

# DEMOCRATISATION OF WATER MANAGEMENT AS A WAY TO RECLAIMING PUBLIC WATER: THE TAMIL NADU EXPERIENCE

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## INTRODUCTION

This essay is a story with a difference.

It is not the story of a water movement brought about by social activists protesting against privatisation of water utilities or about non-supply of water for poor people. It is about the experience of a public water utility that realised a growing water crisis had to be addressed very differently from previous reform strategies and that 'democratising water management' required attitudinal changes by both water engineers and the community. It is also a story that illustrates how public officials and citizens who truly work as partners not only succeed in ensuring an equitable water supply for all, but they also conserve natural resources and ensure sustainable water management.

The Tamil Nadu Water Supply and Drainage Board (popularly referred to as TWAD) is the sole governmental agency with a mandate to supply water to the entire state of Tamil Nadu, barring Chennai city. In early 2004 TWAD had to deal with a severe water shortage that resulted from continuous drought, devastated ground water tables due to years of unregulated ground water extraction, and lack of conservation of water sources. Added to this, the water sector itself was changing with public water utilities being blamed by international finance institutions for the water crisis. They demanded the government restructure the public utilities; which meant dismantling government water agencies and handing over their function to non-governmental organisations or private companies.

During initial discussions, water engineers realised that the growing crisis required drastic solutions, starting with themselves and slowly including the community. No change was possible unless there was consensus within TWAD to accept change. There was also a growing realisation that the engineers needed to assess their own role in the water crisis. They needed to assess their strengths and weaknesses and explore what prevented true partnerships being built with the community. Equally pressing was the importance of working with the community to address attitude and perspective changes within larger civil society so that communities would be able to shoulder greater responsibilities in controlling and managing water systems.

The change process called 'Democratisation of Water Management' was directed at the following three core issues: (i) reaching the unreached, in a manner ensuring (ii) equity (with equitable distribution as an immediate focus) and founded on (iii) principles of social justice.

### **The challenges of ensuring water governance reform**

Of several aspects of the water crisis in Tamil Nadu, two stand out. First is the need for a realistic assessment of actual water availability and second is a critical analysis of the management of water resources, including the role of water engineers and community.

In Tamil Nadu, 96% of all water sources are based on groundwater. The strategy in the 1980s and 1990s of increasing piped water schemes across the state without any measures to conserve water sources, led to depleted groundwater tables. Unregulated mining of water and un-coordinated use for irrigation and industry only aggravated the precarious situation.

In 2004, of 385 water 'blocks' in the state, 138 were identified as being over-exploited, 37 were at critical levels, 105 were semi-critical and 8 were saline. Only 97 blocks were identified as safe. Besides, of the total 81,587 rural habitations in the state, about 27 per cent were affected by quality; and of these about 25 per cent did not have safe sources.

Over-exploitation and droughts have reduced the annual per capita availability of fresh water to 840m<sup>3</sup> in Tamil Nadu. This is much below the national average of 1200m<sup>3</sup> and is also below the 1000m<sup>3</sup> level which is the international measure of 'water scarcity'.

The technocratic approach of the water department and an absence of a sense of ownership by the users led to a lack of community and stakeholder involvement in water management and a reluctance to ensure sustainable drinking water use practices.

Of the many problems characterising the water crisis, four stand out:

1. A significant and growing section of marginalised people are excluded from provision of water service; in other words increasing numbers of 'unreached' people, be it in rural or urban areas; these included Dalits, tribal communities and slum dwellers.
2. The continued inequity in water distribution;
3. The problem of water sustainability covering the entire gamut of water management issues and effective management of water sources to conservation and preservation of water bodies and sources.
4. An uninvolved technocracy with an entrenched mind set.

Any attempt to bring about water sector reform would need to address these four core areas if any sustainable solution is to be found. It is within this framework that the governance reform in TWAD was undertaken.

