Swajal Nirmal Bharat

A newsletter on water and sanitation in India

Vol 1 No 1 December 2012

Message from Mr. Bharatsinh Solanki, Honorable Minister for Drinking Water and Sanitation

The provision of safe drinking water and sustainable sanitation services in rural areas is a principal challenge that faces the country even now, 66 years after Independence. While there have been significant achievements in providing water supply to a large population, issues of water quality and adequate operation and maintenance systems need to be looked at seriously by policymakers and managers, both at the national and state levels. Rural sanitation needs a completely new approach, which has already been initiated by the Ministry. The revamped sanitation program, 'Nirmal Bharat Abhiyan', has been launched with a substantive increase in incentives, a focus on a new communication strategy, and attention on Solid and Liquid Waste Management. The understanding of the impact on the health of the population has to be understood.

In this endeavor, the Ministry of Drinking Water and Sanitation is bringing out an e-newsletter through which new information on policy changes can be communicated. It shall be an excellent platform for the projection of ideas and the dissemination of information regarding good practices from within the country as well as from abroad.

I urge all stakeholders to utilize the information that will be available and also send their inputs for the newsletter.

Nirmal Bharat Abhiyan

Renewed Focus on the Achievement of Sanitation Outcomes

A Working Group was constituted by the Planning Commission to review the Total Sanitation Campaign (TSC) and suggest strategies, priorities, and allocation for implementation in the 12th Five Year Plan.

According to its recommendations, the Government of India has designed a paradigm shift in TSC, which is now called the Nirmal Bharat Abhiyan (NBA) or the Clean India Campaign. The objective of the NBA is to achieve sustainable behavior change with the provision of sanitary facilities in all communities in a phased, saturation mode with 'Nirmal Grams' or clean villages as outcomes.

The new strategy is aimed at transforming rural India into 'Nirmal Bharat' by adopting the community saturation approach. The provision of incentive for individual household latrine (IHHL) units has been widened to cover all Above the Poverty Line (APL) households constituted by Scheduled Castes (SCs)/Scheduled Tribes (ST), small and marginal farmers, landless laborers, physically challenged or headed by women along with all Below the Poverty Line (BPL) households to attain community outcomes. Financial incentive for the construction of toilets has been raised for all eligible beneficiaries.

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SWACHCHHATA PRERAKS

Catalysts of Change

The NBA is an ambitious sanitation program of the Government of India that aims to revamp TSC to make India Open Defecation Free (ODF) by 2022. The NBA foresees an integrated approach to Water, Sanitation and Hygiene (WASH).

With the initiation of the NBA, the role of the district-level sanitation coordinator, who was an integral part of TSC, has undergone a substantial change. Now known as Swachchhata Preraks, these coordinators are the catalysts of the program at the district level, charged with facilitating GPs in achieving Nirmal Gram Panchayat (100 percent ODF) status, using systems of garbage disposed and drainage to create a clean environment in GPs. To achieve Nirmal Gram Panchayat status, Swachchhata Preraks will spearhead the activities of the NBA by planning, coordinating, monitoring, and executing the annual implementation plan for sanitation in their districts. The Swachchhata Preraks will be functional in 607 rural districts of the country.

Role and Responsibilities

- Facilitate achievement of Nirmal Gram Puraskar (NGP) for all GPs in the district;
- Prepare the NBA's annual implementation plan;
- Plan and implement a district Information, Education and Communication (IEC) action plan;
- Prepare the capacity building plan and training calendar at the district, block, GP, and village levels;
- Ensure the formation and regular meetings of Village Water and Sanitation Committees (VWSCs);
- Seek support of NGOs, SHGs, Swachchhata Doots, Bharat Nirman Volunteers, and local organizations for the implementation of the program;
- Coordinate convergence with ASHAs, Anganwadi workers, and other functionaries of the departments of Health, Education, Rural Development and Public Health Engineering, and PRIs;
- Ensure achievement in GPs of all components of the NBA, IEC, IHHLs, school and Anganwadi toilets, and SLWM;
- Ensure fund flow to the GPs and beneficiaries;
- Ensure sustainability of the NGP status; and
- Update information on the Ministry's Information Management System (MIS).

