st April 2008 the water resources department again had Rs 81.52 lakh due on KMC as raw water royalty charges.

One of the significant reasons given for operating the new water supply project as a PPP project is that the municipal corporation is not able to recover the expenses incurred on the water supply system. The funds meant for other heads have been spent on water supply and consequently the development of the town gets hampered. However, handing-over of water operations to a private company would not make a positive difference to the situation. The only difference would be that the expenses on water supply would increase many fold and that this expenditure would either be recovered from the residents or subsidised by KMC and these funds would go into the coffers of the private company.

***No public in PPP:*** *People living in town were not consulted.*

Consider the figures given for water supply expenses and recovery for the year 2007-08 in this context (Please refer **Table No-3**). During the financial year 2007-08 the total expenditure on water supply was Rs 3.18 crores and the recovery was Rs 94.25 lakhs. This translates into per capita expenditure of Rs 159, and the recovery compared to this was only Rs 47, the remaining Rs 112 was covered by KMC in the form of a cross-subsidy to the water supply department from other sources of revenue.[34]

In 2011-12 when the water supply is handed over to the private operator the per capita expenses on water supply would rise to Rs 354 and the recovery would be Rs 138 per capita, the subsidy would then jump to Rs 216 per capita.[35]

Similarly, in 2014-15, when all the maximum possible water connections are expected to be online (after the 4 year gestation period) and the company would be supplying 30 mld water. Then per capita expenses would rise to Rs 618 and recovery would be Rs 321, the subsidy would further increase to Rs 297 per capita.[36] How KMC would be able to subsidise this increased cost remains to be seen.

## Issues in Distribution

Under the final negotiated contract terms the responsibilities of operating and maintaining water supply distribution have remained with KMC. Even though distribution responsibilities were part of the original tender notice.[37]

This would result directly into further financial burden on KMC in terms of distribution costs apart from the bulk water supply costs which we have already discussed.

**Table No-7**, shows the expenditure of KMC on water systems from 2005-08. If we compare the operating expenses of Vishwa Infra in **Table No-2** with those of KMC in **Table No-7**. One, It is quite obvious that the increase is steep, from a range of Rs 2-3 crores under KMC to Rs 7.62 crores under Vishwa Infra, close to two and a half times increase in expenditure. Two, this increase is

Table No-7

Annual Expenditure of KMC on Water Supply System

| Heads | 2005-2006 | 2006-2007 | 2007-2008 |
|---|---|---|---|
| Establishment Cost | 7525372 | 8089023 | 9566194 |
| Electricity Expenses | 1447784 | 4242039 | 3523502 |
| Water Treatment Expenses | 683224 | 745259 | 453018 |
| Maintenance Costs | 3396662 | 2688401 | 2902084 |
| Miscellaneous Expenses | 13212647 | 11776984 | 15383605 |
| **Total Operating Expenditure** | **26265689** | **27541706** | **31828403** |

***Source**- Based on the information and data received from the Office of Khandwa Municipal Corporation, dated - 26th September 2009.*

despite the fact that the capital expenditure (capex) for Vishwa Infra project comes from a separate account than O&M expenses. However the capex for KMC was included in the annual expenditure on water supply system. Three, even though the private company has taken over and is responsible only for bulk water supply some of the distribution costs will still be borne by KMC.

It seems quite likely that because of the reservations shown by several private bidders during the bidding stage to execute 24x7 water supply and distribution, the costs involved, water tariff hikes to match costs and guarantees from the municipal corporation and state government in case of revenue loss. KMC has been forced to keep distribution under its control and hence the costs ensuing from it.

The water supply scheme has also been changed from 24x7 to just 6 hrs a day, 3 hrs each in the morning and in evening. The earlier publicised claims of 24x7 water supply resulting in the national saving of water and electricity have been quietly left aside. It seems that this step too has been taken under pressure from the private bidders raising issues about the financial viability and the capacity of the people to pay for the expensive 24x7 system and the need for it in a mofussil town like Khandwa.

The pushing back of distribution component of water supply on to the municipal corporation also gives strength to the case against private involvement in urban water supply specifically in rustic small towns like Khandwa. One, it shows that the private companies are not ready to take risks handling distribution, which is better left for the municipal corporations to operate. Two, it also shows that the private companies are not sure about their efficiencies in distribution and recovery, since low efficiency would mean taking a hit on the profits. And, three, by taking on to just the bulk supply operations and escrow mechanism for payments for bulk supply, the private concessionaire has tried its best to ring-fence its revenue and profits at the cost of other developmental activities under KMC.

