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Sanitation: Modelling Best Practices

TAPAS DATTA

Recognizing the importance of sanitation and its criticality in determining the success and failure of the livelihood projects, PRADAN is keen on modelling best practices in the Drinking Water and Sanitation sector that can be replicated by others such as partner NGOs and state governments. This article is a study of the PRADAN experience.

PRADAN has been engaged with the rural communities, especially women's SHGs, across seven states in the country for about three decades now. Empirical evidence from its experience in the economic sector has made it realize that losses, both in terms of medical expenses and person days for engagement in productive work, are mainly due to the lack of basic services such as health, nutrition, safe drinking water and sanitation in the rural communities. The lack of hygiene and its consequent illnesses could offset the gains in the natural resource management and the livelihood sectors.

PRADAN's intervention in the Drinking Water and Sanitation (DW&S) sector is relatively recent compared to its longstanding involvement in the livelihoods sector, both on- and off-farm. DW&S is neither the mainstay of PRADAN's work nor is it its historical or current corporate mandate. The size and spread of its DW&S projects nationwide is minuscule compared to its livelihood projects. However, recognizing the importance of sanitation and its criticality in determining the success and failure of the livelihood projects, PRADAN is keen on modelling best practices in DW&S, which can be replicated by others such as partner NGOs and state governments. PRADAN's small but robust intervention in the DW&S sector in Koderma (Jharkhand), Purulia (West Bengal) and Kandhamal (Odisha) districts have already shown encouraging results in the last three years of its inception. On offer are simple, cost-effective, community-owned and managed models of DW&S that can be replicated on a wider scale.

As part of the modelling process, PRADAN thought it necessary to first analyse all the facets of the intervention, capture the experience of the stakeholders—both the communities as well as the implementers—with these systems and benchmark the current intervention against some critical factors that determine whether or not these could qualify as 'replicable models'. This then could make it possible to lay down guidelines for setting up both the hardware as well as the software components of similar interventions in the DW&S sector.

THE MACRO ENVIRONMENT

The drinking water scenario during the Eleventh Plan

Through successive National Five Year Plans, across political regimes, there has been a concern about providing drinking water to the people—both in the rural as well as the urban areas of India.

The Eleventh Plan identifies the major issues that need tackling during this period such as the problem of sustainability, water availability and supply, poor water quality, centralized vs. decentralized approaches and financing the Operation and Maintenance (O&M) costs. At the same time, it seeks to ensure equity with regard to gender, taking care of the interests of socially and economically weaker sections of society, schoolchildren and socially vulnerable groups such as pregnant and lactating mothers, disabled senior citizens, etc. There has been a major paradigm shift during the Eleventh Plan period with the restructuring of the erstwhile Accelerated Rural Water Supply Programme (ARWSP) and creating the National Rural Drinking Water Programme (NRDWP). Among other issues, this paradigm shift emphasizes the need to move forward from habitation level provisioning of drinking water to the household level. Laudable as the proposition may seem, the reality, however, poses insurmountable obstacles.

The Mid-term Appraisal (MTA) of the Eleventh Plan reports: "The National Drinking Water Mission was established in 1986. Within 10 years, the mission claimed that only 63 problem villages were left to be covered. In 1999, the unit was narrowed down to habitations and a new target of universal coverage of 15 lakh habitations was set by the end of the

Through successive National Five Year Plans, across political regimes, there has been concern about providing drinking water to the people—both in the rural as well as the urban areas of India

Tenth Plan. According to the Department of Drinking Water Supply (DDWS), the number of 'slipped-back habitations' that had to be 're-covered' in the Bharat Nirman period (2005–10) had grown to 4,19,034. The Eleventh Plan re-set the goal to 'provide clean drinking water for all by 2009 and ensure that there

are no slip-backs by the end of the Eleventh Plan'. But slip-backs continue to happen on an on-going basis. NRDWP was provided with Rs 39,490 crores in the Eleventh Plan. The states are to spend a total of Rs 49,000 crores. This is nearly three times what was provided for in the Tenth Plan provision. However, the 2009 DDWS document, 'Movement towards Ensuring People's Drinking Water Security in Rural India', recognizes that the objective of providing adequate drinking water to the rural community is yet to be achieved "in spite of the collective efforts of the state and central governments and huge investments of about Rs 72,000 crores in the rural water supply scheme under both state and central Plans up to 2009."

The factor responsible for this situation is the overdependence on ground water for both drinking and irrigation purposes rather than surface water and traditional water sources. Lowering of the ground water table due to over-extraction causes the water supply to be of poor quality. The lowering poses a threat more to the water used for human consumption than for irrigation. Surface-water contamination is relatively easier to contain through targeted and purposive awareness-building of communities about the importance of sanitation and waste disposal. However, ground-water contamination is an issue that cannot be dealt with easily.

Water and sanitation are inseparably linked with each other. The primary factor responsible for bacteriological contamination of water is the insanitary conditions. Recognizing this, the Government of India (GoI) and the state governments have placed considerable emphasis on sanitation during the Tenth and Eleventh Plans. This is reflected in the annual outlays as well as in the newly introduced schemes such as the Nirmal Gram Puraskar (NGP) in 2003. It has been claimed that the NGP has been a shot in the arm for the Total Sanitation Campaign (TSC) programme. Between 2003 and 2009, the coverage with individual household latrines (IHHL) in the country has shot up from 23 per cent to 62 per cent.

By its own admission, the GoI in its MTA of the Eleventh Plan has concluded that, "Poor quality of construction and the absence of behavioural change were the main reasons for the slip-back." The state governments and the GoI have realized that "the Information, education and communication (IEC) involves a specialized set of activities that demand professionalism of a kind rather different from what line department personnel are normally trained for. Social mobilization for changing attitudes is not a one-off activity. It is a complex process that takes time in the initial stages. There is a point of inflection after which the process takes off and thereafter is led by the people themselves. But this happens only after a critical mass of qualitative effort is put in."

THE CURRENT POLICY ENVIRONMENT

Expectedly, the lessons learned from the experience of the Eleventh Plan period in the water and sanitation sectors have formed the

Water and sanitation are inseparably linked with each other. The primary factor responsible for bacteriological contamination of water is the insanitary conditions

basis for formulating the policies and strategies in the Twelfth Five Year Plan.

In the drinking water sector, source sustainability and water quality are two major areas of emphasis in the Plan. There are, of course, other areas of concern to be addressed such as poor O&M, poor quality of construction of the water supply systems using sub-standard material, faulty design and lack of ownership by the communities due to their non-involvement in the planning and implementation of the systems. Many of the Village Water & Sanitation Committees (VWSC) formed through official intervention are now defunct and even *Panchayati Raj* Institutions (PRIs) lack both the will and the knowledge to oversee construction as well as handle the upkeep of these systems.

The policy perspective, however, may be more complex than what has been mentioned above and demands a closer examination of grass-roots level issues in both the implementation and the maintenance of water supply systems in the rural areas. During the course of the study, we tried to validate some of the generic issues mentioned above. We also tried to identify the micro-level issues that may eventually become major stumbling blocks. These are mentioned here because they may form a part of the advocacy agenda for non-state parties to influence state and national policies.

The current Twelfth Plan does not acknowledge and give enough space and attention to the fact that there are many non-state parties, namely, NGOs across the country and outside of the government machinery, who have enthused, energized and built capacities amongst communities to have water supply

systems that communities lead and manage on their own. These systems are not only cost-effective and functional but sustainable too. The government does recognize the merit of these NGO-run projects and also upholds the process and result-oriented approach but, sadly, expects the existing institutions of governance to adopt these. It is like trying to fit a square peg in a round hole!

In the sanitation sector, the challenges are more formidable. The biggest challenge is, of course, to transform the sector from its present orientation of toilet construction to building awareness among communities about sanitation and hygiene and, thereby, leading to behaviour change. Lessons learned from successful sanitation and hygiene projects have established the fact that once the connection between the incidence of disease and the unsafe disposal of excreta is perceived by communities, the adoption of improved sanitation and hygiene practices becomes rapid. The understanding of the faecal-oral route of disease transmission by the communities holds the primary key to adoption.

The other challenges include making available a wider range of technologies for toilet construction so that communities can make an appropriate choice of technology, suitable for their geo-climatic conditions. Besides this, the availability of water for ablution and cleaning the toilets is also a challenge to be dealt with. By implication, therefore, ensuring the availability of water in toilets becomes a pre-requisite before the construction begins. This partly explains why, despite having achieved high coverage levels across the country (62 per cent), the usage rate found in the studied villages is horrendously low (4 per cent).

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NEED, RATIONALE AND SCOPE OF THE CURRENT STUDY

The purpose of this study is to examine and analyse the experience of the people of Koderma and Purulia for whom this sector is relatively new. The findings of the study could be used to demonstrate cost-effective and community based 'models' that could be replicated, both by PRADAN elsewhere as well as by the government and non-governmental partners.

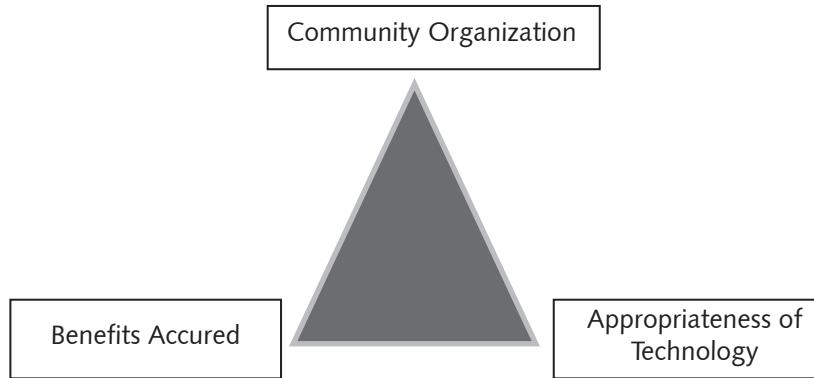
The main narrative in this study provides a detailed description and critical analysis of the DW&S projects in Koderma and Purulia. It tries to draw lessons from the experience, providing an insight into the strengths, the areas that require improvement, the opportunities that these offer for future expansion and consolidation, and the possible threats, or rather obstacles, faced in scaling-up; the study suggests possible safeguards too.

The study tries to contextualize PRADAN's intervention within the prevailing macro environment pertaining to the sector in the country. It attempts to examine the relevance of the pilot in the context of the national policy mandate and its potential to be accepted as a national model for wider replication.

FRAMEWORK FOR ANALYSIS

The study uses a framework for analysis looking at three aspects to critically analyse the achievements of the interventions, keeping in mind PRADAN's objective of creating a sustainable 'model'. Figure 1 is a diagrammatic representation of the framework.

Figure 1: The Framework for Analysis



1. **Community organization** (What led to the community demanding a certain commodity or service?)

The term 'community organization' is used in the present study to represent the gamut of activities and processes whereby members in a given community are mobilized around a common issue or issues, which affects/affect their lives adversely; eventually, they resolve to address these issues collectively.

2. **Appropriateness of technology**

In determining the choice of technology in a community based water and sanitation project, the following key questions are crucial:

- Do the majority of the members in the community understand how the technology works?
- Are the hardware components used in the technology available locally or at least within a reachable distance?
- Should there be a breakdown, would the communities be able to repair it on their own?
- Is the technology effective and competitive, in terms of the costs involved?

3. **Benefits accrued** (Are the demands of the community met?)

For the purpose of this study, again, we have made a distinction between 'realized' benefits and 'perceived' benefits. Realized benefits are those that are more obvious, and perceived benefits depend on the 'informedness' of the community. To illustrate the point: 'Water flows from a tap in my own backyard!' is a realized benefit whereas, 'We and our children should drink only this water so that we don't fall sick like we used to in the past' is a perceived benefit.

THE FIELD STUDY

For the purpose of this study, we visited both the DW&S project locations in Koderma and Purulia in the first phase and Kandhamal (Odisha) in the second phase. However, this study looked into the Purulia and Koderma experience in depth; because Kandhamal was at a very nascent stage and, hence, might not demonstrate all the facets of a DW&S project, it was not studied in detail.