On September 18, 2012, Mr. Jairam Ramesh, then Minister for Drinking Water and Sanitation, launched the dedicated website on Swachchhata Preraks. This website is a one-stop resource hub for all Swachchhata Preraks. The website will be an effective tool for monitoring the program at district, state, and national levels. The Swachchhata Preraks will use this website to interact with each other to share their views/experiences, good practices, and challenges, across and within states.

Funds for capacity building of all stakeholders have been earmarked under the revised strategy. Convergence with other state departments such as Health, Women & Child Development, and Panchayati Raj is being focused upon

Convergence with the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has also been created to facilitate sanitation facilities in rural households by making funds available.

The component of Solid and Liquid Waste Management (SLWM) has been prioritized by developing a roster of options and focused funding. A conjoint approach with the National Rural Drinking Water Programme (NRDWP) has been adopted to address the issue of availability of water in the Gram Panchayats (GPs) so that sanitation facilities can be sustained after creation.

Funds for capacity building of all stakeholders including Panchayati Raj Institutions (PRIs) and field-level implementers have been earmarked under the revised strategy. Convergence with other state departments such as Health, Women & Child Development, and Panchayati Raj is being focused upon. Provision has been made to incentivize Accredited Social Health Activists (ASHAs) and Anganwadi workers to promote sanitation. Self Help Groups (SHGs), Women Groups, and nongovernmental organizations (NGOs) of repute are to be encouraged by states to participate in sanitation promotion. There is now a provision for social audit and active people's participation in the implementation process of the NBA through Gram Sabhas.

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CAMPAIGN

Students across India Test Water for Fluoride

Nationwide fluoride testing project in schools

Left to right: Students testing water samples at Kendriya Vidyalaya, Dungarpur; Kendriya Vidyalaya, Madurai, begins testing

To create awareness on water quality issues with a specific focus on fluoride contamination in groundwater sources, Schools Water Portal and Oracle Education Foundation are partnering on a nationwide program engaging students from across the country in a water quality testing, analysis, and reporting exercise for fluoride in groundwater.

The program aims to give students practical exposure to a problem that affects 6.6 crore people in 19 states of India. It complements the syllabus which touches on very broad aspects of water contamination in India, and is a simple test for fluoride in water that can spark interesting discussions on water quality in a classroom.

Over 1,500 Kendriya Vidyalayas and Delhi Public Schools are already participating in this program. Students from Leh to Port Blair and Bhuj to Itanagar are collecting groundwater samples and testing them for the presence of fluoride.

Schools are provided with a water quality testing kit that can test 30 samples of water for the presence of fluoride. Schools Water Portal has provided comprehensive learning resources and instructions on how to test water for fluoride to assist teachers and students conduct the testing. Once all results are received from around the country, Schools Water Portal will map them on an Internet-based maps platform.

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PROGRAMME

RWSSP-LS

Spotlight on Lagging States

The Government of India and state governments have spent more than ₹1,500,000 million over the last 20 years in providing water supply to over 700 million people in 1.5 million rural habitations and achieving sanitation coverage of 31 percent of the rural households. This is a major accomplishment for the Rural Water Supply and Sanitation (RWSS) programs, but improving and sustainable service delivery still remains a challenge. Deteriorating quality and quantity of source water, poor operations and maintenance (O&M) standards, and weak cost recovery are formidable constraints in achieving and maintaining full coverage. Moreover, only 31 percent of rural households have piped water supply and less than 11 percent of GPs have received the NGP for achieving an ODF environment.