## **DEMOCRATISING WATER MANAGEMENT TURNING WATER ENGINEERS INTO CHANGE AGENTS**

The current experiment titled 'Democratisation of Water Management – Nurturing Democratic Change' was launched in early 2004. The democratisation process had three stages:

- (i) The first covered all the TWAD officials, from the most senior to the latest engineer, who had to undergo training in small batches.
- (ii) In the second stage, water engineers would work to sensitise the community to the importance of finding solutions together for the water crisis, including in taking responsibility for safeguarding water.
- (iii) In the third stage, the water engineers and the community would launch water projects based on principles of (a) optimal utilisation while ensuring (ii) conservation of natural resources and (iii) sustainability of schemes and (iv) local self management. The measures included self-regulation of consumption, taking responsibility for managing water schemes, consensus on choice of technology and cost of schemes, recovery of water charges and decision on water charges and other issues based on consensus and democratic participation.

### **The thrust areas for intervention**

The main thrust of the change effort was to bring about the following:

#### **Attitudinal transformation**

Amongst individuals

Within TWAD, as an organisation

Amongst key stakeholders

#### **Perspective changes**

The most important perspective change was the recognition that the thrust of all service delivery institutions, and in particular the water sector, should be for 'reaching the unreached', in a manner ensuring equity and based on norms of social justice. Additionally, the perspective recognised the citizen's fundamental right to water and that water was a community resource.

Some of the more important components of the perspective changes needed in the internal functioning of the water utility included the following:

Shift from access to service delivery: measuring impact not by supplying water to each village but to each household

Shift from providers to partners: viewing community as equal participants or 'partners' in water management

Shift to sustainability enhancement approach

It must be stressed that perspective changes were required by the engineers and citizens and other stake holders. Years of being provided free schemes had not only made people habituated to receiving 'free schemes' but had also robbed communities the traditions of taking responsibility for conserving water sources, controlling consumption and safeguarding water. If

democratisation had to take root and succeed, perspective shifts were needed amongst water professionals and citizens alike.

### **Institutional transformation**

This focused on changing values and ethics, practices and responses, roles and responsibilities of different institutions, official and social. Respecting the dignity, identity and inter-dependence of all people and groups and ensuring participation by traditionally excluded groups like dalits, artisan groups, minorities, women, aged people, physically challenged people and others, was intrinsic to this process.

Critical issues: dimensions of the challenge

Eight key areas were identified as critical:

1. Supply of an adequate amount of safe drinking water to all citizens in a manner which does not further endanger the water system.
2. Encourage and enable active partnerships between all stakeholders with the goal of building sustainable water systems.
3. Institutional transformation of management systems, to ensure water systems meet new norms of conservation, appropriate use of technology, knowledge and skills.
4. Reviving traditional water management systems while empowering stakeholders and the local community to play a more active and intense role in managing water systems.
5. To bring about 'Convergent Community Action' by bringing together state service provider with an informed, involved and active community.
6. To create a sense of common ownership aimed at enabling sustainability of water systems.
7. Focus on capacity building of different stake holders including local government officials, women and local communities, local bodies, NGO representatives and elected representatives.
8. Strategic use of state agencies as the starting point to transform the organisation into a more people focused, community responsive and publicly accountable organisation.

### **From engineer to community: transferring the change process**

By the end of 2004 about 160 water engineers had undergone training and many of them started the second phase of the change project, viz., working with community leaders, panchayat presidents, women self help group members, Dalits, youth groups and so on. To give greater shape and focus to the change project, 43 village panchayats were chosen covering almost 472 habitations in 29 of the 30 districts of the state to initiate pilot projects.

In all the pilot villages engineers held numerous meetings, workshops and training programmes. They innovated with training methods including use of local street theatre, films and other creative forms to involve more youth, women, children, the old and the marginalised. They critically evaluated the context of water schemes in each village covering issues of extent of water availability, demand assessment for different uses, prevailing water use practices including traditional practices for management of water, willingness of people to maintain equitable supply and responsiveness of villagers to safe sanitation methods and practices.