This leaves the service area related issues like coverage, quality, timings, operation and maintenance, connections, complaint redressal, distribution equity, etc in the hands of KMC. Again going back to the fundamental argument behind PPPs that involvement of private players would improve the performance of water utility in the above mentioned areas of service delivery and efficiency. However, when crucial distribution related issues remain with the same agency/ utility, what improvement can we expect and what is the use of such a PPP?

For example, if we consider the service area aspect - under

***Slow pace of work:*** *ongoing work in the town.*

the UIDSSMT reform agenda KMC has stated that 40% of the population lives in slums/ temporary settlements and 20% of the population is not covered by the piped water supply in the town. The town has approx. 194 kms of water pipelines. Under the project agreement the private company would lay 60 kms of pipelines which includes 5 kms - short term, 5 kms - mid term and 20 kms long term rehabilitation. The remaining 30 kms, one can safely assume would be the newly laid pipelines. For the moment it is anybody's guess in which area this will be laid. But it seems quite likely that the slums would not be covered, since as yet there are big enough higher income localities in the town which are not supplied water by the municipal corporation and depend on ground water. The decisions on such issues it seems would be taken by the municipal corporation in due time.

### No Parallel Competing Facility

The article 11.1 of Price Offer II of the Concession Agreement with the private company mentions a clause named as "No parallel competing facility". Under this article in the agreement, there is no description or explanation of what this really means and when and how this would come into force. This is quite surprising since almost all the other articles written in the concession agreement have been provided with detailed descriptions following them.

The interpretation of this article in the context of the concession agreement means that once the municipal corporation signs the agreement with the concessionaire, neither the municipal corporation nor anyone else would be able to run/ operate any activity/ facility which could be deemed as parallel competing facility to what the private operator is doing i.e. water supply. This means that for the next 25 years neither the municipal corporation nor anyone else including the local residents would be allowed to use any other source for fulfilling their water needs. Not only this, the capacity of the already existing facilities could not be increased for public welfare or otherwise.

The local residents would be prohibited from increasing the capacity of their own borewells/ dugwells and installing new borewells. The same would happen with handpumps located within the boundaries of KMC. The handpumps that run dry in the summer months could not be repaired by increasing the depth or by replacing the pipes used. It is aimed under the new project to provide individual connections to each household and recover charges from them. This could mean that the public stand posts and the handpumps would be dismantled once the project starts operations. It is also possible the private operator would demand that the residents stop using water from the already existing wells and borewells.

### In Case of an Emergency

As per the no competing facility of the concession agreement, the municipal corporation would have to disconnect all the public stand posts in favour of individual connections. The capacity increase or construction of new water sources would be prohibited. Apart from this it is quite unlikely for the municipal council to supply water using tankers. In short following the conditions of this agreement, in the next few years all the alternative sources of water supply would be shut down and water distribution from these sources prohibited.

On the other hand, the agreement between KMC and the individual connection-holder explicitly states that in case water is not supplied to the connection-holder, she will make her own arrangement for fulfilling the water needs. However, the crucial question that remains unanswered is - if the water supply from the new project is interrupted due a natural calamity or in case of any technical problems, and when the use of all the secondary sources of water prohibited, from where the people would get water for their needs?

### Retrenchment of Employees

Khandwa town has 17,676 water connections including 1733 public stand posts. The number of employees under the water supply department is 175, making it 10 employees per 1000 connections

approximately. Once the water supply is privatised, the retrenchment of these employees is a big possibility.

ULBs have to accept a reform agenda while applying for funds under UIDSSMT. The reforms agenda includes administrative reforms which mean retrenchment of workers under Voluntary Retirement Scheme (VRS) and not to re-fill the vacant posts. KMC has given assurances to follow these reforms steps under UIDSSMT. According to the reforms agenda and the assurances given the retrenchment would start in the third year of the scheme.

KMC has accepted the reforms agenda in the MoU signed on 4th December 2007 with the state nodal agency for UIDSSMT - "Madhya Pradesh Vikas Pradhikaran Sangh". According to point 12 of the MoU, the state nodal agency would have the right to stop the fund installments for the project in case the municipal corporation violates any of the conditions of the agreement.

The municipal council has also accepted in its proposal in the Khandwa Municipal Council general assembly dated - 31st March 2008 that the staff of the water supply department is not trained to operate the new water project. This was one of the main arguments given by KMC for the implementation of new water project by a private company through PPP mode.