In Koderma, we visited Belkhara and Dharaidih villages. In Purulia, we visited Berada and Hesla villages. The Purulia team had focused mainly on awareness generation and sensitization of the community. They informed the

communities about how diseases occur and spread, and how the faecal-oral route is linked. The major work was done on the sanitation programme. Villages in Koderma and Purulia were taken up for intervention around the same time. They do have common features and yet they differ on many counts. Because this was a study and not an assessment, we tried to link and correlate the varying degrees of achievements in these two locations with their unique characteristics. This helped us take note of some of the lessons learned and record them as important factors, to be considered by planners of similar projects.

The Table below shows the observations and analyses from Purulia and Koderma locations of PRADAN, with respect to the framework of analysis.

In Odisha, we visited Uhakia village in Baliguda block of Kandhamal district. PRADAN's DW&S intervention in Odisha presents a different technological option that takes advantage of the unique terrain and topographical characteristics of the location. The water for household consumption is more of an off-shoot of the gravity flow-based irrigation system for agriculture. Both the surface run-off and sub-surface flow of water in the upper catchment area are trapped in a reservoir and, subsequently, conveyed to the village through PVC pipes (about 1800 m), using the force of gravity. This water is further channelled through distributaries to individual households. The system provides potable water for drinking, washing and other domestic use through the day. However, unlike in the other two locations, community mobilization around

Community Organization	Appropriateness of Technology	Benefits Accrued
Mini Piped Water Supply in Koderma		
<ul style="list-style-type: none"> ◆ Regular meetings of the women's groups in the village provided a ready platform for the initiation of discussions. ◆ The benefits of having a safe source of water were perceived having learned about the link between unsafe water, diseases and loss of income. ◆ Community-led planning and implementation of the PWS was ensured. ◆ Ownership of the community 	<ul style="list-style-type: none"> ◆ The technology used is simple, cost-effective and easy to understand. ◆ The hardware components used in the construction are available in the local market. ◆ The community was well aware of the technical details and specifications of the materials used. 	<ul style="list-style-type: none"> ◆ Women could articulate both the 'realized' as well as 'perceived' benefits. ◆ Women were aware of the consequences of drinking unsafe water and emphasized the clean handling of water. ◆ Women felt that they now had more time for other work because the drudgery of fetching water was no longer there.

Community Organization	Appropriateness of Technology	Benefits Accrued
Sanitation Programme in Purulia		
<ul style="list-style-type: none"> ◆ Like Koderma, Purulia also had women's groups and communities in PRADAN's intervention area that had already risen above the level of subsistence to where they were beginning to be conscious of 'quality-of-life issues'. ◆ Generating understanding 'on how falling sick is related to unsafe water consumption, unhygienic living and insanitary conditions' were the main focus. ◆ Communities taking charge at each stage of planning and implementation was also ensured. ◆ Ownership of the community 	<ul style="list-style-type: none"> ◆ Emphasis was placed on SHG members and the community understanding the designs of the sanitary units. Exposure visits were organized for SHG members and the masons who would finally construct the toilets. ◆ Training programmes and handholding support were given to the masons, and the construction was monitored for technicalities. ◆ The units were flexible rather than standardized. ◆ The cost of construction of these toilets was well within the recommended estimates. 	<ul style="list-style-type: none"> ◆ PRADAN's sanitation programme was based on the solid foundation of a clear understanding of the benefits, and the families would be able to sustain it even if PRADAN were to withdraw from it at any time. ◆ The women enjoy the privacy and convenience of toilets and do not have to face the difficulties faced by those women in villages where such an intervention has not been made. ◆ Assured privacy, convenience and dignity were the other benefits cited by the women

Water, Sanitation and Hygiene (WASH) was not very visible. The people were happy to receive the water at their doorstep; because there was no contribution by the community, they did not feel any ownership.

POSITIONING PRADAN'S INTERVENTION IN THE MACRO ENVIRONMENT

Against this backdrop of the policy environment, its thrust areas and priorities, we tried to position PRADAN's limited but comprehensive intervention in the DW&S sector. What needs to be borne in mind,

however, is that no single 'model' of a good DW&S intervention such as PRADAN's can be replicated across the country since the cultural, social and geo-climatic diversity of the regions within the country is immense. In the context of this section, we choose to use the expression 'recreate' rather than 'replicate'.

In the course of this study we tried to benchmark PRADAN's DW&S interventions against the issues identified in the MTA of the Plan and the changes proposed in the Twelfth Plan.

Drinking Water	
Twelfth Plan Emphasis	Pradan's Intervention
Source sustainability	PRADAN gives primacy to surface water use rather than ground water. All the locations identified by it for the installation of PWS systems draw water from streams rather than from ground water sources. Besides, its DW&S projects are not stand-alone but form a part of the larger operations in the area of natural resources management (NRM), including land and water resources management.
Water quality	Water quality is regularly monitored by communities mainly for bacteriological contamination. Water is filtered and purified at source, and stored and handled safely by the families.
Poor construction quality	Construction activities are managed by the primary stakeholders (men and women of the village) themselves under technical guidance from PRADAN rather than by outside contractors. The design inputs have been provided by a partner NGO, which has years of experience in the construction of similar systems.
Poor quality of material used	All material used in the construction are ISO certified and procured directly from the supplier by a purchase committee constituted by the community
Lack of ownership by communities	PRADAN follows an intensive process of awareness building, demand generation, participatory planning, community managed implementation, funds management and O&M. This ensures that the communities have full ownership of the process from start to finish.
Poor O&M	The O&M function is managed entirely by the communities through their designated groups, costs of which are met from a separate fund created through the contribution of the families.
Sanitation	
Top-down, target-driven approach	There is very little that PRADAN can do about the current orientation of the government except advocating for reforms. However, it has demonstrated the efficacy of the decentralized, community-led-and-managed toilet construction operations, in which families have the freedom to choose the location, the design and the material to be used.
Low usage rate	All the toilets constructed in the villages are being used and maintained by the villagers, including children. The toilets are perceived as family assets rather than as alien objects thrust upon them and which may be allowed to perish over time from disuse and disrepair.

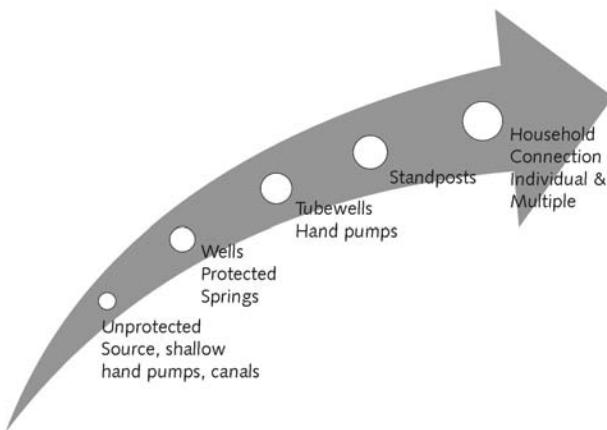
Sanitation	
Twelfth Plan Emphasis	Pradan's Intervention
Availability of water at the user point (the toilet) without causing an additional burden of fetching water by the women of the household	To some extent, this issue has been addressed by PRADAN, especially where there is a piped water supply point inside the homes of the families. However, more effort is to be made to reduce the drudgery of fetching water in villages, where the source is a well or a hand pump.
Targeted and purposive awareness generation to precede any construction activities within communities about the importance of sanitation particularly helping communities understand the faecal-oral route of disease transmission	This has been a major strength of PRADAN's approach. No construction activities are initiated before a stage is reached where all the members of the community have fully understood and internalized why diseases occur and the hazards of open defecation.

CONCLUSION

PRADAN has addressed most of the issues mentioned above. However, because we are talking about modelling, a comprehensive model must have all the facets of an ideal DW&S system, integrated into one organic whole at the same place and at the same time. For example, in Koderma, despite having safe drinking water sources such as a PWS system with water points in the homes of the families,

there are no sanitation facilities and the villagers are still going out to defecate in the open. We appreciate that a beginning has been made to enthuse the communities to construct IHHLs by constructing the first demonstration toilet in Belkhara. However, sanitation and hygiene awareness was incomplete. Although we understand that PRADAN was not in a position to take up the sanitation programme

Figure 2: Evolution of Drinking Water Programme



Source: "National Rural Drinking Water Programme: A Framework for Implementation" – DDWS, GoI

immediately due to constraints of funding, it could have still included the issue in its awareness building and demand generation programmes and linked these with the TSC programme of the government as in the case of Purulia.

A comprehensive model must have all the facets of an ideal DW&S system, integrated into one organic whole at the same place and at the same time

unprotected sources, shallow hand pumps and canals to household connections—individual and multiple, the popular source of water in each of these stages was neglected and forgotten once the next stage was attained.

Purulia presents a different picture. The work done in the area of sanitation is exemplary. Conducting a baseline study before the initiation of the project, analysing family spending on illnesses and finally linking the disease prevalence (mainly water-borne because these constitute more than one-third of the diseases) with poor sanitation, leading to demand generation for IHHLS. But the integration of water with the issue of sanitation was found missing. This is not to say that the project has lost sight of the issue of safe water availability. The existing secondary sources of water (hand pumps) have been protected from contamination through proper platforms and drainage; new hand pumps have been sunk replacing the old and dry ones. However, we have not seen any evidence of these interventions reducing the burden on women having to fetch water for sanitation. Another critical aspect of the water programme that needs to be borne in mind by programme planners and evaluators is the concept of a 'water safety net'. The general criticism of the water programme in India, since Independence, has been the preference for new technologies over the older ones and, consequently, traditional sources such as dug wells and step wells (*bawris*) were ignored, and new sources such as hand pumps and, later, PWS systems became prevalent. Figure 2 is a graphic representation of the water programme in India.

However, what the figure masks is the fact that, in reality, during this journey from

It is, therefore, imperative that in any given rural location, the communities are given the options of alternative safe sources at the same time so that if one fails, the communities can fall back on the other. A paper issued by DDWS mentions the following as one of the paradigm shifts that have occurred in NRDWP: "(To) move away from over dependence on single source to multiple sources through conjunctive use of surface water, groundwater and rainwater harvesting."

The emphasis on ensuring the presence of the secondary and tertiary sources of water alongside the primary one is an important and a significant departure from what has been the approach historically.

This aspect was ignored in the PRADAN interventions in both Koderma as well as in Purulia. During our visit to the villages, we found that the wells were in a state of disuse and disrepair. Even those reported to be used sometimes were not in good shape. The other aspect that needs to be considered prior to advocating the PRADAN model as replicable with the GoI and the state governments is the issue of source sustainability because this is one of the priority considerations in the Twelfth Plan. Besides, the near total reliance of the communities on hand pumps, as in Purulia, may not be an acceptable proposition for wider replication.

The hydro-geological conditions in the three districts are still conducive and the extraction

of groundwater may not be considered 'undesirable' or 'forbidden'. However, the projects should not be allowed to neglect the traditional sources that serve as secondary and tertiary sources of water.

PRADAN projects in two different locations together present contours of what could be considered as a replicable 'model'. However, if these have been conceived as stand-alone

projects, they may not serve the overall purpose of disease reduction. Hence, PRADAN may like to take a more holistic view of the DW&S intervention (it may well be there already but it has not articulated it in the context of DW&S). In our view, PRADAN should allow its DW&S projects in Koderma and Purulia to grow into holistic and comprehensive models with each component of it fitting with the other into an organic whole, and then advocate this recipe.

Nirmal Gram: Problems and Prospects

CHANDAN SENGUPTA

Prioritizing the provision of safe drinking water and sanitation to its people sets a country on the path to achieving standards of human development indices such as reduced crude death rate, increased life expectancy at the time of birth, low infant mortality rate and low maternal mortality rate

The quality of life of an individual is largely dependent on the availability of adequate safe drinking water and proper sanitation. A country interested in achieving decent standards of human development indices such as reduced crude death rate, increased life expectancy at the time of birth, low infant mortality rate (IMR) and low maternal mortality rate (MMR) gives priority to the provision of safe drinking water and sanitation to its people.