There are some states with less than 10 percent coverage of households with tap connections and sanitation facilities and are lagging behind in many service parameters in RWSS. To assist these lagging states, MoDWS is developing a dedicated National Program for Rural Water Supply and Sanitation for Lagging States (RWSSP-LS) with the assistance of the World Bank.

Phase I will be to the tune of US$1 billion (US$500 million from the International Development Agency [IDA] and US$500 million as Government of India's counterpart funding). Four states (Bihar, Uttar

The program will bring about reforms in institutional aspects, infrastructure setup, social and environmental aspects, implementation arrangements, financing, and capacity building requirements. Project interventions will take place at all four levels: national, state, districts, and villages (including blocks, as appropriate)

Pradesh, Jharkhand, and Assam) are being taken up as part of the Phase I program. The goal of the World Bank project is to enhance the institutional capacity of MoDWS and participating states in delivering the national RWSS-LS.

The program aims to improve piped water coverage integrated with sanitation services through decentralized service delivery systems. It will be implemented through a special window of assistance under NRDWP. The program will bring about reforms in institutional aspects, infrastructure setup, social and environmental aspects, implementation arrangements, financing, and capacity building requirements. Project interventions will take place at all four levels: national, state, districts, and villages (including blocks, as appropriate). The capacity building component will address the national and the state RWSS programs while demonstration projects for decentralized service delivery arrangements will be implemented in selected districts of each state. The project will be implemented over a six-year period.

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CAPACITY BUILDING

Sustaining Total Sanitation through Community Participation

Nandiya Gram Panchayat of Khargone district of Madhya Pradesh, now a Nirmal Gram Model Training Center, shows how working together can make a huge difference

Nandiya GP of Khargone district of Madhya Pradesh was the proud recipient of the prestigious NGP in 2007 from the President of India. Its sustained ODF status has now resulted in the Government of Madhya Pradesh declaring it a Nirmal Gram Model Training Center. Today, the villagers of Nandiya can celebrate the success of being an ODF village. However, it was a completely different place in 2006. Human excreta and solid waste littered the streets, water-borne diseases were rampant, the aged and pregnant women lived under constant fear of falling ill, and adolescent girls and women faced the threat of molestation while going out to the fields for defecation. It was the death of a girl child due to unsanitary conditions that motivated the villagers to bring about sustainable change. The process was started by Mr. Shankar Singh Parihar, then Up Sarpanch of the GP, and financially supported by the district administration and the District Water and Sanitation Committee.

Nandiya has a total population of 1,837. IEC campaigns were carried out by the villagers to make the village ODF. Their experience says that building toilets is easy but bringing about behavioral change is a difficult task, which they have now achieved. The villagers have instituted several innovations to sustain the GP's ODF status.

The GP purchases plastic bags from all the villagers on every Tuesday at ₹25/kilogram. The aim is to make the GP free from plastic. They sell these plastics to vendors on a regular basis. For the disposal of other solid waste, the GP has adequate bhu-nadeps, compost pits, bio-gas system, and so on. The GP has a proper underground drainage system, through which waste water from each household is accumulated at one single point. The GP auctions the waste water every year to farmers who use it for irrigation.

The health impact of becoming ODF has been good. The two medical practitioners who earlier treated water-borne diseases have left the village due to a lack of work. The villagers have never used the free medical treatment card provided to them by the government.

The key factors in achieving success in terms of ODF status and sustaining it since 2007 have been leadership, community participation, involvement of PRI members, and support from the district administration.

The lessons that have been learnt include: a single person can change the scenario of an entire village; and total sanitation can be achieved through community participation.

The best practices achieved in Nandiya are now being replicated in seven GPs in the state with plans to introduce them into more villages. UNICEF has been providing support for community mobilization to Nandiya since 2010-11, and will further support the village in its capacity as a Model Training Center in the future.