***Bulk water pipeline:*** *yet to start water supply*

The article 7.5 of the draft concession agreement describes in details the rights and safety of the workers and the staff of the project. However, there is not a single word regarding the job security/ benefits of the workers in the water supply department of KMC. On the other hand if the municipal corporation had wished it could have pushed for an alternative employment for these workers.

However, under the finally negotiated contract terms, the fate of these employees hangs in balance. Since the private operator is not taking on the responsibilities of distribution. Hence, it is still not clear if the employees of KMC would be shunted out or hired on contractual terms by the private company. It seems most likely though that these employees would continue under the present circumstances.

The question that begs to be answered here is that how this same set of "poorly trained" staff is supposed to deliver better distribution services to the residents. According to concession agreement the private company would only operate the bulk water supply. When till recently it was claimed that the employees of KMC are not trained enough to operate new water project and hence the need for PPP.

Even though it can be considered that availability of more water would improve some aspects of distribution, but that does not translate into improvements in every other aspect.

## The Myth of 24x7 Water Supply

When the project was initiated it was proposed to be a 24x7 water supply scheme. However, due to huge investment requirements and the inability of the private companies to execute this scheme the 24x7 concept was dropped in the amended 5th Volume of the concession agreement of the project to 6 hrs a day water supply.

One of the companies that submitted the bid for the project stated that 24x7 water supply is unnecessary mainly due to the reason that it will increase the cost of operation and management

of the system. Some of the private companies that participated in bidding stated that the project was financially unviable and it would be better if they use local resources to supply water to the town, contrary to 24x7 water from long distance as desired in the project planning. They also said that 24x7 is unviable because it would lead to huge electricity costs which the residents would be unable to pay. The high O&M cost of 24x7 scheme was the main reason that none of the companies that submitted the bid was ready to ensure 24x7 water to the town.

Unity Infraprojects Limited stated, "the low water demand and high conveyance cost make operating expenditure unviable. We are also not sure of taking up collection activities in Khandwa. The water charges being thrown up are at least 6-7 times what the local population is used to. We would hence suggest a guarantee from the state government, in the event of local people not paying water charges. In the absence of suitable clauses for recovery of dues and with water being a basic necessity, connection cannot be terminated, we are not in a position to submit our proposal".[38]

Ashoka Buildcon Limited stated, "as per document 24 hrs & 7 day supply of water is not feasible, because the cost of required electricity will go very high...KMC presently draws water from Nagchoon Talab (Approx. Qty.-4 MLD) and from Sukhta Project (Approx. Qty.-10 MLD). Nagchoon supplies by gravity up to WTP. While the lift involved in Sukhta is moderate. Both these sources have reliable water and are located advantageously topographically with respect to Khandwa city. The civil works and transmission mains of both projects are in good condition. If both these are allowed to be used by the bidder, the overall water production cost would come down substantially".[39]

Similarly, Jamshedpur Utilities and Services Company (JUSCO) in its communication stated, "given the fact that the current tariff for water is Rs 50/ month and **if for socio-political reasons, tariff cannot be increased to fully meet the payments due to the concessionaires, KMC shall provide partial/ full**

**guarantee for the balance amount. This is one risk which no private entity can mitigate**". (Emphasis in original)

It further states that, "**In continuation to the point #2, in case of KMC's inability to compensate the balance amount, is there is any scope for partial/full guarantees by the state government?"**[40] (Emphasis in original)

### Revision of Water Tariffs

The water tariff revision would be done by a committee that would include the accountant, auditor and engineer of the municipal corporation and the representatives of the private company. According to the concession agreement the water tariffs would be raised by 10% every three years. This committee would also be mandated to take a decision whenever there would be a proposal from the company to raise tariffs.[41] In case the tariff hike of 10% every three years seems less to the private company.

There is a possibility that the private operator would propose for tariff hikes to the tariff revision committee, inspite of the 10% hike every three years clause in the concession agreement. The crucial point here is that there are no people's representatives included in the committee. It would be easy for the private operator to get tariff hikes approved arbitrarily, as and when it wants, without any representation of the local people in this matter.

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# 9

## No Public in PPP

THE concession agreement under the PPP project between KMC and Vishwa Infra for water supply looks skewed towards the private operator, in the sense that it safeguards the benefits of the private operator but neglects the benefits to the people of the town. Even thoughts have not been spared for the future of the workers of the water supply department.