The lack of safe disposal of human excreta, improper environmental sanitation and poor personal hygiene have a direct correlation with many diseases in developing countries. The use of the Individual Household Latrines (IHHL) by a majority of the population is a good indicator of improved access to better sanitation facilities. Studies reveal that the IMR is low in states where the Total Sanitation Campaign (TSC) has a greater coverage. For example, Tamil Nadu has achieved 77 per cent of its IHHL target and has an IMR of 28. On the other hand, Bihar has covered only 31 per cent of its target and its IMR is 48. Because of the non-availability of IHHLs, the incidence of diarrhoeal and other gastro-intestinal diseases in India is rampant; this is why the present IMR or under-five (U_5) mortality in India is high in comparison to the developed countries and even to neighbouring countries such as Sri Lanka and China.

The implementation of the Rural Sanitation Programme has never been a priority in India. It was only as recently as 1986 that the Central Rural Sanitation Programme (CRSP) was launched by the Government of India (GoI) as a Department in the Ministry of Urban Development. CRSP was a supply-driven programme, in which a latrine was provided to a rural family without creating a demand for it. Moreover, the financial allocation for the programme was very little. As a result, the few latrines that were provided to the rural households were not used. A study conducted in West Bengal during 1988–89 revealed that most of the latrines that were provided under the CRSP were used either for storing firewood or keeping domestic animals. As a result, even after five years of the implementation of the CRSP, there was no visible progress in providing rural families access to household latrines (as per the 1991 Census, access to household latrines in rural areas was 9.48 per cent).

To give an impetus to the programme, in 1999, the GoI converted the programme into a campaign with a new name—Total Sanitation Campaign. Subsequently, TSC was also included in the 'Bharat Nirman' campaign, as one of its flagship programmes. TSC was very different from the earlier strategies used to implement the sanitation programme. Many important issues such as personal hygiene, home sanitation, storage and handling of drinking water, garbage and waste water disposal were included in sanitation, in addition to the disposal of human excreta. The programme was modified and became a demand-driven one, by reducing the amount of subsidy, which is provided only to families that are Below the Poverty Line (BPL). The programme aims at providing universal access to household latrines and achieving the goal of total cleanliness in all the villages of the country within a specific time-frame.

As an encouragement, the union government introduced a unique award called 'Nirmal Gram Puraskar' (NGP). The award recognizes the achievements and efforts made to ensure full sanitation coverage and to develop healthy competition among *panchayat* bodies to implement the programme at different levels. Emphasis was also given to providing toilets in all educational institutions (separate toilet blocks for girls in co-educational schools) and in *anganwadi* centres. To encourage a sense of ownership, at the initial stages of the implementation of TSC, the amount of incentive for the provision of household latrines for BPL families was kept very low. This approach was found to be effective; subsequently, to encourage the construction of better toilets, the amount of subsidy was increased to Rs 3,200 per family.

The report states that 59 per cent (626 million) Indians still do not have any access to toilets and practice open defecation, and that a majority of them live in rural areas. It was also found that there is a vast gap between the 2011 Census figures on sanitation and the reports provided by the states on their online portals.

STATUS OF THE IMPLEMENTATION OF TSC

The status of the implementation of TSC by all states and union territories is readily available on the portal of the Ministry of Drinking Water and Sanitation of the GoI. The reports show that remarkable progress has been made by most states and union territories, in providing IHHL and institutional toilet blocks. During the last 11 years, since the introduction of TSC,

access to household latrines in rural areas of the country has increased substantially (21.9 per cent as per Census 2001 and 70.45 per cent as per online reports). The availability of toilets in schools and *anganwadi* centres has also increased substantially (90.26 per cent schools and 78.14 per cent *anganwadis* have toilet facilities). Since the introduction of NGP in 2004, as many as 28,002 *gram panchayats* (GPs) have been awarded with this prestigious award.

CRISIS OBSERVED IN IMPLEMENTING TSC

The online reports of implementing states show that the coverage of sanitation facilities has been quite widespread. However, evidence indicates that India is heading towards a major sanitation crisis. According to the 2011 Census, 53.1 per cent of the households in India do not have a toilet (63.6 per cent in the 2001 Census). In the rural areas of the country, only 30.7 per cent of the households had IHHL as against 21.9 per cent as per the 2001 Census. These facts have been reconfirmed by another report released on March 6, 2012, by WHO and UNICEF's Joint Monitoring Programme on Sanitation for Millennium Development Goals. The report states that 59 per cent (626 million) Indians still do not have any access to toilets and practice open defecation, and that

a majority of them live in rural areas. It was also found that there is a vast gap between the 2011 Census figures on sanitation and the reports provided by the states on their online portals.

It was also noticed that the criteria for the NGP did not exist in almost all the awarded GPs across the country. The NGP was intended to ensure an open defecation-free environment and also to create an opportunity for a rapid scale-up of TSC. It was a great challenge to ensure that the spirit of NGP was not diluted and that the quality of the award was maintained. In June 2008, a study was conducted by the UNICEF in 162 NGP-awarded GPs across six states of the country to assess whether or not the spirit, principles and quality of NGP had been maintained. The main findings of the study are:

a) IHHLs

- i. On an average, around 81 per cent of the households had access to the IHHLs. In 26 per cent of the GPs, 50 per cent of the households had no access to IHHLs and in 10 per cent of the GPs, less than 50 per cent of the families had IHHLs.
- ii. Approximately 60 per cent of the households had reported the use of IHHLs. An additional five per cent households used community or shared latrines. The balance 35 per cent defecated in the open.
- iii. All the members of the families were not using their IHHLs.
- iv. The reasons for the latrines not being used were: poor/unfinished installation (31 per cent), the lack of behaviour change (17 per cent), the absence of a superstructure (14 per cent), a blockage/pan-choke (12 per cent), the lack of water (9 per cent), etc.

v. Around 45 per cent of the households disposed their child's faeces in the open or along with their solid wastes or in the drain.

b) Toilets at educational institutions:

- i. Approximately 96 per cent of the schools had toilets.
 - ii. Only 42 per cent schools had separate toilets for girls.
 - iii. In the schools, 45 per cent of the boys and 19 per cent of the girls were found to defecate/urinate in the open.
- c) At *anganwadi* centres, 38 per cent had no toilets.
- d) Solid and liquid waste disposal was not initiated in almost all GPs.

LAUNCHING OF NIRMAL BHARAT ABHIYAN

The gap between the 2011 Census figures and the online reports of states was taken very seriously by the GoI. Also the major lapse in the implementation of the programme was the sustainability of NGP-awarded *panchayat* bodies. These major shortcomings of the programme could be due to:

- a) The lack of a demand-driven strategy in the implementation. In many cases, *Panchayati Raj* Institutions did not collect any contribution from the beneficiaries. Instead, *panchayats* provided the contribution for the beneficiaries. Often, the beneficiaries were compelled to construct latrines because of administrative pressure.
- b) The inferior quality of construction of latrines. In many cases, latrines were constructed up to the plinth level only without any superstructure. Even if the superstructure was provided, it was of inferior quality.

- c) The lack of motivation of the households to use the latrines.
 - d) The lack of supervision during implementation.
 - e) The withdrawal of the delivery mechanism after the receipt of NGP.
 - f) The lack of community participation during implementation as well as after the receipt of NGP: There was no sincere attempt to involve the local NGOs, CBOs and women's groups, including SHGs.
 - g) The lack of continued information, education, communication (IEC) activities: IEC activities were carried out in a ritualistic manner. No attempt was made to launch need-based, area-specific advocacy or introduce any awareness generation activities. As a matter fact, no priority was given to this very important component of the programme although there was no dearth of funds for this activity (15 per cent of the total project cost was set aside for IEC activities). The expenditure incurred against the allocation under IEC was thus very low in almost all states.
2. To improve the quality of IHHLs, the cost of construction of one latrine with incentive has been increased to Rs 5,500. Of this, Rs 4,600 is provided as an incentive and the balance amount of Rs 900 is to be contributed by the beneficiary.
3. Stress has been placed on integrating the programme with the MGNREGA, from which an additional amount of Rs 4,500 can be generated, and IHHLs constructed at a cost of Rs 10,000 (through the engagement of unskilled/skilled workers and the purchase of some material).
4. Emphasis has been laid on the safe disposal of solid and liquid wastes so that rural areas become clean (*nirmal*) in the true sense. Substantial funds have now been earmarked for this purpose (Rs 20 lakhs per GP, which has more than 500 families).
5. The criteria for awarding NGP have also been changed. More stress is now placed on the safe disposal of solid and liquid waste and the availability of water in the concerned families of the *panchayat* body.

All these factors led the Ministry of Rural Development, to drastically modify the strategies for implementing the programme. New guidelines were published in July 2012 and the programme is now implemented under the name Nirmal Bharat Abhiyan (NBA).

IMPORTANT FEATURES OF NBA

1. Instead of providing an incentive only to BPL families, the scope has now been extended to many other categories of needy, above-the-poverty-line (APL) families such as those belonging to the Scheduled Castes (SCs) and the Scheduled Tribes (STs), small and marginal farmers, landless farmers, women-headed families and physically handicapped-headed families.

CHALLENGES TO BE ADDRESSED

Following the report of the Joint Monitoring Programme (JMP), for Water and Sanitation released by UNICEF and WHO, which pointed out that India is lagging behind by around 11 years in meeting Millennium Development Goal targets, the government has resolved to deal with the situation. However, the Census report findings have complicated matters further and presented an alarming development with an 11 per cent decline in households that have toilets. The percentage has gone down to 53 from 64 in 2011. The officials from the Ministry of Drinking Water and Sanitation have admitted that although efforts are being made to tackle the problem of sanitation, much still remains to be done, considering the needs of the population. In response to

the situation, the budget for the sector has been more than doubled, from Rs 1,500 crores in 2011–12 to Rs 3,500 crores for the next fiscal year. A Steering Committee of the Planning Commission has proposed an allocation of Rs 44,116 crores in the 12th Plan (a hike of 675 per cent over the 11th Plan allocation for sanitation).

A detailed exercise is also being conducted to identify the shortcomings of the existing sanitation and drinking water efforts and to incorporate these into the 12th Five Year Plan. However, confusion exists in terms of the reliability of the available information from different sources (the Ministry of Drinking Water and Sanitation, the JMP and the Census reports). For example, in the case of rural sanitation, the Ministry claims that the coverage is 53 per cent whereas the JMP and the Census data keep the figure at 33 per cent and 30 per cent, respectively. At the state level, the Ministry of Drinking Water and Sanitation claims that in states such as Uttar Pradesh and Madhya Pradesh, only 31.7 per cent and 34.8 per cent of the population lacks sanitation facilities. However, according to the Census data, 78 per cent of the population in Uttar Pradesh and 86.9 per cent of the population in Madhya Pradesh do not have access to sanitation facilities. The Ministry claims that only 23.4 per cent of the people do not have sanitation coverage in Tamil Nadu whereas the Census data reports that the figure is 76.8 per cent.

In such a situation, there is need to develop a more accurate monitoring system by revamping the existing monitoring mechanism and evolving community-based monitoring

The launching of NBA created opportunities for implementers to achieve the goal of a Nirmal Bharat. This can only be achieved by ensuring that each gram (village) is nirmal, each district is a nirmal district and all the states are nirmal.

system. There is also need to introduce the GPS technology in this regard.

OPPORTUNITIES TO BE CAPTURED

The launching of the NBA has created a tremendous opportunity for the implementers to address the shortcomings of the programme

and take remedial measures for the mistakes committed in the past. As per the new guidelines, a fresh baseline survey is to be conducted so that each state can identify the number of latrines that were provided but are now defunct or unfit for use. The gaps that have been noticed between the Census 2011 reports and the online reports of the states are to be kept in mind when formulating the new Project Implementation Plans (PIP). Care is also to be taken that the programme is really implemented as a demand-driven one and that durable and user-friendly latrines/toilet blocks are constructed for individual households as well as for institutions. Stress is to be laid on proper utilization of the huge IEC funds available under the *Abhiyan*, to educate the people about the proper use and maintenance of latrines, and to motivate them to use these by inculcating a desire for health and hygiene.