CAMPAIGN

Total Transformation

The NGP winning tribal village of Chaphyachapada in Nashik district, Maharashtra, sets an example through good participatory practices

Chaphyachapada village in Baglan block of Nashik district, Maharashtra, has a primarily tribal population of 1,020 constituted by 159 families. What sets this village apart from others in the vicinity is that each family has an individual toilet facility, develops a kitchen garden, plants trees, practices solid waste management, dumps its garbage at a landfall site, and uses cattle dung as fertilizer in agriculture and gardening. The village environment is clean and healthy and villagers free from the risk of water-borne disease.

Not so long ago, the residents of Chaphyachapada lived in filthy and unsanitary surroundings, suffered from a range of water-borne diseases and were not interested in changing their situation. It was the launch of the TSC in Nashik district in 2004 that brought about a transformation in the mindset and behavior of the residents of Chaphyachapada.

With the initiation of TSC, district and block officers began by carrying out a survey to assess awareness and use of toilets. Elected GP representative and officials held meetings to educate people on sanitation, health, and hygiene. Mass awareness campaigns were organized using local folk performances. The VWSC engaged students and teachers to spread the message of sanitation and to convince villagers to construct toilets. A village-level committee was established to monitor open defecation; 'Good Morning' squads were formed to patrol the village to check open defecation. A fine of ₹500 was imposed for defecating in the open and ₹100 rewarded to those who informed on offenders. Women's involvement was encouraged and door-to-door visits were made by members of women's SHGs to convince people of the importance of sanitation and constructing toilets. Training programs were organized for Anganwadi workers and school teachers, who further provided masonry training to the villagers. A school sanitation and hygiene education program based on the innovative concept of 'Swachchhata Doot' was implemented.

The Village Water and Sanitation Committee engaged students and teachers to spread the message of sanitation and to convince villagers to construct toilets

The village achieved development and ODF status as a result of several measures such as drainage management, solid waste management, and drinking water management. In addition, family planning, tree plantation, ban on addiction and tree cutting, and promotion of solar road lighting were also promoted.

As a result, today, Chaphyachapada GP is the proud recipient of several state and national awards. It first participated in the Sant Gadgebaba Abhiyan in 2001-02 and won the third prize at the block level. In 2005-06, it won the first prize at the block level and the third place at the district level. In 2006-07, Chaphyachapada won the first prize at the district level and, in 2007-08, the third prize at the state level. It has also been awarded the NGP by the President of India at the national level. Apart from this, Chaphyachapada has won the Tanta Mukti Purskar, Vima Gram Purskar, and the Girna Gourav Purskar.

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SPOTLIGHT

Accolades for Achievement

Shirguppi, a village in Karnataka, wins national and international recognition for sustaining 100 percent total sanitation and community managed water supply

Shirguppi, a model village of Athani taluk in Belgaum district, has recently been awarded a cash prize of ₹5 lakh by web giant Google for successfully sustaining development in the village, based on parameters laid down by the website. However, the Shirguppi Gram Panchayat (GP) is no stranger to receiving accolades. It has been the recipient of two national awards–the Nirmal Gram Puraskar (NGP) and the Rashtriya Gaurav Gram Sabha–as well as two Nirmalaya State Awards from the Government of Karnataka. The total award money of ₹22 lakh has been pumped back into the development of the GP.

For the residents of Shirguppi, it all started with a Gram Sabha meeting in 2005. It was decided that open defecation would be prohibited and offenders penalized through non-issuance of documents such as ration cards, birth certificates, and so on, to families practicing open defecation. The GP constitutes 2,101 families of which 501 are categorized as Below the Poverty Line (BPL) and 1,601 as Above the Poverty Line (APL).

Following the meeting, an aggressive and intensive total sanitation movement was launched in the village, using different tools and methods to ensure the involvement of the entire community. The campaign was kick-started with the local Member of the Legislative Assembly (MLA) addressing the community and pledging financial support through the MLA fund, and the District Magistrate endorsing the movement. The GP then proactively took the movement forward.