In the town, several local representatives claimed that the project details have not been shared with them. Even the leader of the opposition stated on record that he is not aware of the details. The strength to this argument comes from the point that the final project bid was approved by the MIC and not after debate and discussion in the general assembly of the KMC. When local representatives were not involved in the process, it would be foolhardy to expect information sharing, consultations and discussions with the larger public. Leave alone the concept of free, prior and informed consent of local people before a project is approved.

Initially, when the project was being planned KMC officials made tall claims that with this PPP project all the water problems of residents would be solved. It claimed that the project would provide 24x7, reliable, cheap, good quality and quantity water supply to the town. However, now it seems that these claims would remain on paper and not in reality.

It has already been mentioned in the earlier sections how the 24x7 water supply dream has fizzled out and the reasons for the

same. The water supply hours have now been cut down to 6 hours a day.

On the other hand, once the water supply starts from the new private project, KMC would ask the individual connection-holders to sign individual agreements called "Agreement to be entered into by KMC and Consumer"[42] provided under Annexure III Schedule I (Re-Amended), Volume-V - Amendement-5 for entire Bid Documents. This agreement (a format of which is available in the concession agreement - added as annexure to this report) which does not include any parameters of the level/ quality of services to be provided by the private operator includes a clause to make sure that the residents would not complain against poor quality of water supply. While signing the agreement the residents would agree and accept not to complain in case of low pressure of water, timing of water supply and the less quantity of water supplied.

It is also added in the agreement that if for any reason water is not supplied, then in that case the resident would make her own arrangement to fulfill the water needs.

In case of a disagreement on the billed amount for water supplied/ consumed, the residents would be required to pay the full billed amount first. Later on, if the complaint is found to be valid,

***Ongoing project work:*** *locals facing poor traffic conditions.*

the remaining amount would not be returned to the resident but would be adjusted in the future bills.[43]

In case water is not supplied for 6 hrs a day as per the contract, even then it would not be possible for the residents to complain for not delivering the services according to the contractual obligations. In the concession agreement, in the same clause the word "as-much-as-possible" has been added to free the private operator from its responsibility and accountability.[44]

Volume-I of the concession agreement had maintained that the water supply would be a 24x7 service under the new project. However, after the pre-bid meeting with the potential private bidders this proposal was dumped in favour of 6 hrs a day supply, because the private companies were not keen in supplying 24x7 water to a town like Khandwa with possibility of low revenue collection for an expensive system. For both these proposals there was no public discussion and debate organised by the KMC to observe the response of the people and to gauge what exactly the residents of the town want.

The water connection charges under the new private project are proposed to be Rs 300. However, the expenses for laying the pipeline from the mains to one's home, including specified pipes, ferrule, meter, other connection material, road digging and plumber charges would have to be borne by the residents.

Even in case a resident, who turns into a defaulter by not paying the water bills, would not cause much concern to the private operator, because the municipal corporation would act as a partial guarantor in such a case. The municipal corporation would pay half the amount to the private operator immediately and the remaining half would be paid after receiving the amount from the concerned resident.

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# 10

## Question Marks on the Project

ONE of the main arguments for private participation in water projects is that it would enable water systems to be financially sustainable. However, this project seems to be a wrong example of private participation and financial sustainability. Quite a few of the companies which were involved in the tendering and bidding process questioned the financial sustainability of the project. This can be the major reason that many of the companies which were involved until the tendering and pre-bid process, chose not to submit tenders for this project. Since the private players would not like to risk their investment and efforts in a financially unviable project.

The whole tendering and bidding process proves this point. The tender documents of the project were bought by 19 companies, out of 19, 12 companies attended the pre-bid meeting and only 4 companies, out of 19, submitted their bids for the project. Most of the companies stated that the project is not financially viable therefore they would not be interested in implementing it.

Ashoka Buildcon questioned the financial viability of the project, the concept of 24x7 water supply for such a small town, high O&M costs and the idea of ignoring the local water resources.

JUSCO had written that the project is not financially viable since social and political reasons would not allow the charges to be raised to such an extent to recover full costs and asked the municipal corporation or the state government to provide guarantees.

Unity Infra wrote that the project is not financially viable due to reasons like there is low water demand in Khandwa town, the long distance transfer would increase the O&M costs manifold, people would not pay high charges for water supply and asked for guarantees from the municipal corporation.