CONCLUSION

The goal of the NBA is to make India clean. The launching of NBA created opportunities for implementers to achieve the goal of a *Nirmal Bharat*. This can only be achieved by ensuring that each *gram* (village) is *nirmal*, each district is a *nirmal*/district and all the states are *nirmal*. If measures are taken to correct the earlier errors and sincere attempts made to implement this important programme, goal of a *Nirmal Bharat* will be achieved.

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Initiatives around Water Supply and Sanitation

ASHISA KUMAR RATH

Bringing about transformation in behaviour and lifestyle requires constantly engaging with the community, generating a demand for the creation of structures for water and sanitation from the villagers themselves by helping them understand the link between lack of hygiene and economic loss, and handholding villagers through the planning and construction processes

Shrambhukia village in Balliguda looks surreal amidst the valley. The beautiful terrain, the surrounding green forest and the ever-flowing waterfalls enhance its view. Four small hamlets together comprise the village Shrambhukia, a part of Rutungia gram panchayat. The village, connected to the main road through a *kuccha* road, is approximately 16 km away from the block headquarters at Balliguda. The village has a population of 161, distributed in 38 households, and the villagers are all from the peace-loving Kandha tribe. The Kandhas used to practice shifting cultivation and are mainly dependent on forest produce for their survival.

PRADAN's engagement in the village started in 2003, with the promotion of women SHGs mobilized around savings and credit. PRADAN initiated goat-rearing and Siali leaf plate-making because the village lies on the fringes of a forest. The village also falls under the OTELP (Orissa Tribal Empowerment and Livelihood Programme) area of implementation. One of the components of the programme was developing infrastructure in the village along with micro-watershed development. The focus was to develop a model 'homestead development with round-the-year agriculture'. During the planning stage in the village, the whole community was engaged. Because the village has access to two perennial sources of water, this could be channelized to the homesteads and the fields through a flow irrigation system. The idea was well accepted, especially by the women who faced the daily drudgery of bringing water for household consumption by trekking 3–4 hours a day to fetch water either from the *jhara* (waterfall) or the *chuan* (subsurface water stream near the upper catchment). Keeping in mind the pressing need to alleviate this drudgery, a holistic plan was finalized, with the community's participation, to channelize water effectively to homesteads for use in households through a gravity flow system. The women were very excited and keen to initiate this project. Thus, Shrambhukia became PRADAN's pilot village.

No.	Name of Hamlet	No. of Households	Population	Category	Caste	No. of BPL Families	No. of Landless
1	Dalabali	6	31	Tribal	Kandha	6	1
2	Sindingi	8	37	Tribal	Kandha	8	3
3	Kudakpadar	13	58	Tribal	Kandha	10	
4	Shrambhukia	11	35	Tribal	Kandha	11	
	Total	38	161			35	4

Water Requirement of Kudakpadar Hamlet
(Total population: 58)

Parameter	Total unit	Per unit requirement	Total requirement
For individual household consumption	58 persons	55 litres/day	3,190 litres/day
For agricultural use	130 decimals	285 litre/day/decimal	37,142 litres/day (10 decimals/family)
Total water requirement			40,332 litres/day

This was a new initiative for PRADAN; a decision was taken to visit a place where such a gravity flow system was already in operation. The exposure team comprised women SHG members, men of the village and a PRADAN professional. We went to Bhisamgiri village in the adjacent Ganjam district where household water supply has been installed through a diversion-based gravity flow. The village had a similar terrain, making it easier for the visiting team to relate to it. After the exposure visit, the women were charged up and took the lead. On return, a field survey was conducted to chalk out the route map for laying the pipeline; there were regular discussions with the community on the technical design of the diversion-based irrigation system, with an add-on component of household water supply through taps. After a series of meetings and discussions, the overall design and layout of the system, to provide water for daily

household needs as well as for round-the-year cultivation of vegetables in the homestead, was worked out.

The participation of the community was quite evident; the villagers were involved in the planning, layout designing and implementation processes. Sixty per cent of the costs came from the labour component. The terrain being hilly, heavy labour was required. Three feet-deep trenches were dug for laying the underground pipelines from an elevation of over 9 m to the foothills of the village and then to each household from a distance of around 2 km. Considering the peak discharge of 0.67 LPS, PVC pipes of 75 mm diameter were finalized (based on Hazen's William Formula). These PVC pipes then channelled water from the upper catchment to the distributaries from where the water was supplied to individual households. All the plumbing work was done

by trained village youths. Training programmes on plumbing were organized for interested village youth. They were also trained to function as service providers for maintenance and repair work.

A lot of hard work and commitment went into bringing the plans to fruition. It was a big moment when water began flowing out of water taps in the people's backyards. The villagers were overjoyed. The women of Shrambhukia do not have to struggle to bring water because they now have 24 x 7 supply of water. Women have started using water for all household chores. People have also started growing vegetables in their homestead. For the first time, people began thinking of a second crop in winter.

PROVISION OF SAFE DRINKING WATER

The women were quite happy and content to have piped water in their homesteads. Although the community had always been drinking water from the same stream, the water was not of good quality. The water supply to households was an add-on component of the diversion-based irrigation system; thus, there was no process of treating the water neither was there a storage tank. Water reached the taps directly because of the flow through gravity. Therefore, the next level of engagement started; a storage tank was constructed at the source for water treatment before being supplied for household consumption. The storage tank comprises three filter chambers to filter water for any impurities. The first chamber is filled with small pebbles to prevent moss and other floating matters; the water then passes through the second filter, which is treated with charcoal to prevent minerals and germs; and the last filter has a vertical layer of fine sand that impedes all kind of germs and minute particles. The treated

A lot of hard work and commitment went into bringing the plans to fruition. It was a big moment when water began flowing out of water taps in the people's backyards. The villagers were overjoyed.

water was then lab tested; traces of sulphate, nitrate, carbonate and iron found were under the permissible limits; however, the water had bacteriological contamination.

The water was then further treated with sodium hypochloride solution for bacteriological treatment (at the rate of one drop of 0.5% strength sodium hypo-chloride solution per litre of water). One drop of solution contains 0.5 mg chlorine and, after the contact time, the residual chlorine in disinfected water will be to the extent of 0.2 to 0.3 mg. (As per the 'BIS 10500' specifications for drinking water in India, water can be considered free from bacteriological contamination if there is free residual chlorine of 0.2 mg per litre).

A village development committee (VDC) has also been formed for the smooth implementation monitoring and evaluation of the project. Any repair at the source level and in the pipeline system is discussed in the VDC, and the contribution from the community collected for any such work. The VDC also plans to install a water meter in every household, to check the monthly water usage in each household. The household pays the water charges; the money goes into maintenance and other costs.

At present, piped water supply covers a total of 2,160 families in 53 villages in Balliguda and K. Nuagaon blocks of Kandhamal district. This endeavour of providing safe drinking water and irrigation facilities for the homestead agriculture has been widely appreciated at the district level. Along with OTELP, Integrated Tribal Development Agency (ITDA) is also supporting the up-scaling of the activity in other villages of Balliguda and K. Nuagaon as well in the villages of Phulbani block.

AWARENESS GENERATION

With water now being available in homes, women in SHGs and cluster meetings share about how their daily drudgery has been reduced. Women are now also talking about the government's campaign on the construction of individual toilets in every homestead. This was also a frequently talked-about topic in cluster meetings and other forums. They wanted to know how they could avail of the benefits and construct toilets in their homesteads. They spoke of the problems they faced owing to the lack of sanitation. They had to defecate in the open; they narrated how sometimes they had to face humiliation. The team, in its endeavour of supplying safe drinking water, had not dealt with developing awareness in the community. It started with awareness generation around the sanitation programme, talking about open defecation/ unsafe disposal of excreta and its implications on health. Discussions were generated around diseases and how we fall ill after consuming contaminated food or water; how unhealthy habits (unclean hands, unclean surroundings) have an effect on our health. Various tools such as organizing video shows in the village; placing placards and posters at prime locations in the village, schools and *panchayat bhawans* were used to ensure community participation. Discussions on living with dignity and following healthy lifestyles were encouraged in SHGs and clusters.

INITIATING THE SANITATION PROGRAMME

At the same time, a workshop of the OTELP partner-NGOs was held on the theme, in which Gram Vikas—a partner NGO—presented its model of a sanitation unit with

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bathroom and piped water supply for an individual family in Ganjam district. OTELP was ready to contribute Rs 4,500 per family for the construction of a household toilet unit. OTELP also proposed that Gram Vikas could be the Resource Agency for technical support. This was an opportunity for us to get a head-start in the Water and Sanitation Programme but we were hesitant. Unlike the piped water-supply system, which was

an add-on component of the drip irrigation system, this was a totally new activity for us. After many discussions, we finally agreed to work on the water and sanitation theme, in collaboration with Gram Vikas, wherein PRADAN would focus on community mobilization, which is its core, and Gram Vikas would provide the technical support.

We then again went back to the villages and started interacting with the community about the water and sanitation theme. We thought that merely constructing toilets would serve no purpose unless there was explicit demand and people understood its utility. This was not a simple task. One, we had to build community consensus on the sanitation programme and, two, we had to leverage with the concerned government department for funds.

We thought of focusing our intervention in those villages where piped water supply had already been installed. Once the community consensus was built, the work started in three villages in three different clusters. This was to ensure that the successful model could then be replicated in three different clusters. A village water and sanitation committee (VWSC) was formed to implement the programme smoothly. VWSC ensured that all the families in the village construct a sanitation unit

Village-wise Data of the Construction of Toilets and Bathrooms

No.	Name of Block	Gram Panchayat	Village	Total No. of Families	No. of Toilets and Bathrooms
1	Balliguda	Sindirgaon	Kilupada	35	34
2	Balliguda	Rutungia	Kadiganda	22	14
3	K. Nuagaon	Sirtiguda	Sirtiguda	84	35

and for this they collected a 'corpus fund', toward which each family had to contribute Rs 1,000, to be paid in 4–5 installments. Technical training programmes on masonry were organized for village youths, with Gram Vikas as a resource agency. Technical training programmes on brick-making were conducted for the community.

Though the community understood the need and was also motivated to construct the sanitation unit, there still was an issue of the huge cost of construction. The total cost of a sanitary unit along with a bathroom and piped water supply, as proposed by Gram Vikas, was approximately Rs 19,700, in which OTELP would provide Rs 4,500 grant to a family.

Simultaneously, efforts went on to influence the government-sponsored Nirmal Bharat Abhiyan (NBA) programme of the Department of Water and Sanitation (DW&S), to avail of the incentive of Rs 4,600 for the construction of Individual Household Latrines (IHHLs). Also, convergence with MGNREGA programme was done for the provision of labour component of Rs 4,500 for the construction of IHHLs.

At present, the construction of a sanitation unit in the three villages is in progress, with the community having started work with the

grant received from OTELP; the community contributed the labour and provided construction material such as bricks and stones. The availability of a working capital is a big challenge because the funds are transferred only after the completion of construction. This has also affected the work progress. In Kilupada village of Balliguda block, the first payment from MGNREGA has come as a big respite and has boosted the morale of villagers.

ISSUES AND CHALLENGES

The initiation of the Water and Sanitation Programme has encouraged the community to bring about substantive changes in lifestyle. However, there are issues that need to be addressed before replicating the model in other villages. First, the Gram Vikas model (with a toilet-cum-bathroom along with a piped water system), though a comprehensive model, has a high cost, making it difficult to replicate without any external support or grant. Second, there are multiple stakeholders involved, that is, OTELP, Gram Vikas, NBA and MGNREGA; this needs multiple levels of negotiations and influencing. Third, the construction of toilets or the provision of water is not the end; a constant engagement with the community is needed to bring about behavioural changes, requiring a lot of patience and energy.