An exhaustive Information, Education and Communication (IEC) drive with maximum emphasis on social mobilization yielded excellent results. Members of the GP, Self Help Groups (SHGs), Village Water and Sanitation Committee (VWSC), and Women Groups were actively involved in repeatedly visiting households to motivate the community to build toilets and shun open defection. Community rallies were organized at regular intervals. The Gram Sabha meeting was telecast live on the local cable channel and documentaries on the Total Sanitation Campaign (TSC) were frequently telecast. Film shows were arranged repeatedly and pamphlets distributed. Wall paintings were displayed on walls along the village roads, and on the walls of schools and Anganwadis. School children played a special role in the campaign by participating in a fortnightly rally against open defecation.

In a meeting of the Gram Sabha, the Branch Manager and senior officials of the Lal Bahadur Cooperative Credit Society, Cooperative Karnataka Vikas, were requested to sanction loans to interested villagers to build durable, quality toilets. The bank agreed on an assurance from the GP that it would ensure repayment of the loan by each villager. Bank loans of ₹10,000 for each family, irrespective of economic status, were sanctioned in 2006 for 330 families; 180 families got loans from KBG for a five-year term at 5 percent interest and 150 families for a seven-year term at 11-12 percent. BPL families received a subsidy of ₹1,500. The GP undertook to monitor repayment of loans.

Irrespective of economic status, the loan enabled BPL and APL families to install durable quality toilets with readymade safety tanks by spending in the range of ₹15,000 to 20,000. All toilets used tiles for easy maintenance. Households with shortage of space constructed toilets on the first floor, connected to underground safety tanks. Dustbins were placed alongside roads for disposal of solid waste. Since the villagers had invested hard-earned money in building the toilets, they were committed to using them and ensuring that there was no slippage on an open defecation free (ODF) environment.

However, the entire process of achieving ODF status was not easy. Some villagers continued the practice of open defecation. To counter this, 'Good Morning' teams were formed. Women's teams would interrupt male offenders while men's teams would embarrass women offenders. Tension was generated due to this activity and even a First Information Report

The GP also constructed eight community toilets, with eight seats each, to accommodate 64 people at one time, for migrants, landless laborers, and villagers with marginal land

(FIR) was lodged against members of the monitoring teams with the police but the District Magistrate supported the cause and police protection was provided to the monitoring teams. The offenders succumbed to community pressure and started sharing the toilets of neighbors till they built their own.

The GP also constructed eight community toilets, with eight seats each, to accommodate 64 people at one time, for migrants, landless laborers, and villagers with marginal land.

The GP has also successfully solved its drinking water problem through community action.

With World Bank funding, in 2005, a project worth ₹23.64 lakh was sanctioned for the upgradation of the single village scheme. The project constituted the repair of the water treatment plant, construction of an elevated storage tank of 3 lakh litre capacity, and building an additional distribution network (2.2 kilometer). The disinfection unit was created by the GP.

The water supply system uses the following methodology: Water collected from Krishna River flows to the Jack Well, built 250 meters away. From the Jack Well, using a submersible pump, the water is pumped to a four-chamber settling tank and then into a circular settling tank, from where the water is carried to a four-chamber slow sand filter. The filtered water is channelized into a pure water sump. Water is then treated with chlorine and pumped to two reservoirs from where it is distributed to households through household connections.

The village has participated in the project by planning and implementing sustainable drinking water supply with household connections, community management, and tariff collection.

The World Bank funded scheme was estimated at ₹23 lakh. Although the community was to contribute 10 percent of the cost and the GP 5 percent, ₹8 lakh was collected from the community with varied contributions for various groups. Families contributed ₹100 each, Scheduled Caste and Tribe families ₹50, shops ₹500, landless laborers ₹100, and farmers ₹100 per acre. Donations were also received ranging from ₹1,000-5,000; some even from banks that had extended loans for toilets. This process was initiated in 2006; work on the project started in 2007 and was completed within six to seven months.