In effect, the village community was trained to critically review the need, necessity and relevance of proposed new water schemes in terms of the need for new investment, exploring the potential for expanding, rejuvenating or repairing existing water schemes and reviving abandoned or non-completed schemes. A conscious attempt was made to encourage the community to self regulate consumption of water, ensure better maintenance of existing water supply schemes, lower power consumption and work towards conserving natural resources.

Initial efforts to improve relations with the community produced results the moment engineers started to relate with the community as people and not as subjects! This spurred more efforts in different regions. Though subsequent responses, especially those requiring stakeholders to assume additional responsibility and involvement, required far greater effort, the fact that engineers visited and worked with them to find solutions struck a chord with people.

### **A definitional breakthrough: The Maraimalainagar Declaration**

The challenge of changing water schemes was made easier by a major definitional breakthrough achieved during one of the workshops for engineers. The statement came to be known as the 'Maraimalai Nagar Declaration'.

#### **The Maraimalai Nagar Declaration (August, 2004)**

- We will evaluate the existing schemes and ensure that the schemes are put into optimal use first.
- Then rehabilitation will be undertaken wherever necessary, along with revival of traditional sources.
- This will be taken up before taking up any new schemes in the block.
- We will all aim at 10% increase in coverage with the same budget.

The significance lies in the fact that TWAD, like many other state controlled autonomous public utilities, gets its revenues not from state budgets, but instead earns a percentage spent on projects. In 2004, the TWAD Board was entitled to 13%<sup>1</sup> of all budgeted schemes, from which fund it would pay salaries, cover operating expenses and other costs. Thus, the more schemes TWAD undertook the greater its earnings. By adopting the Declaration as their leitmotif, water engineers were accepting reduced earnings for themselves. This required persuasion amongst the state wide department. After lengthy discussions the Declaration came to be unanimously adopted.

In the years 2005-06, many TWAD projects were re-examined and projects scaled down. Engineers managed to persuade both co-engineers and community leaders that in the long run it was better to go for water conservation methods than for new bore wells and overhead tanks. While it was time consuming to convince community leaders to adopt self-regulation of water before investing in new schemes, the change management engineers persisted. Across Tamil Nadu, in numerous villages, slowly people started embracing the new approach to water management.

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<sup>1</sup> Before 2002, the Government permitted TWAD to charge 18% of schemes.

### **Total community water management: breathing life to a new vision**

A Change Management Group (CMG), made up of volunteer engineers, was formed to carry forward the change process. The CMG formulated a vision statement called 'Our dream - secure water for all, forever' which identified conservation of nature, ensuring vibrant water bodies and equitable supply as the tasks of the water engineer. The vision was discussed statewide and adopted by consensus.

The vision was to be implemented through a comprehensive plan of action called Total Community Water Management.

The engineers committed themselves to work with the community towards

- improved systems and system management for better service delivery
- protecting and improving the source potentiality
- revival of all traditional water bodies for other uses and recharge
- ensuring equitable water supply, especially to weaker sections like dalits and tribals.
- a clean environment in and around water points
- regular disinfection practice and periodical water quality testing
- better O&M practice for low user cost
- judicious use of scarce water and to undertake
- conservation measures
- practice of waste water reuse and recycling
- consensus in Gram Sabha regarding regulatory measures
- "Reaching the Unreached"

## **IMPACTS OF THE DEMOCRATISATION PROCESS**

### **BREAKING HIERARCHIES AND MINDSETS: INTRODUCING THE *KOODAM***

#### **The *koodam***

An obstacle to free discussion amongst TWAD engineers was the hierarchical differences and status distinctions. These had to be broken down to facilitate self-critical, honest, blunt and open discussions.