Water, Sanitation and Hygiene (WASH)



PRADAN piloted the drinking water, sanitation and hygiene programme, aiming to bring quality changes in the life of the community with which it is engaged. The three pilot programmes in Balliguda, Purulia and Koderma were initiated through a series of interactions with and deliberations in the community. The main foci of the programme are to develop healthy habits in the community and develop low-cost models for accessing drinking water and sanitation.



Towards a Hygienic Lifestyle

SAFINA PARWEEN AND AVIJIT MALLIK

Working to gain the full-hearted support and active participation of the villagers in the building of individual toilets within the premises of their homes is a step in the path of social transformation

The most prominent landmark in Belkhara is the water tank, which stands tall at the entrance of the village next to the temple. It is a symbol of pride, prestige and prosperity for the people of Belkhara. About 400 ft away from the tank, where the vast open ground spreading out on the western periphery of the village ends, is the intake well and the pump house. And down below, next to the well, runs the river, Gauri, which serves as a natural boundary between Belkhara and the next village Harno. The rivulet has been the lifeline for both the villages for years. The villagers used it for bathing and washing and it was also the favourite place for their buffaloes during summer. The water flows round the year in this rivulet, even as hand pumps go waterless during the dry months.

But now the mini piped water supply (PWS) system provides water to all the 125 families of the village in their homes—seven days a week, round the year. It is a dream come true for the villagers of Belkhara—a dream, which became a reality three years ago because of the efforts of the villagers, especially the women's self-help groups (SHGs), which have been at the forefront of all developmental activities in the village for the last 12 years.

There are overall signs of prosperity in Belkhara. The *kaccha* houses are giving way to more airy and well-lit brick structures. Electricity connections have reached most of the families. All children of the school-going age, including girls, are now in school. The smaller children look healthy and no longer have distended tummies or discoloured hair. All this is, of course, not attributable only to the availability of safe water in homes but also to the overall development in the village due to the sustained involvement of PRADAN, which has touched all major spheres of their lives—economic as well as social—and has improved the quality of life in the village.

PRADAN has been working in five blocks of Koderma district of Jharkhand since 1992–93, covering 164 villages. There are 10,912 members working towards regular savings and credit mobilization in SHGs. In addition to organizing savings and credit, PRADAN has promoted livelihood activities such as agriculture, poultry, and

tasar reeling and spinning. SHGs have been a powerful vehicle for socio-economic change in the area. Underprivileged women clubbed their SHGs under the banner of Damodar Mahila Mandal Sangh (a federated body of SHGs promoted by PRADAN). They have drawn strength through social networking, meeting at regular intervals and joining hands to protest when there are instances of violence against women. Substantial work has been done to empower women in SHGs. SHG meetings are not only a hub for economic activities but also a source of solace for the women, who interact on social issues so that they can contribute to the progress of the society. PRADAN professionals arrange for as well as conduct various training programmes, and offer regular facilitation to SHG members, leaders and community resource persons (CRPs). These have also triggered an urge among members, to constantly improve their lives. Gradually, members have started discussing and sharing their opinions on healthy food habits, balanced diet, reproductive health, immunization, family planning, self-hygiene and sanitation, environment cleanliness and the importance of clean drinking water in their SHG meetings, cluster meetings and other forums. The most drastic and overwhelming change has been seen in the field of water and sanitation issues.

To develop a better understanding of water and sanitation, PRADAN organized an exposure

The benefits of having a safe source of water, the clean handling of water and the availability of toilets were highlighted after establishing the link between unsafe water, diseases and loss of income

visit to the Gram Vikas in Ganjam district in Odisha, where a community based intervention on water and sanitation had been implemented. The PRADAN team accompanied nine people from the villages of Belkhara and Dharaidih for the exposure. The objective of the visit was to show the villagers the people-owned-and-managed, sanitation-cum-

drinking water project, the processes involved in planning, implementing and monitoring the scheme, and its day-to-day management. The visit was followed by training programmes and awareness generation on how unclean drinking water and open defecation cause diseases. The benefits of having a safe source of water, the clean handling of water and the availability of toilets were highlighted after establishing the link between unsafe water, diseases and loss of income. The villagers easily arrived at a consensus about the need to have a PWS system in the village; however, the high cost of building a latrine with a septic tank acted as a deterrent.

To begin, a mini PWS system was developed in Belkhara and Dharaidih, through community contribution and with support from the Damodar Valley Corporation (DVC) under its Corporate Social responsibility (CSR) programme. Considerable time and energy were spent by the community in deliberating on the implementation and management structure, which is critical in ensuring effective and efficient delivery, maintaining proper records for transparency and ensuring that the rules and regulations are complied with, by one and all. A Village Development Committee (VDC) was formed and its main task was to implement, monitor and manage all the programmes promoted in the village. The villagers of Belkhara and Dharaidih held

a number of meetings before the VDC was formed and it was ensured that each caste or *tola* was represented in the committee. Training programmes and regular monthly meetings were organized to narrow down the social gap among the different communities in the two villages so that they could come together and participate in project implementation and management. Monthly meetings are held in the villages; the income and expenditure of the committee are read out to the villagers and all major decisions are taken in the meeting itself.

The experience of the women with the PWS system has been very positive and they now talk about the consequences of consuming contaminated water. They also speak of how water gets contaminated and emphasize the need to keep drinking water in covered, clean containers. They realize the importance of the water not being touched by hand when handling it. Most of the women now take a bath everyday in the privacy of their homes. Earlier, due to scarcity of water, most of the women and children did not take a bath; during summer, often, they bathed in the river where they also used to clean their cattle. As

The experience of the women with the PWS system has been very positive and they now talk about the consequences of consuming contaminated water

a result, most of them suffered from skin diseases as well as gynecological complications due to poor menstrual hygiene.

Women from the village shared, "Earlier these facilities were only for the town people but now we can also get these facilities at our village, without any dependency

from outsiders. Now our life is much more meaningful and we have more time for other work because we are now spared the drudgery of fetching water."

At present, the team is implementing four other drinking water projects funded by the Department of Drinking Water and Sanitation of the Government of Jharkhand. Money has been transferred for this by the department to the Village Water and Sanitation Committee (VWSC). PRADAN engages with the VWSC, the villagers and SHG members for technono-managerial purposes.

In Dharaidih, due to the continuing increase in the price of diesel, monthly operation costs became an issue. A solar-based lifting device was installed to lift the water from the well, to tackle the problem. The discharge of the solar

The PWS system in *Belkhara* comprises an overhead tank with a capacity to hold 30,000 litres of water and a 400-feet long main pipeline made of 90 mm diameter PVC pipes. This pipeline connects the tank with the intake well which is 20 feet in diameter and 32 feet deep. A five horsepower pump, run on diesel, draws water from this well and pumps the water up to the water tank. The well is covered and the water is treated with bleaching powder and alum before being pumped up.

The total cost of construction of the PWS system is Rs 15,04,800, of which the families contributed Rs 20,000. Apart from that, the villagers contributed around Rs 60,000 to install an electricity-operated pump because there was no provision for an electric pump in the original proposal to the donors. Currently, each family is paying a user fee of Rs 75, which goes towards the maintenance and service charge. Each family gets about 150 lpcd of water per day, and water is supplied twice a day.

pump varies from 0.9 to 1.8 litres per second, depending on the intensity of the sunlight. A device called the 'ferule' is being installed to supply uniform water to each and every household. The aim is to cover the entire village, reduce the consumption of fossil fuel, and provide potable water to each household.

SANITATION

The SHG women raised issues related to unsanitary practices and the consequent health hazards and were keen to have sanitary units at home. However, they believed that constructing a toilet would be very expensive and were apprehensive that it would overflow or smell. This provided a new activity for the PRADAN team. It contacted UNICEF and the District Water and Sanitation Department to seek solutions. Training programmes were organized at the SHG and the cluster levels, to clear doubts. UNICEF, Jharkhand, provided for the construction of two sanitation units for demonstration purposes at Belkhara where PWS was functional. UNICEF also supported by providing technical training and on-field support to construct sanitary units. SHG members from the village and from other clusters visited the village and were motivated to have their own units because of the easy-to-build technology and the cost-effectiveness. The members discussed the issue of having a sanitary unit with their families and in cluster meetings. Meanwhile, the PRADAN team raised some funds from UNICEF, to construct 10 sanitation units in five SHG clusters, that is, two in each cluster. The need to construct the sanitary unit was so high that in two villages, SHG members initiated and constructed sanitation units at their own cost and began using them too. In every forum of SHG members, sanitation became a point of discussion.

The SHG women raised issues related to unsanitary practices and the consequent health hazards and were keen to have sanitary units at home. However, they believed that constructing a toilet would be very expensive and were apprehensive that it would overflow or smell

The PRADAN team also explored a tie-up with the government-sponsored Nirmal Bharat Abhiyan (NBA), whereby the Department of Water and Sanitation would provide Rs 4,600 per sanitary unit as an incentive and the rest of the funds would be the beneficiary's contribution. A detailed cost-estimate of the Individual Household Latrines (IHHLs) was prepared, and a plywood model was constructed for display, to

help SHG members understand the working of the toilets better. This latrine is basically a 4 x 3 ft permanent brick structure with a twin soak pit at the rear end of the unit. The size of the soak pit is 1 metre in depth and 1.2 metres in width. One soak pit would be in use at a time; once it got filled, the empty soak pit would be connected through the junction box situated at the back of the IHHL, for further use. One soak pit would take a family of five to six members approximately four to five years to fill. Once the soak pit was filled, it would take the night soil five to six months to convert it into manure which could be used for agriculture purposes. The entire cost of this IHHL would be around Rs 9,500–10,000. Members contribute Rs 5,000–5,500 approximately, most often in the form of labour.

Under the NBA, each village has to form a VWSC, with the *Mukhiya* of the *panchayat* becoming President of the Committee. This Committee takes care of the issues of drinking water, and safe disposal of liquid and solid waste of the village. As per government guidelines, the incentive amount for each family in the Below Poverty Line (BPL) category will go to the account of VWSC; BPL families will then receive a cheque for the incentive amount after the construction of the

unit. To cover the entire village and help it avail of the incentive for the sanitation unit, the Above the Poverty Line (APL) families will be divided into five categories—families belonging to the scheduled tribes (ST)/schedule castes (SC), women-headed families, marginal farmers, landless farmers and families with a member who is handicapped.

The constant liaisoning by PRADAN with the concerned departments and the Deputy Commissioner (DC) helped pave the way for some monetary help for BPL families to construct latrines and a drainage system in the villages. In Koderma district, in the project villages of PRADAN, about 4,000 SHG members wanted to construct IHHL units. They applied to the concerned department and funds for 93 units have been disbursed for construction. The release of the funds by the government has been slow; the community members have, in some cases, begun constructing the units at their own cost. In almost all the villages of Koderma district, SHG members are willing to construct IHHLs.

Meanwhile, the government issued an order converging the Mahatma Gandhi National

It has not been an easy task for the people to put in their own money for making latrines, thereby contributing to a healthy society and lifestyle; constant effort has helped move this forward. Hopefully, in the years to come, more and more people will realize the importance of health and hygiene in their lives and develop healthy ways of living

Rural Employment Guarantee Act (MGNREGA) with this sanitation programme. There is, therefore, a provision of Rs 4,000 per IHHL as labour payment to job card holders. However, it is still a struggle to have the funds released under MGNREGA and the department. As per government rules, MGNREGA funds go into the account of the *panchayat samiti* whereas the incentive amount goes into the account of VWSC. Therefore, it is a great struggle to align the programme with

MGNREGA funds.

It has not been an easy task for the people to put in their own money for making latrines, thereby contributing to a healthy society and lifestyle; constant effort has helped move this forward. Hopefully, in the years to come, more and more people will realize the importance of health and hygiene in their lives and develop healthy ways of living. After the construction of IHHLs, PRADAN's focus is on how individual members of the household use the toilet as well as other hygiene issues. It will take time to change the mindset of the villagers; the team has begun to handle this Herculean task and is confident of achieving its goal.