Individual connections have been provided to 1,462 households and shared connections to 721 households. A deposit of ₹1,000/1,500 for connections has been collected from each household. The GP has engaged three pump men and one clerk to maintain the system. A tariff of ₹1,000 per person per year is charged from the 1,462 households with individual connections and ₹240 from the 721 households which share water. Electricity charges total ₹1 lakh per month and, including tax, the GP collects ₹16.35 lakh per year. It also earns interest on a fixed deposit on the security amount.

The achievement of sustainable sanitation and water supply has resulted in a slew of awards for the GP. In 2010-11, it received ₹4 lakh as prize money for the NGP, ₹2 lakh for the Rajat Nirmalya for securing the second place in the district, and ₹1 lakh for the Nirmalaya Award (first in the block). The crowning glory was the receipt of ₹10 lakh as part of the Rashtriya Gaurav Gram Sabha award, for effective and proactive functioning of the Gram Sabha. In addition, for sustaining the single village surface water scheme and total sanitation, the village has been recently acknowledged with the Google International Award for which ₹5 lakh has been rewarded to the GP. These achievements have brought the community a sense of immense pride and the determination to sustain their accomplishments.

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SPOTLIGHT

From Filth to Beauty

The transformation of a filth point into a beautiful pond and garden, with an attached sanitary complex

Vadakkencherry is a remote village located in Palakkad district of Kerala. In the centre of the village, facing the Panchayat building, was situated Mekkulam, a pond. However, instead of being a source of water and pleasure for the villagers, it had turned into a fetid point of contamination and disease. All kinds of garbage and waste were dumped here, and it soon became a breeding centre for pests and vectors. The stench emanating from the pond, which had slowly filled up and resembled a ditch, subsumed the entire village. As a result of this unbearable situation, the Panchayat authorities approached the District Suchitwa Mission. This crisis opened up a real opportunity for the TSC team to intervene.

In coordination with the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) Joint Program Coordinator, the TSC team prepared an action plan to clean the pond. The pond was desilted and the filth and dirt removed and used to fill the land around it. The side wall of the pond was constructed using the GP's plan fund and the pond filled with clean water. In the land-filled portion, a garden was laid out. GP and TSC funds were used to build a community sanitary complex nearby, which is now a pay-and-use utility. A place that was once filled with dirt and filth has become a beautiful pond surrounded by a garden. The community sanitary complex has become a public utility with one family obtaining a livelihood from it. And, more important, the villagers have been relieved of the foul odor and a health risk.

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INNOVATION

A Paradigm Shift

Transforming a routine water quality monitoring program to a household water safety program

The Water Supply and Sanitation Department, Government of Maharashtra, has undertaken various steps to tackle the issue of safe service delivery of drinking water in the recent past. It started with the launch of Sujal Maharashtra Nirmal Maharashtra Abhiyan. The Government of India recently released a policy formulation document under the National Rural Drinking Water Program (NRDWP). The paper emphasized the importance of water safety and security. Initiatives such as information, awareness and education campaigns, capacity building programs, technical solutions to the quality affected habitations to create awareness within communities, and mitigation measures to provide safe drinking water were launched. The department developed strong mechanisms to strengthen water quality monitoring to streamline the monitoring and surveillance program.

The Government of India's flagship programs generate a huge amount of data at different levels and the analysis of the data, which will lead to informed decision making and actions at different levels, is a challenge. Further, the involvement of more than one department often creates chances of duplication because of non-alignment of the management information system (MIS). Analysis and packaging of such data and evidence-based advocacy at different levels will certainly help to track the progress of different NFPs at the state level, which will support the Government of India and the respective state governments to measure progress against different indicators under the Millennium Development Goals (MDGs). Water quality monitoring will contribute hugely to MDG achievements. This is an example that provides a clear picture of how to position evidence-based advocacy with disaggregated data at the higher level in a state so as to influence revision of key policies across the districts.