One conceptual tool used was the adaptation of a Tamil cultural practice called the **koodam** or the 'gathering place' (with parallels to practices like Choupal etc. in North India)

Koodam refers to a geographical space in a traditional village which is considered sacred, generally found in temples, or during festivals or under a tree; Inside the *koodam* all participants meet as equal, adult members of society; And discuss issues of common concern; decisions are arrived at by consensus. Within the *koodam*, the norms for relating are based on the acceptance that all are equal members inside, irrespective of differences in status, wealth and learning outside the *koodam*; each person has to express their view on an issue being discussed. *Koodam* is an honoured space, sacred because all participants value and respect it. It is not a religious space. There is no need for supervision or policing as social consensus is the binding factor.

In a dramatic manner, the concept of the *koodam* helped establish a new sense of relating, belonging and purpose amongst the engineers. By the end of 2006, over 470 engineers had undergone intensive training. The officials were of various ranks ranging from chief engineers to assistant engineers.

### **Koodam as the canvas for charting the change process**

The concept of the *koodam* and the need to create an egalitarian space found resonance from community members. From village *koodams* consisting of the panchayat president, local officials and the community, district level *koodams* and *koodams* of elected representatives and common citizens were formed. The idea which energised most was that all are equal and have an equal opportunity to express their opinion and views, irrespective of differences in class, caste, gender and community.

In a manner not envisaged for it in the beginning of the change process, the concept of the *koodam* effected change efforts within and outside the organisation and struck a chord amongst many sections of society<sup>2</sup>.

### **Outcomes of 472 habitations under 143 village panchayats**

The following figures relate to experience from about 140 village panchayats as the end of 2006. The impacts can be shown in the nature of 7 shifts in approach that occurred<sup>3</sup>. These are:

- Shift 1: Choice of technology option
- Shift 2: Finding more cost effective solutions
- Shift 3: Towards community involvement
- Shift 4: Towards savings
- Shift 5: Towards conservation
- Shift 6: Towards reducing operations and maintenance expenses
- Shift 7: Towards sustainability

Out of 330 schemes in 140 village panchayats (VP) for which complete data is available, only 128 (39%) schemes opted for sinking new bore wells and eight schemes (2%) of all VPs opted for Combined Water Supply Schemes (CWSS). The remaining 194 schemes constituting 59% of all schemes in the pilot villages opted for low cost alternatives involving local technology, conservation-oriented water schemes focusing mostly on rehabilitation of existing schemes, extending pipeline, mini power pumps or hand pumps. This reflects a different way of decision-making, based on community ownership, choice and willingness to manage the operating costs.

One of the most significant impacts, which portrays the inherent potential of this process, is the reduction in the capital cost per household by 40 per cent in the project villages. It has been found that the average cost per household in non-pilot schemes was about Indian Rupees 4580, whereas in the pilot batch the average cost is only Rs.1827. In real terms this means the

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<sup>2</sup> We have worked with the concept of the *koodam* in many settings including in change programmes in government departments, community organisations, and NGOs. The *koodam* concept evoked intense response from Naga participants when we worked on a programme on 'Good Governance in Nagaland', a state in North East India as also in interactions with participants in Europe and Latin America!

<sup>3</sup> See the site [Hwww.cmgtn.com](http://www.cmgtn.com)H for more details.

possibility of additional coverage of 400,000 households every year, within the same budget (as of 2006).

It slowly became clear that the adoption of appropriate technology, maintenance to reduce potentially expensive replacements in the future, regulated hours of pumping and supply, maintenance of quality and quantity all had an effect on the nature and functioning of water systems in each village. The regulation of pumping hours included (i) ensuring that the bore pump was not too powerful and (ii) maintaining a cap on the hours of pumping based on the ensuring balance between quantity of water available in the source and quantity required for supply. This had a major impact in reducing the hours of pumping thereby reducing electricity costs. Equally importantly from the angle of sustainability of water source, the regulation of pumping hours ensured the replenishment of the water source. The TCWM initiative led to many innovative schemes. Tree plantations have been taken up with over 20,000 saplings planted; numerous check dams have also been constructed to catch rain water.