The Promotion of Sanitary Toilets in India

SAMIR DAN

Focusing on the pivotal role that safe drinking water and sanitation play in the progress of the people in any location, this article discusses the use of sanitary toilets in the context of the Joint Monitoring Programme Report (2012) for Water Supply and Sanitation

BACKGROUND

The threat to human health from water-related issues is linked to, both, its scarcity and quality. Also, most of the water quality concerns are linked to faecal contamination, resulting from open defecation. Lack of access to safe drinking water and sanitation, therefore, prevents sustained progress in public health, globally. Drinking Water, Sanitation and Hygiene (WASH), as a sector is, therefore, the foundation upon which health facilities/infrastructure and other initiatives to address malnutrition need to be based. The challenge of laying WASH as the foundation for public health inputs to succeed are, however, quite daunting as is the challenge of meeting the Millennium Development Goals (MDGs) at the global level. The magnitude of the challenge is documented in the Joint Monitoring Programme (JMP) report, published every two years.

THE JMP REPORT (2012)

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (on the progress on Target 10 of the MDG 7) reports on the access to drinking water and sanitation globally. The Target 10 of the MDG 7 aims to "halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation." The base year for all the MDGs is considered to be 1990. The latest report of the JMP, published in 2012, states that the target of halving the proportion of people not having access to safe drinking water globally was met in 2010, five years ahead of time. During 1990 and 2010, over two billion people gained access to safe water worldwide and, currently, about 11 per cent of the people are using unimproved sources. Also significant is the fact that almost half of these two billion people, who have gained access to safe drinking water between 1990 and 2010, live in India (522 million) and China (457 million).

The JMP 2012 report also states that the world is unlikely to meet the MDG sanitation target even though 1.8 billion people have gained access to improved sanitation between 1990 and 2010. An estimated 2.5 billion people still lack basic sanitation facilities and, if the present trend continues, 2.4 billion people will still be without sanitation facilities by 2015. In 2010, about 63 per cent of the world population had access to basic sanitation facilities and, at the given rate of progress, about 67 per cent of the population will have access to sanitation facilities by 2015, which is less than the target of 75 per cent. Once again, India (251 million) and China (593 million) contributed significantly to the global gains in the access to sanitation; however, the progress in India, noticeably, has been comparatively low. The JMP 2012 reported that 814 million out of 2.5 billion, who do not have access to improved sanitation, live in India as against 477 million in China. Interestingly, the JMP report also indicates that nearly 1.53 billion people resort to open defecation globally, of which 626 million (60 per cent) live in India, compared to only 14 million in China. Evidently, progress in sanitation in India and China will determine the prospects of the world reaching the MDG targets.

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There are many complexities and challenges in the compilation and comparison of WASH data across nation states. Nonetheless, the report analyses several issues pertaining to the disparity in access to water and sanitation facilities between the rich and the poor, and also between the urban and the rural

areas. Complications involved in defining and comparing acceptable standards of toilets and safe water across countries, as well as accessing data on water quality, are some of the challenges faced in compiling the JMP report. An interesting component in the JMP report, which has a significant implication for programming in India, is the definition of different categories of toilets.

DEFINITION OF TOILETS AND ITS IMPLICATION IN THE PROGRAMME IMPLEMENTATION IN INDIA

The JMP data indicate that, in India, 814 million people access unimproved toilets of the global aggregate of 2.5 billion, which is the MDG sanitation target. Of these 814 million in India, 626 million practise open defecation, implying that about 188 million people are using some form of toilet, which is not of acceptable standards. Many of these people live in urban areas as indicated in Table 1.

Table 1: Status of Sanitation in India

Categories	Improved	Unimproved		
		Shared	Other Unimproved	Open Defecation
Urban	58	19	9	14
Rural	23	4	6	67
Total	34	9	6	51

Source: Progress on Drinking Water and Sanitation 2012 Update—WHO/UNICEF

In urban India, only 14 per cent practise open defecation as against 67 per cent in rural India. Shared or other unimproved toilets are mostly found in urban areas and are rare in rural India (only 4 per cent shared and 6 per cent other unimproved). In fact, progress in the reduction of open defecation in sub-Saharan Africa may be attributed to people resorting to shared or unimproved toilet facilities. In China, for instance, it is observed that only two per cent of the people practise open defecation in rural areas whereas about 56 per cent have access to improved toilet facilities, suggesting that about 42 per cent of the population accesses shared or unimproved toilets.

Table 2 shows the definitions of improved and unimproved toilets as documented in the JMP report.

Evidently, the challenge of the MDG goal in sanitation, globally, is to convert the population using unimproved toilets to improved toilets; and within that domain, to address the menace of open defecation. For India, this implies that the sanitation programme will need to address the following issues:

- To promote the use of sanitary toilets amongst 67 per cent of the rural

population practising open defecation and to convert about 15 per cent of the rural population from using unimproved toilets to improved toilets

- To convert the toilet use of 28 per cent of the urban population from unimproved source to improved source and to promote toilet use amongst 14 per cent of the urban population practising open defecation

IMPLEMENTATION STRATEGY IN RURAL INDIA WITH RESPECT TO TOILET DESIGN

To address the sanitation needs in rural India, the government-sponsored Central Rural Sanitation Programme (CRSP) was implemented in all the states in 1986. In addition, the Total Sanitation Campaign (TSC), launched in 1999, provided a major thrust to the sanitation sector. It had strict implementation guidelines at the national level, supplemented by fund allocations both at the national and the state levels. In 2011, the Government of India (GoI) restructured TSC, introducing several modifications in the programme components as well as increasing budget outlays. The key highlights were an increase in the subsidy for the construction

Table 2: Definition of the JMP Indicators for Improved and Unimproved Sanitation

Improved	Unimproved
<p>Use of:</p> <ul style="list-style-type: none"> ◆ Flush or pour-flush to: <ul style="list-style-type: none"> ▪ Piped sewer system ▪ Septic tank ▪ Pit latrine ◆ Ventilated improved pit (VIP) latrine ◆ Pit latrine with slab ◆ Composting toilet 	<p>Use of:</p> <ul style="list-style-type: none"> ◆ Flush or pour-flush to elsewhere (that is, not to piped sewer system, septic tank or pit latrine) ◆ Pit latrine without slab, or open pit ◆ Bucket ◆ Hanging toilet or hanging latrine ◆ Shared or public facilities of any type ◆ No facilities, bush or field (open defecation)

Source: Progress on Drinking Water and Sanitation 2012 Update—WHO/UNICEF

of home toilets and expanding the ambit of eligibility for the subsidy, to include the many socio-economic categories that were outside the domain of subsidies in earlier years.

The merit of enhancing the subsidy for toilets was obviously questioned in the backdrop of the experience of implementing TSC in India, wherein a supply driven approach (though not prescribed by TSC), was adopted by various state governments, constructing large numbers of toilets, which were not used by the people. This discussion was, however, limited to the issue of the definition of a sanitary toilet, as prescribed in the national guidelines.

PERFORMANCE OF TSC

The Census of India 2011 data has indicated that in contrast to the reports of the Department of Drinking Water Supply (about 65 per cent), only 36 per cent of the rural population use toilets. It clearly emerges that about half the toilets that were built are either not being used or do not exist anymore. Why did the people not accept the toilets provided to them? Experts are of the opinion that the facilities reached the community without adequate inputs for behaviour change. In other words, individual families were not consulted or involved in the implementation process. TSC was rechristened as Nirmal Bharat Abhiyan (NBA) in 2012 with an objective of accelerating the sanitation coverage in the rural areas so as to comprehensively cover the rural community through renewed strategies and saturation approach. NBA, therefore, lays substantial focus on changing the behaviour of the population as one of the key components of the programme.

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BEHAVIOUR CHANGE COMMUNICATION AND THE TOILET MODEL

Again, the success of the initiatives to change community behaviour depends largely on the efficacy of the government delivery mechanism to respond to the community demand for toilets, once such a demand is generated.

Evidently, the design and model of the sanitary toilet needs to be discussed with the user community. The guidelines of GoI provide the necessary safeguards to ensure public health security. Historically, GoI has very strongly recommended the promotion of sanitary toilets, that is, a sanitary pan with a water seal, which is connected to a covered leach pit. The sanctity of public health security is protected by these minimal and non-negotiable components. Thereafter, considerations of cost and sustainability come into play to first design the pit toilets and then the off-pit toilets—two leach pits are used alternately; the water seal leads to a junction box, which has two pipes leading to the leach pits. The use of the pits is controlled by a valve in the junction box. This then needs to be supplemented by a strong superstructure of the user's choice.

QUALITY ASSURANCE ENSURES SUSTAINABILITY

An assessment study (Impact Assessment of Nirmal Gram Puraskar awarded Panchayats conducted by TARU, supported by UNICEF) was conducted in 2008 at the national level, to measure the impact of the Nirmal Gram Puraskar (100 per cent toilet coverage—the best-case scenario) under TSC. It indicated that nearly 81 per cent of the households reported having toilet

infrastructure, 66 per cent reported that the facilities were functional and 63 per cent reported that they were using the toilets regularly.

The study further indicated that the primary reason behind people reverting to open defecation was the poor quality of construction (31 per cent). The lack of a superstructure (14 per cent), the poor location of the toilet (5 per cent) and the blockage of pans/dysfunctional status of the toilet (26 per cent) were other reasons cited by people, who were not using the toilets. These findings indicate that proper installation and the quality of construction are the key determinants that ensure sustained use.

CONCLUSION

The availability of a functional sanitary toilet on demand is the primary factor that determines the sustained use of toilets. The NBA has rightly focused on Behaviour Change Communication (BCC) as a key component for the advancement of rural sanitation in India. Following an effective BCC, providing the prescribed sanitary toilet with a water seal, leach

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pit and a strong superstructure assures public health security and is in alignment with the global definition of improved sanitation. The national policy is, therefore, comprehensive and on track.

The challenge for rural sanitation in India is to translate the policy into successful implementation. The challenges in programme delivery are enormous—assessing

the building capacity of the stakeholders, designing an effective fund-flow mechanism, assuring the quality of construction and ensuring integrity in the process of programme delivery. All these factors are important for the advancement of rural sanitation in India. This discussion paper, being limited to the significance of the toilet model prescribed by the national policy, has not dealt with these issues in detail. However, as the policy prescribes community contributions in the implementation process, both in cash and kind—an indicator manifesting effective demand), it is important to engage the community effectively and comprehensively in the process.

The article is an excerpt from a Discussion Paper by Samir Dan, Chief Engineer cum Executive Director, State Programme Management Unit, Drinking Water and Sanitation Department (DWSD), Government of Jharkhand

The Purulia Experience on WASH

KUNTALIKA KUMBHAKAR

Inspiring and instilling change in the centuries-old habits of villagers by slowly and steadily introducing the women of the SHGs in Purulia to sanitation and hygiene practices is both challenging and rewarding

BACKGROUND

When I joined PRADAN and heard that I had to stay in a village for 15–20 days for an assignment, the first thought that came to my mind was, 'Oh my God! How will I survive without a proper toilet and bathing space?' Being very finicky about clean toilets, I now had to make use of open spaces! I found it very difficult. Questions about how the women of the village manage immediately came to mind. The fear of someone turning up right there haunted me during my entire village stay. This is not an unfamiliar story for a PRADANite staying in a village, as is overwhelmingly evident when we initially shared about our experiences with each other. I questioned the women and girls of the village; most spoke of the lack of finances to make bathrooms and toilets. Many accepted the situation as natural and normal. Later, when the discussions in our meetings in PRADAN mainly focused on livelihood enhancement and community mobilization, this issue gradually faded out.

However, this problem has been spoken of by women over time. It is interesting that the villagers, initially, perceived us as 'livelihood wallahs'; therefore, their other problems hardly came up during discussions although members did share the need to have drinking water, and the difficulty and drudgery of carrying water over distances every day. Over the years and subsequently, in a meeting, at Anandamoyee Cluster at Berada village and later in federation meeting, many women members identified sanitation as a problem or a block in their way to progress as 'developed', recognizing that this needed to be worked upon. Such issues cropped up in SHG and cluster meetings too although we were tentative and evasive when dealing with these. Then PRADAN's focus in its Vision 2017—aspiring to enhance the well-being of the rural poor—opened a different door for us. It got strengthened with the Purulia team's intervention on women adult functional literacy. Our successful initiation on the literacy programme and our understanding on the concept of holistic development provided us with the confidence to venture on a path not treaded on so far.