The attention that needs to be drawn here is that Khandwa Water Supply Augmentation Project has been considered financially unviable by some of the private companies' involved in the tendering and bidding process, even though the central and state government are providing 90% capital subsidy to execute the project. However, the question remains to be answered that why the project was pushed even though several of the experienced and specialised water sector companies had concluded that the project is not viable. Though a lot of efforts were made to create a viable project design, which is clear from the process of drafting and re-drafting the tender documents and the concession agreement with comments and suggestions from the potential bidders. The concession agreement was amended five times taking into consideration the comments and suggestions of the potential bidders, before it could be finalised.

It seems that an unviable project has been pushed through, the price for which would be paid by one whole generation of Khandwa. Throughout the project period of 23 years the private operator would generate profits from this project.

The process seemed to be biased towards particular bidders in the sense that some of the bidders that had suggested that the project is unviable for supplying 24x7 water to the town and also those who suggested that the use of local resources should be made for the project were shunted out during the bidding process. However, the awarded concessionaire has done the same thing by cutting the hrs of water supply to 6 hrs a day in comparison to what was claimed in the earlier project documents to be 24x7 supply.

The responsibility of distribution and collection of water charges was shifted on to the municipal council after the pre-bid meeting with the potential bidders. It was decided that the company would

be responsible only for supplying water upto the inlet of the metering area. The distribution of water and collection of charges would be the responsibility of the municipal council.

Further, it is quite clear from the financial statements of Khandwa Municipal Corporation that its sources of revenue are neither too huge nor too many. In the last financial year 2009-10, the total revenue of the municipal corporation has been estimated Rs 10.14 crores. In a scenario when only the water supply expenses would be around Rs 13 crores, which is more than the total revenue earned by the corporation. Then the remaining amount for water supply would be compensated to the private operator from the other heads for which KMC receives funds from the state government. This would mean that most of the funds received by the corporation would go into running the water project and not enough funds would be available for other developmental activities in the town.

To conclude, the project that claims to supply reliable and cheap water to the residents of the town has many questions to answer. When and how that will happen remains to be seen.

❑

# End Notes

1. For more details of the project, please see - http://www.khandwa.nic.in/indirasagar.htm

2. Nagchun also called Moghat reservoir was constructed in 1897 at a cost of Rs 4 lakhs.

3. Shrivastav, PN, Madhya Pradesh District Gazetteers East Nimar, District Gazetteers Department, Madhya Pradesh, Bhopal, 1969, Page No - 355

4. Shrivastav, PN, Madhya Pradesh District Gazetteers East Nimar, District Gazetteers Department, Madhya Pradesh, Bhopal, 1969, Page No - 351

5. Detailed Project Report, Khandwa Water Supply Augmentation Project, Page - 17

6. Detailed Project Report, Khandwa Water Supply Augmentation Project, Page - 17

7. Personal communication with Shri Uday Mandloi, then Bureau Chief, Dainik Bhaskar, Khandwa, dated - 7th November 2008

8. The Nagchun tank was built in the year 1897 on the outskirts of the town at the cost of Rs 4 lakhs. The tank is capable of supplying 1.8 mld water to the town for domestic purposes at very low costs using the gravitational flow.

9. The major source for water supply to Khandwa town is Bhagwant Sagar Reservoir also known as Sukta dam, since this man-made reservoir is constructed on Sukta river. Bhagwant Sagar (Sukta Project) was completed in March, 1984. It envisaged an earthen dam with spillway constructed across river Sukta (a sub tributary on the left bank of river Narmada) near village Dongar in Khandwa district. The total water storage capacity of the reservoir is 78 mcm (million cubic meter), out of this 4.24 mcm or 150 mcft (million cubic feet) water is reserved for domestic water supply to Khandwa town.

10. Based on authors personal discussion and conversation with Shri Tarachand Agrawal, Ex-Mayor, Khandwa

11. Derived from the Official Notesheet of the Project related file, Page - 1,2

12. M/S Mehta and Associates, Indore was appointed consultants by KMC under UIDSSMT guidelines for project preparation including DPR, bid documents, etc, dated - 3th November 2006.