It is noteworthy that the operations and maintenance expenditure in these villages reduced by about 25 per cent while the revenue generation improved by 70 per cent leading to improved financial sustainability of the schemes.

The following figures show the financial impact of the new approach

**Contribution:** Rs.1.42 crores (approximately US\$300,000) contributed by 50,896 households in 143 village panchayats in 29 districts reflecting their sense of ownership

**Investment cost:** Overall reduction by 40-50%: average project costs from Rs. 4580 per household in regular schemes to Rs.1827 per household.

**Low cost options:** 50% of schemes are now rehabilitated such as pipeline extensions instead of more expensive options

**Savings:** Savings of between 8% and 33% have been achieved over the regular budget. Operation and maintenance expenditure reduced to Rs.18.6 per household. In sum, savings to the tune of Rs. 50 crores (approximately US\$10 million) has been effected over budgeted schemes.

**Equity:** 65% of schemes were for groups where the majority were below the poverty line including scheduled castes

**Sustainability:** 90% of households undertake rainwater harvesting; 150 traditional water bodies revived



## **EXPANDING THE PARADIGM OF DEMOCRATISATION: PUBLIC-PUBLIC PARTNERSHIP AS AN ALTERNATIVE TO PUBLIC-PRIVATE PARTNERSHIP**

The positive outcomes of the democratisation experiment initiated by TWAD shows the power inherent in the process of bringing about governance reform in public utilities. Many challenges however still loom large, threatening the success of the water management change exercise. Continuing and sustaining the change process and addressing newer issues for change are two of the most critical issues that now confront TWAD.

The most important outcome of the democratisation experiment is the breaking down of numerous stereotypes and myths about government systems, public officials, politicians and the poor. The most powerful myth that has been shattered is that people, especially the poor people, want only 'free schemes' and will not take care of their assets and resources. In numerous villages, it has now been conclusively demonstrated that communities are willing to take charge of their own water schemes and also ensure that there is fair and equitable distribution. The new work ethic which is slowly being adopted by the water engineers shows the ability of public officials to respond to changed situations placing a premium on transparency, accountability and responsibility. The TWAD engineers have also demonstrated that they can be as creative, innovative, committed and willing to take risks as any other professional.

In August 2006, the Government of India and UNICEF convened a national conference of 10 states facing a severe drinking water crisis to share the TWAD experience. At the end of the conference, a national level 'Change Management Forum' was formed. All the states participating unanimously endorsed the resolution that future efforts at change within the drinking water sector should necessarily involve institutional transformation focus.

Of critical importance is that two states, Maharashtra and Jharkand, invited TWAD engineers to share with their engineers the change efforts in Tamil Nadu. TWAD engineers conducted workshops for engineers of the Maharashtra Jal Pratikaran (MJP) and the water department of Jharkand to help them identify critical areas for change.

Such exercises of one public sector utility helping another public sector utility to improve its functioning has come to be termed by the UN as '*Water Operators Partnerships (WOPs)*' or '*Public-Public Partnerships (PUPs)*'.

PUPs, referring to the partnerships between successful public sector utilities taking the lead to help other public utilities transform and change, has become a powerful conceptual tool to challenge the privatisation model pushed forward by international finance institutions using the concept of 'Public-Private Partnerships'. There are many other requests from other water utilities in India and a few from abroad for assisting with change projects.

It is necessary to note that the model for change followed in the TWAD experiment is not limited to the water department, but can be successfully applied in other sectors too including health, welfare and education institutions.

Globally today, the TWAD experience has become an example of the potential to truly democratise public services in such a way that people and community ultimately take charge of their public utilities and common property resources. While there is a long to go before the TWAD Board achieves full democratisation, the journey has begun and begun decisively.

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