It all started with the idea of a pilot project on Water, Sanitation and Hygiene, popularly referred as WASH. Water and sanitation being new areas of intervention, both for PRADAN as well as for the community, it was thought prudent to demonstrate the successful implementation of viable options for assuring these in one or two pockets, thereby leading to mass acceptance of the ideas. Simultaneously, during this phase, the aim was to enhance the organizational capacity of PRADAN so that the interventions could be taken up on a larger scale. We began with three villages—Berada, Jamkuri and Mohuldi—of Barabazar, Kashipur and Jhalda-1 blocks in Purulia district of West Bengal. These villages had strong SHGs that had successfully implemented a Special Swarnajayanti Gram Swarojgar Yojana (SGSY) programme; the villagers had already enhanced their income and were eager to bring about changes in other aspects of their lives. Three different blocks were chosen so that the positive experiences could be emulated easily in other villages, following a cluster-based approach.

BUILDING DEEPER UNDERSTANDING OF THE ISSUE IN THE AREA

To be prudent, we began with a situation analysis. We wanted to have a deeper understanding of the problem so that we know what the crucial areas for intervention are. We also wanted to understand the attitude of people towards WASH: is it a knowledge gap, or simply behavioural and attitudinal problems that stops people from adopting proper sanitary structure and other sanitation measures. A baseline survey of 710 families from the three pilot villages was conducted. It revealed that though a majority of the people use tube wells and dug wells for drinking water, these wells were often poorly managed, open, without any plastered walls, and were prone to getting water logged. Ten

per cent of the surveyed families also fetched water from either ponds or rivers near their house to meet their requirements. None of the surveyed families had a sanitary unit at home; all of them defecated in the open.

The survey also revealed that a considerable number of families had some minimal knowledge about how to keep drinking water safe; when questioned about their capacity to do so, the percentages were lower.

A loan analysis of SHGs provided us with an idea about the purposes for which loans were taken by members. Data was gathered from 170 SHGs of Barabazar and Baghmundi blocks and generated from the computerized accounting system used by these SHGs for accounts maintenance. The data revealed that 10.46 per cent (Rs 19,07,029) of the total loan taken was to combat illnesses, amounting to nearly a half of what they took for agricultural activities (Rs 40,41,151), which is their lifeline.

In an SHG meeting, when a member was confronted for not repaying the loan, she said, "*'Amar to sab daktarer kachey kharach hoye galo, NREGA'r kaaj elo jakhon takhon to 'se' khatiyay porey achey. Kaaj korte parbe tobe to loan ferot korbo* (All of my money saved has been spent on paying the doctor and for medicines. Ever since the NREGA work came, my husband has been ill. I can repay the loan only when I earn something)." When the issue was raised in the cluster meeting, many women affirmed that this was a familiar situation.

The baseline survey also revealed that most of the diseases were caused by either unsafe water and/or unsanitary conditions, and the most prevalent disease was diarrhoea.

The analysis was 'mirrored' back to the members. The awareness of this recurrent drain on their monetary resources was a

trigger for the members, who realized that they needed to take active steps to arrest this. The situation was ripe now for us to diversify into the hitherto unexplored area of drinking water and sanitation (DW&S) and address the issue of availability of safe water for drinking, sanitation and hygiene. Support came from Water for People (WFP), in the form of funds and technical knowhow. The challenge, however, was to explain the link between illnesses and the loss of wages and income, and why these occur. The moot question was, "Why are people falling sick?"

PRADAN then concentrated on three major areas to initiate work in the project. One was to continuously build awareness and sensitization on WASH issues, and how the entire contamination cycle works; second, provision of clean drinking water; third, the latrine structures at household levels and, fourth and most important, building the capacity of SHGs and their associative tiers to manage and implement the project.

AWARENESS AND SENSITIZATION PROGRAMMES

Health camps

Health camps were arranged twice in Berada, Jamkuri and Mohuldi—first, post-monsoon and, then, pre-monsoon—to identify the diseases occurring during both these times. This was the first time that health camps were organized in these villages and the turn up was huge. The entire management and conduct of the health camps was championed by women SHG members. They held several meetings, supported by PRADAN, on planning the events. This included understanding the purpose of organizing the health camp in the project, planning the event, detailing the tasks and role-division among members. Every group collected an initial record of the

families that would come for the check-up and Rs 5 per family was collected as a token registration. Important stakeholders such as the Block Development Officer (BDO), Block Medical Officer, Health (BMOH), and the *gram panchayat* (GP) Pradhan were invited; they supported the initiative by sending government doctors for the health check-ups. Some common medicines were also arranged for, after consultation with the doctors.

To make sure that the villagers attend these camps, SHG members made posters, wrote slogans, campaigned for and looked after the successful implementation of the health camp. These camps were arranged either in schools or in the open, with temporary arrangements. On the outside wall of the venues, some handwritten posters on health tips such as bathing regularly, maintaining hygiene and using soap to clean hands after using the toilet were displayed, to make the community more health-conscious. Following the success of the camps, one SHG member joyfully said, "It was only because of our SHGs and our cluster that we got the opportunity to arrange such a programme at our doorsteps."

As many as 769 people visited these six health camps, of which 10 per cent were children below 10 years, 30 per cent were old women (>50 years), 5 per cent were men in the range of 30–50 years, 4 per cent of the patients were men above 50 years, 7 per cent were adolescent girls and boys and rest were middle-aged women (25–50 years). All of them belonged to the three villages.

The findings of the report, prepared by the doctors, were shared and discussed with the community. The women said that diarrhoea and jaundice were prevalent especially during monsoons. The problem, especially for the women, as they described it, was because there was no privacy they were not able to clean

themselves properly during menstruation, leading to genital infections. They also talked about worms being common in children and even in elders, causing stomach ache.

Audio visual shows

From the day of inception of the WASH programme in these three villages, the fact that open defecation needs to be avoided and that it is essential to wash hands thoroughly before having food was discussed in every cluster and SHG meeting. The baseline survey revealed that the villagers had information on general hygiene; however, the challenge was with their attitude. With ample open spaces available in the area, they had become habituated to defecating in the open and not maintaining proper hygiene practices, generation after generation, year after year.

Audio visual aids were used to make the demonstration lively because visual effects have a greater and more permanent imprint on our minds. However, because the discussions around WASH took place only in SHGs and its associative tiers, the other villagers were never a part of these. Building an 'all-clean village' had to ensure awareness in the whole community; therefore, audio-video shows to generate awareness of the need for toilets, clean drinking water, uncontaminated source of water for bathing and washing, etc., were organized for the whole village. Approximately 800 people saw the three shows. The show was interactive, and included deliberations on the effects of open defecation, how it spreads disease and how it aggravates other health problems. Visuals of different sanitary latrine models were shown and there were many queries regarding the cost, the technology, the durability, the time period, etc. Interestingly, none of the villagers attending the show left till the end of the show and the discussions. This was one of the most effective awareness

programmes; the ripples created could be built on gradually into huge waves, resulting in action.

EXPOSURE VISIT TO SSDC

The video show triggered many queries among the villagers and they were keen to understand the model, its functioning and the cost. A two-day exposure visit to the Sundarban Social Development Centre (SSDC) in North 24 Parganas was organized, with support from Water for People (WFP), to see different toilet models, and understand the systems and processes for implementing and building these. A team comprising 12 SHG members, 5 masons (for technical understanding) and 3 PRADAN professionals went to SSDC. The team also saw the local sanitary mart run by SSDC and the water works in the local villages. It was a learning experience for the exposure team because this was the first time they saw people using sanitary units in a village.

DEMONSTRATION OF THE SANITARY LATRINE MODEL

On its return from the exposure visit, the team was eager to share their experiences with other villagers. This was another important step towards initiating the sanitary latrine unit construction. There were, however, only 12 people to influence 750-odd families. So, the next step was to have a demonstration of different models of the sanitary latrines so that villagers could watch these and select what suits them and their budgets.

For the demonstration model, the land required was donated by the villagers through a written agreement with the SHG on stamp paper in all the three villages. The models were determined by the people who had been on the exposure visit and PRADAN, together with inputs from WFP. In all three villages,

three models were selected for demonstration. These were ones with:

- ◆ Seat on pit with ceramic pan and squatting plate
- ◆ Leach-pit and off-pit model with ceramic pan
- ◆ Latrine with urinal/bathroom

WFP provided technical knowledge and sent three experts to help the local masons construct these models. With these models in place, people were able to clarify their doubts better through a physical inspection of the models. Many misconceptions such as the toilets will smell bad, will fill up soon or will overflow were laid to rest by explaining the technical aspects during the demonstration. This boosted the confidence of the community and helped the villagers make the decision.

These models were even visited by the Damodar Valley Corporation (DVC) personnel and from other villages from the neighbouring Bankura district where they were initiating a sanitation project.

SENSITIZATION TRAINING FOR CLUSTER AND FEDERATION LEADERS

In a place like Purulia, the concept of a sanitary latrine was never in focus. Therefore, making a success of this project was very challenging. It called for an attitudinal change to the issue; only then could behavioral changes be expected. From the beginning, the women leaders of the SHGs played a very crucial role in influencing and mobilizing the community around this. They have been the major force in other areas of development too such as livelihoods and literacy. These women have created a small space for themselves, through different activities, to influence the decisions

Much emphasis was given to explain the ways through which diseases spread because of open defecation. That women are the worst sufferers because of open defecation was doubly emphasized

of the family. Almost 70 per cent of the families are covered under SHG membership and, hence, this platform plays a crucial role. Therefore, we realized that if we could sensitize and train the leaders to talk on these issues, they would be able to motivate and organize the community. They would be very good actors

in influencing the entire community. They had never been taken through the whole concept of WASH, although there had been discussions on it sporadically. Then there was the question of not only having the sanitary infrastructure, but to using it regularly and maintaining its cleanliness and hygiene. With these ideas in mind, a two-day training-cum-sensitization event was organized.

A module was developed by the PRADAN staff, using some of the components of Community Lead Total Sanitation (CLTS) approach of training. (CLTS is an innovative methodology for mobilizing communities to completely eliminate open defecation. Communities are facilitated to conduct their own appraisal and analysis of open defecation and take their own action to become open defecation free.) The event highlighted how practices such as open defecation, polluting water by washing their cattle in ponds, and throwing waste here and there in the village impacts their families and village negatively and what actually happens. Much emphasis was given to explain the ways through which diseases spread because of open defecation. That women are the worst sufferers because of open defecation was doubly emphasized. The process included sharing the concept, exploring real-life experiences, analyzing these experiences and then building new knowledge.

Another important activity of the training was an 'Open Defecation Mapping' of the village,

which was specially designed to trigger disgust and shame about the practice. The mapping had a strong impact on their minds and created considerable turmoil. Most of the women were illiterate; therefore, games, sub-group activities, movies/documentaries, songs, etc., were used to convey the message of the ills of open defecation and lack of hygiene. The women themselves came up with beautiful slogans and songs on the issue. They took an oath and decided to influence everybody in the village to stop open defecation. After the training programme, the process of registration of families wanting sanitary infrastructure became easier and smoother.

Since this programme was being anchored at the federation level, the leaders were required to understand the intricacies of the issue; it was not merely the construction of a sanitary latrine unit. The WASH programme is running in three villages, one under each federation currently. This may be expanded next year and, hence, it becomes very important to build the capacity of the federation leaders. The leaders were given exposure to the three villages where the work was initiated; they were provided in-house training on sanitation and hygiene and their views on the same were sought. This generated much excitement among the federation leaders; they shared in another meeting that they now think twice before using pond water for bathing, etc. The federation members decided to spread the programme to every village and expand it as early as possible. These training programmes particularly made a huge impact in mobilizing the community and encouraging the villagers to opt for sanitary latrines.