13. Derived from the Official Notesheet of the Project related file, Page - 15

14. Derived from the Official Notesheet of the Project related file, Page - 26, 27

15. The earlier state nodal agency for UIDSSMT was 'Madhya Pradesh Vikas Pradhikaran Sangh' which has now being changed to Directorate, Urban Administration and Development, through a GR issued by the Ministry Urban Administration and Development, Government of Madhya Pradesh, Bhopal, dated - 27.01.2010

16. Derived from the Official Notesheet of the Project related file, Page - 76

17. Detailed Project Report, Proposed Water Supply Scheme for Khandwa City under UIDSSMT, prepared by Mehta and Associates, Indore for Khandwa Municipal Corporation, Khandwa, Page - 47, 48

18. Jawaharlal Nehru National Urban Renewal Mission Overview, Ministry of Urban Employment and Poverty Alleviation and Ministry of Urban Development, Government of India, 2005, Page 12

19. Jawaharlal Nehru National Urban Renewal Mission Overview, Ministry of Urban Employment and Poverty Alleviation and Ministry of Urban Development, Government of India, 2005, Page 12-13

20. Jawaharlal Nehru National Urban Renewal Mission Overview, Ministry of Urban Employment and Poverty Alleviation and Ministry of Urban Development, Government of India, 2005, Page 13

21. Jawaharlal Nehru National Urban Renewal Mission Modified Guidelines, Ministry of Urban Development, Government of India,2005, Page 21

22. For more details on many other PPP projects in water sector please see - “Public Private Partnerships in Water Sector: Partnerships or Privatisation?”, Source URL - http://www.manthan-india.org/IMG/pdf/PPPs_In_Water_Sector_Final_Book.pdf

23. Annez, Patricia Clarke (2006): 'Urban Infrastructure Finance From Private Operators: What have we Learned from Recent Experience?', World Bank Policy Research Working Paper 4045, The World Bank, Washington DC

24. Gassner, Katharina, Alexander Popov and Nataliya Pushak (2009): 'Does Private Sector Participation Improve Performance in Electricity and Water Distribution?', PPIAF Trends and Policy Options No. 6., The International Bank for Reconstruction and Development/ The World Bank, Washington

DC, Source URL - http://www.ppiaf.org/documents/trends_and_policy/PSP_water_electricity.pdf

25. Hall, David (2008): 'Public Private Partnerships (PPPs) Summary Paper', Public Services International Research Unit, University of Greenwich, UK

26. Section No.-11.1, No Parallel Competing Facility, Bid Document, Draft Concession Agreement, Khandwa Water Supply Augmentation Project, Price Offer-II, Vol -III, Page - 55

27. For more details on regulatory mechanisms in developing countries please see - "Social Policies and Water Sector Reforms" by Narendra Prasad, Paper Number 3, Markets, Business and Regulation Programme, United Nations Research Institute for Social Development, Geneva, 2007 and "Handbook for Evaluating Infrastructure Regulatory Systems" by Ashley C. Brown, Jon Stern, and Bernard Tenenbaum with Defne Gencer, The World Bank, 2006

28. For more details on failed privatised projects in water sector, please see - http://www.manthan-india.org/spip.php?article23

29. Financial Bid for Price Offer II - Khandwa Water Supply Augmentation Project submitted by Vishwa Infra to Khandwa Municipal Corporation for Khandwa Water Supply Augmentation Project, Dated - 02.02.2009

30. Financial Bid for Price Offer II - Khandwa Water Supply Augmentation Project submitted by Vishwa Infra to Khandwa Municipal Corporation for Khandwa Water Supply Augmentation Project, Dated - 02.02.2009

31. Price Offer - II submitted by Vishwa Infra to KMC, Dated - 10th February 2009

32. KMC has not been able to propose a revision in water tariffs in Khandwa since 1997 - 98.

33. Letter written by Tapi Prestressed Products Limited, dated - 14th June 2008 (L-3, Page - 63)

34. Assuming the population of the town in 2007 - 08 was 2,00,000.

35. Taking into account that 2011 - 12, the expenditure would be Rs 7.62 crores for 17.47 mld water supply @ Rs 11.95/ KL, as given in the financial bid, recovery would be Rs 2.97 crores, and the population is 2,15,373.

36. Taking into account that in 2014 - 15, the expenditure would be Rs 14.39 crores for 30 mld water supply @ Rs 13.15/ KL, considering the 10% price rise in water tariffs. The recovery from water tariffs would be Rs 7.47 crores including tariff hikes, and the population would be 2,32,815.

37. Revised Tender Notice, Amendment No - 03, Office of the Commissioner, Municipal Corporation, Khandwa, MP, Dated - 23rd May 2008

38. Unity Infraprojects Limited's letter to the Commissioner, Municipal Corporation of Khandwa, dated - 30th September 2008.

39. Ashoka Buildcon Limited's letter to the Commissioner, Khandwa Municipal Corporation, dated - 22nd August 2008

40. JUSCO's communication to the Commissioner, Khandwa Municipal Corporation, dated - 23rd June 2008

41. Khandwa Water Supply Concession Agreement, Volume-I, Schedule K, Page - 47

42. Agreement to be entered into by KMC and Consumer, Annexure III Schedule I (Re-Amended) - Levies of Charges and Water Charges, Volume-V - Amendment - 5 for entire Bid Documents, Water Supply Augmentation Project under UIDSSMT on Public-Private Partnership (PPP) basis, Khandwa Municipal Corporation, Khandwa

43. Khandwa Water Supply Concession Agreement, Article 9.1.6 (i) & (ii), Page - 48, Dated - 3rd October 2009

44. Instructions to Bidders I (Amendment), Volume-V, [(2.2.2 (ii)], Page 198

## Chronology of Events - Khandwa Water Supply Augmentation Project

| | | |
|---|---|---|
| 1. | 17th Apr. 2007 | In Principle approval to the project by KMC |
| 2. | 2nd July. 2007 | Proposal by KMC, estimated cost Rs 93.37 crores |
| 3. | 31st Mar. 2008 | Mehta and Mehta, appointed as consultant for the projand and ect |
| 4. | 7th Apr. 2008 | Tendering Process began, 13th May 2008, last date for submitting tenders |
| 5. | 11th Apr. 2008 | First Amendment, last date for submitting tenders extended to 2nd June 2008 |
| 6. | 16th Apr. 2008 | Second Amendment (KMC wrote to the state government for approval to execute the project through PPP on 15th April 2008) |
| 7. | 23rd May 2008 | Third Amendment, amended tender published in newspapers, last date to submit tenders extended till 7th June 2008 |
| 8. | 16th June 2008 | Pre-bid meeting |
| 9. | 24th June 2008 | Fourth Amendment, last date to submit technical propsals extended to 31th July 2008 |
| 10. | 30th July 2008 | Fifth Amendment, last date to submit technical proposals extended to 30th August 2008 |
| 11. | 13th Aug. 2008 | KMC revises the project cost estimate to Rs. 136.76 crores |
| 12. | 9th Sep. 2008 | Sixth Amendment, last date to submit technical proposals extended to 30th September 2008 |
| 13. | 30th Sep. 2008 | Last date to submit technical proposals, technical bids opened |
| 14. | 6th Oct. 2008 | Bids submitted considered not satisfatory, hence revised bids to be invited, Price Offer-I cancelled (Ref - Project Director's letter dated - 6th Dec. 2008) |
| 15. | 4th Dec. 2008 | MoA signed between KMC and state nodal agency “Madhya Pradesh Vikas Pradhikaran Sangh”, UIDSSMT reform agenda takes legal shape |

| | | |
|---|---|---|
| 16. | 6th Dec. 2008 | Price Offer - I cancelled, as per the decision of the State Level Empowered Committee, Letter Dated - 16th Dec. 2008 |
| 17. | 16th Jan. 2009 | Decision to call for Revised Tenders (Based on Price offer-II) Last date to submit financial proposal 3rd February 2009 (Ref.- Municipal Commissioner's letter to bidders) |
| 18. | 10th Feb. 2009 | Financial Bids opened in Khandwa |
| 19. | 12th Feb. 2009 | Financial bid approved by the state nodal agency |
| 20. | 16th Feb. 2009 | Financial bid approved by the Mayoral Council |
| 21. | 3rd Oct. 2009 | Concession Agreement signed between KMC and Vishwa Infra |
| 22. | 5th Oct. 2009 | Work Order issued to Vishwa Infra, the private operator had started the survey work even before the work order was issued |

Agreement to be entered into by KMC and Consumer
(Subject to revision in accordance with KMC Rules and Regulations)

This agreement for getting water supply connection from Khandwa water supply scheme entered into this day..... Of ….....Between

Shri ---------- residing at …… in Khandwa town herein after called as Consumer as a first party and Executive Engineer, Khandwa Municipal Corporation on behalf of KMC which is statutory under taking of and having its office at Khandwa here in after called as Khandwa Municipal Corporation as the second party.

I hereby enter into agreement as I agree with the following terms and conditions of this agreement.

1. I/ we here by agree as a consumer the rules in forces (Dejure) of Khandwa Municipal corporation which will be implemented by the Khandwa Municipal corporation/ Concessionaire/ person authorized by Khandwa Municipal Corporation.
2. I/ we here by agree to pay the water bills as per the water charges as and when fixed by Khandwa Municipal Corporation.
3. Any dues on account of water bills if pending with me for a period of 2 months or more than the Khandwa Municipal Corporation has right to disconnect my connection without prior intimation and I will be solely responsible for this disconnection.
4. I/ we hereby agree that Khandwa Municipal Corporation / Concessionaire is empowered to impose revenue recovery through District Collector Khandwa by informing my office for deduction through my pay and salaries, security deposit and or by attachment of immovable or immovable property against the pending water bills.