STREET PLAYS AND HYGIENE DAY CELEBRATION

As the structures were being built and the training programmes were going on, we

wanted to infuse energy and trigger enthusiasm among the whole community. As a part of this, two programmes were planned—a street play on the concept and issues of WASH, and a Hygiene Day celebration, involving the whole village through a rally, etc.

Street dramas have special attraction and are an effective tool in influencing people and making them aware of issues. For this, a street play was planned in the village in the local language by the local street play troupe. The play was a comedy replete with messages. The incidents portrayed were everyday ones and very practical so that every child, man and woman could relate to it. The play called *Sukher Thikana* highlighted the problems and humility faced by women when they defecated in the open. Audiences were further energized when, at the end of the play, a quiz competition was organized to recapitulate the messages and the learning.

Hygiene Day was celebrated to enthuse and concretize the experiences of the training programmes, the street play and other discussions into some joint action in the community as one. These were mostly followed by street plays because it generated a lot of enthusiasm for bringing about change. On Hygiene Day, the community actively participated in cleaning their village surroundings of any filth and dirt. They cleaned their houses, village roads and all the water sources. A drawing competition for children on the theme 'My neat and clean village' was organized. Cultural programmes were also organized, in which the women and children participated.

SUSTAINING THE ENERGY AND THE MOMENTUM

Merely bringing about awareness once is not all; there needs to be continuous fuelling and

discussions at regular intervals. Celebrating Hygiene Day regularly is one way by which the women organize activities and competitions on hygiene and cleanliness among children and adults. They also organize rallies, make posters and slogans and celebrate the day-long event with stalls on information, knowledge and models. Quizzes and drawing competitions were also regularly organized, to sustain the momentum.

Along with this, SHGs and clusters are platforms where discussions and follow-ups happen. The capacities of women leaders were enhanced to facilitate the processes; these women followed up on the maintenance and renovation of the newly constructed drinking water structures as well as on the cleanliness and hygiene of sanitary units. They also follow up on the use of the infrastructure by family members and the progress of construction of new structures.

WATER WORKS

The situation was bad. Hand pumps broke down, especially during summer months, and it took the *panchayat* between 7 days and 6 months to repair these. During the dry season, the handful of staff members were incapable of addressing problems across so many villages.

Such being the existing situation, it was imperative to work towards making safe water, which is cost-effective, available to the population; this would also serve as a model for the government.

One of the reasons for villagers not adopting the sanitary latrine is its requirement of water, which is an integral part of the package. For sanitary latrines, at least one bucket of water

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is required per use for washing and flushing; with water being so scarce, the apprehension and resistance to constructing a sanitary latrine is natural. PRADAN had already been working on water conservation measures through water harvesting structures in these villages. Hence, we decided to work on making available drinking water first. Social mapping revealed that there are a few water sources in each of

these three villages, and we only needed to renovate these to ensure a smooth supply of water.

There were two types of drinking water sources in these villages—tube wells and open dug wells. The renovation of a well involved its cleaning, the plastering of its inner walls where required, a net to cover the well, repairing the platform, proper drainage of waste water into a soak pit, and making washing platforms where necessary and possible. Renovating a tube well meant flushing, changing its internal parts, repairing the platform and the broken tube well, and assuring proper drainage of waste water into a soak pit. Later on, flushing was decided against because of the risk involved if not done correctly. Although we started by repairing dug wells, the use of dug wells was discarded because these were considered as unsafe water sources. Tubes were installed in those areas that did not have, or had very few, tube wells.

A piped water supply system, drawing water from the river bed, was devised. The selection of these water sources was made by the community, keeping in mind where a majority of the villagers are dependent upon collecting their drinking water.

The work was supervised and regularly monitored by SHG members and their associative tiers. They monitored the progress in weekly meetings, by updating the tasks done, identifying problems and physically inspecting and supervising work regularly. In Jamkuri village, help to repair a tube well, defunct since long, was sought and received from Kashipur block. The SHGs submitted an application to

the block; after many visits by the villagers to the block and regular follow-ups with the panchayat, finally, the block sent plumbers, who repaired the tube well. The engineer also helped in supervising the semi-skilled masons in the civil work, designing and estimating and giving layout. Thus, at least two or three masons were trained so that they could maintain the slope of the platform properly, build the honeycomb soak pit (which they were unfamiliar with so far), construct the drain ensuring a proper slope and make each structure durable. The internal parts could not be repaired because of a lack of skilled persons to do it. We have decided to complete that in the next project. At present, 60 water resource renovations and 3 new installations have been completed. The population of 12,000 villagers is now able to access good quality drinking water with these interventions.

SANITARY LATRINE STRUCTURE CONSTRUCTION

The construction of sanitary latrines took time; there were much back-and-forth deliberations with the community, the SHGs and the associative tiers. Moreover the structures of their choice could not be fitted with the subsidy amount only, more investment was required.

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This extra cost was proposed to be as a part of zero interest loan. In a backward region like Purulia, which is abundant in open spaces with jungles for open defecation, constructing the sanitary unit by taking loan was a very big challenge. Moreover, the district officials too showed lack of interest in the idea initially. We wanted to help families to access the subsidy for sanitary infrastructure creation under Total Sanitation Campaign

(TSC), which went unutilized in Purulia.

A three-day technical training for masons was conducted, with support from WFP, so that the structures are technically sound, with no complaints of water logging, smelling, etc. After many awareness and sensitization programmes, a handful of people were convinced initially and agreed to go ahead with establishing a unit. Hoping this would inspire others, we worked steadily on accessing the subsidy for them.

Currently, the process is that a beneficiary submits an application to the federation, expressing interest in having a sanitary latrine constructed. The applicant pays Rs 150 as service charge to the federation as well as Rs 900 in advance as the installment, required to access the subsidy amount. The government has increased the subsidy it provides to Rs 5,100, to help build a good structure so that the community is encouraged to use it. The model, standardized over time and accepted by one and all, is the off-pit model with a brick superstructure, tin roof and door. With the subsidy, a family does not need to invest its money unless it wants additional features such as tiles in the structure.

COLLABORATION WITH THE GOVERNMENT AND ADMINISTRATION

From the very beginning, we worked to establish collaboration on this with the block and the *panchayat* as well as the district officials. Our aim was to align our activities with government policies and involve local officials of different tiers of governance with the water and sanitation work, especially the sanitary latrine activity. We invited the officials and people's representatives to all the events.

In Kashipur block, we organized a small orientation event with the BDO and the staff involved in TSC and the *gram panchayat* Pradhan. We made a presentation on the project goals and objectives along with the progress made till date. We shared our monitoring and implementing systems as well. We had a discussion on this as well as the processes and systems. At Barabazar, the local BDO and Assisstant Project Officer APO Sanitation visited the water works and the model sanitary latrine construction. The (APO) visited Berada to see all the work done by the villagers; he talked with the villagers, to assess the demand for sanitary latrines in the village. Impressed, he offered his suggestions on the construction of latrines to the villagers. Following this visit, the BDO and the APO took initiative and influenced others in the block, including the *Sabhapati*, and forwarded the name of Narayani Mahila Samiti of Berada as implementing agency (IA)/sanitary mart of the *gram panchayat*. The SHGs now have more control over the structure they help build and its quality. From being mere conduits for registration money, the federations now began to be actively involved in the implementation of the scheme. In Barabazar Block, the Narayani Mahila Samiti is now respected

The challenge was to contextualize the learning, think creatively and make innovations in the processes and systems, techniques and technologies

and is regularly invited in the monthly TSC meetings; its representatives are heard with attention. A workshop, attended by the BDO, the *Sabhapati* and *gram panchayat* Pradhans and *panchayat* Secretaries, was conducted, in which the women of the Samiti presented the models and their systems of work, earning praise and appreciation from all present.

ACHIEVEMENTS AND LEARNING

This has been a learning project for the team. We were trained by WFP. The challenge was to contextualize the learning, think creatively and make innovations in the processes and systems, techniques and technologies. Purulia district is ranked among the lowest on sanitation achievement. The challenges we faced were in two major areas: first, to adopt the best processes to build motivation and sustain the trigger and, second, to identify those sanitary structure models that would be accepted by and financially viable for the community, keeping the availability of water in mind. The achievement has been at three levels—at the organizational capacity building level, the community level and the district policy/norm level.

At the organizational capacity building level:

- ◆ The concept of safe drinking water, sanitation and hygiene as a comprehensive and inseparable package was developed and strengthened through our engagement.
- ◆ We enhanced capacities in the concepts of:
 - Community-led total sanitation
 - Motivational processes

- Technologies—water infrastructure and sanitary structures
- Hygiene practices
- ◆ Policy modifications/changes in the district regarding TSC
 - Change in perspective around the implementation strategy for TSC
 - The SHG as the IA
 - More than one IA in one *gram panchayat*
 - Change in the model of Individual IHHLs
 - Change in format of the Utilization certificate and muster rolls to make it more genuine and transparent
- ◆ Community level capacity building and hardware
 - Training and exposure of 45 federation leaders of three block-level federations on the concepts and practices of sanitation and hygiene
 - Training of 250 cluster leaders on the concept and practices of sanitation and hygiene
 - SHGs in charge of implementation and monitoring of the water works (tube well repairing and proper sanitized drainage structures) and sanitary structures
 - Four hundred IHHL structures constructed with Rs 18.2 lakhs taken as loan; repayment till date Rs 14.4 lakhs
 - Ninety-eight per cent IHHLs are in regular use
- Use of water for drinking purposes, other than the tube well, is reduced to 10% from 48%
- Nine lakh rupees leveraged from the government by the SHG-based institution as a part of entitlement access on IHHLs
- Celebration of Hygiene Day once a year, to keep the sensitization and awareness alive and to introduce best hygiene practices

CHALLENGES AND WAYS FORWARD

The big challenges are to initiate processes, to make the block-level SHG federations assume charge effectively and ensure access to all its members, and to take the initiative beyond the pilot villages. The other challenge is to motivate the villagers to invest in the installation of the units, a pre-requisite for receiving the government grant. Mechanisms have to be strengthened to ensure a smooth flow.

SOME COMMENTS FROM WOMEN

- ◆ "I am saved from defecating in fear."
- ◆ "The shortcut to the village is now clean and we can walk freely on it." ~ Arati
- ◆ "I am saved from the trouble of finding space for defecating, especially during the monsoon." ~ Sarala
- ◆ "Now I am not ashamed to welcome my guests during festivals." ~ Bugi
- ◆ "The myth of piped water supply for towns only has been broken in my mind." ~ Saraswati

Besides federations, clusters and WASH committees at the village level need to play a more active role (larger in scale and depth) in stimulating change in the attitude of villagers towards hygiene practices, who will then assume more responsibility in the implementation processes. More SHGs need to play the role of IAs so that the villagers access proper structures.

An area of major struggle is the time that PRADAN professionals devote to develop and

establish systems and processes; and to groom leaders and institutions in their roles. Having a structure installed is only half the battle won; the other half requires time in the initial days. Sanitation and hygiene not being the mainstream activity of PRADAN, the support and appreciation of the time invested by professionals is not always forthcoming. There is need for sensitization at the organizational level, with more workshops, discussions and exposure.



The youth from Rutungia *gram panchayat*, Kandhamal participated in a masonry technology training programme at Kalibali village in Ganjam District. The training was conducted by a resource person from Gram Vikas. It included components like design of sanitary units, and the technicalities of construction work addressing concerns of bad odour and water logging.



PRADAN is a voluntary organization registered in Delhi under the Societies Registration Act. PRADAN works through small teams of professionals in selected villages across eight states. The focus of PRADAN's work is to promote and strengthen livelihoods for the rural poor. It involves organizing the poor, enhancing their capabilities, introducing ways to improve their income and linking them to banks, markets and other economic services. The professionals work directly with the poor, using their knowledge and skills to help remove poverty. *NewsReach*, PRADAN's monthly journal, is a forum for sharing the thoughts and experiences of these professionals working in remote and far-flung areas in the field. *NewsReach* helps them to reach out and connect with each other, the development fraternity and the outside world.

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