5. I/ we will not complain for non supply of water as per schedule fixed by Khandwa Municipal Corporation less water supply, water supply with low pressure or due to any unavoidable reasons / situations.
6. I will not complain for non supply of water due to any force majeure like natural calamities and power supply breakdown or fault in pumping machinery and electrical installation.
7. I/ we hereby agree that in case the water is used for the purpose other than the purpose for which the connection is given, I will pay double the amount as per water tariff fixed for the purpose of water used or disconnection of my connection by Khandwa Municipal Corporation/ Concessionaire.
8. I/ we hereby agree to pay water bills and other charges, if any other due payments and DPC within 30 days from the date of receipt of water bills if not paid 1% interest per month as DPC will be paid by me. Water bills will be rounded to Rupee one.
9. I/ we hereby guarantee that (a) it will be my sole responsibility as a Consumer for maintenance and repairs of service pipeline laid of rigid PVC or GI pipes from the ferrule fixed for the connection on Khandwa Municipal Corporation pipe line (b) The service pipeline will not be laid through any drain or gutters (c) in unavoidable situations if the service pipeline is laid thorough drains or gutters it will be covered by an exterior airtight and watertight pipe or jacket of GI pipe equivalent to double the diameter of connection pipe and I will be solely responsible if the connection is contaminated by the water from the gutter drain and KMC shall be free to disconnect the service connection in such emergency. (d) I am aware that leakage on service pipeline if not rectified by me within time Khandwa Municipal Corporation / Concessionaire has right to disconnect my connection without any prior intimation.
10. I/ we hereby agree that the pipes used for services connection has average life of 15 Years For that reason it is the responsibility of consumer to get the connection pipe replaced after every 15 years and I guarantee for that or earlier as the case may be.

11. I/ we hereby agree that there is no any dues against water supply bills on the property or part thereof if at all any dues if found in future' I will be solely responsible for the payment of such full dues.
12. The sole liability/ responsibility lies with me if at all any road of MC or PWD needs to be cut/ open/ dug for laying of services pipeline and I will be liable to obtain permission for such excavation and to pay the prescribed charges for restoring them to their original condition.
13. I am ready to pay the deposits for water connection as prescribed by Khandwa Municipal Corporation.
14. I/ we hereby guarantee that if any connection is disconnected due to violation of any rules in Khandwa Municipal corporation bye laws, I will pay the bill for the entire month at the rate worked out on the average of bills of past three months.
15. I/ we hereby agree to pay the charges for the disconnection/ re-connection as prescribed by Khandwa Municipal Corporation or Concessionaire.
16. I agree to pay under this agreement the expenditure incurred by them through one of the following mode. (Please tick mark the preferred payment option)

| | |
|---|---|
| In one installment at the time of connection. | |
| Half the amount at the time of connection and remaining half in equated Monthly installments during period of six month through monthly water bills. | |
| The full cost of house connection in equated monthly installment during period of six months through monthly water bills. | |
| The full cost of house connection in equated monthly installment during period of four year through monthly water bills. | |

17. If any complaint/objection arises about bills / we hereby agree to pay the full amount of the bill immediately. I agree that the ount due after the redressal of complaint will be adjusted in the next bill.

18. I will not draw water directly from the connection by deploying electric motor pump, I agree that if found so Khandwa Municipal corporation / concessionaire reserves the light to take action like attach the electric motor / to impose penal action to disconnect the water connection, so also I will be fully responsible for damage to meter due to deployment of electric motor and payment of charges towards repair/ replacement of meter.
19. I will not make any alteration or modification in the connection without prior permission of Khandwa Municipal corporation/ concessionaire, if found so, Khandwa Municipal corporation/ concessionaire reserves right to disconnect my connection.

As I agreed clauses one to Nineteen of above agreement this agreement is legally binding on me and as a consumer I will not file any complaint in the court of law.

20. For any force majuere condition which is beyond the control of KMC, causing disruption or break-down in water supply, I shall make my alternative arrangement.

| **First Party** | **Second Party** |
|---|---|
| Signature of the Consumer | Executive Engineer |
| (Name, full address) | Khandwa Municipal Corporation |

**Witness (Name & Signature)**

1.

2.

# Manthan's Other Studies on water sector