From 2008 to 2010, more than 1.5 million water samples were tested in Maharashtra for bacteriological contamination by the Water Supply and Public Health Departments. However, the complete results of tested samples are not known at different levels, especially at the source level. Each department has its own MIS but there is no analysis within nor exchange of the analyzed data. The monitoring system does not provide disaggregated technology-wise water quality profiles supported by sanitary risk. Hence, the focus remains restricted to routine water testing rather than source protection and behavior change. Maharashtra adopted an innovative approach with technical support from the UNICEF Maharashtra office. First, the available data, collected over the years by the Water Supply and Sanitation and Public Health Departments, were mapped and a trend analysis was carried out. Simultaneously, the state government undertook rapid risk-based assessment of water quality based on the Joint Monitoring Program developed by UNICEF and World Health Organization (WHO) under Multi-District Assessment of Water Safety (M-DAWS: 2003) in 15 districts of Maharashtra.

The Water Supply and Sanitation Department along with UNICEF analyzed and rationalized all the Government Orders, including those of the line department of Public Health and Rural Development issued since 1996 till date on water quality monitoring and surveillance, and recommended the creation of pictorial flow charts for ease of understanding. A water quality protocol was finally developed with the appointment of a dedicated water supply person and staff at the district level as Jalnirikshaks to further strengthen monitoring and reporting. In a nutshell, the water quality protocol has led to a new Government Order. At present, the protocol is displayed in each GP office and Primary Health Center, describing the roles and responsibilities of each functionary at every level, starting from Panchayati Raj Institutions (PRIs) to the state government, along with suggestive corrective actions. UNICEF printed 6,000 copies for largescale distribution. Maharashtra is also adopting an innovative coding approach for all drinking water sources and is in the process of geo-referencing all water sources with habitation maps along with the specific location water quality and sanitary surveillance score. The state is in the process of demonstrating a transformation process from routine water quality monitoring to a household water safety plan.

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INNOVATION

Solar Energy-based Dual Pump Piped Water Supply Schemes

An innovative way of meeting the drinking water needs of households

The Ministry of Drinking Water and Sanitation is implementing an innovative scheme in which a single-phased 1 horse power (hp) solar energy-based submersible pump is installed in a high yielding borewell which already has a handpump. Water pumped from the system can be stored in an elevated tank and water supply provided to each house through tap connections. Each of these schemes can meet the drinking water needs of about 250 persons. The main innovations in this process are that electric supply or batteries is not required, and household tap connections can be provided. Each scheme costs about ₹5.10 lakh (including the average cost of the overhead reservoir [OHR] and distribution network but excluding the borewell cost).

The solar energy-based dual pump piped water supply scheme has been designed by the Groundwater Surveys and Development Agency (GSDA), Government of Maharashtra, Pune. This scheme has been successfully implemented in about 1,716 habitations of Maharashtra with the technical guidance of GSDA. It has been found to be useful in tackling the drinking water problems of remote and small hamlets/habitations.

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This Ministry had proposed and obtained clearance for partial funding of a project to cover 10,000 habitations (with populations between 150 and 250) in 82 Integrated Action Plan (IAP) districts of the country from the National Clean Energy Fund (NCEF). The remaining cost is to be borne from the NRDWP (central plus state share).

The NCEF will bear 40 percent of the cost of the system while the balance (60 percent) can be borne from the NRDWP.

The details of the scheme can be found on GSDA's website (www.mahagsda.org), and also on the Ministry of Drinking Water and Sanitation's website (www.ddws.gov.in) under the section 'case study'.

TRAINING

Building Capacity for Success

Successful recruitment, training, and management of Block Resource Center functionaries in Maharashtra

Based on the guidelines provided by the Ministry of Drinking Water and Sanitation, Government of India, the Water Supply and Sanitation Department (WSSD), Government of Maharashtra, has initiated the task of establishing Block Resource Centers (BRCs) across the state. The Maharashtra Center for Entrepreneurship Development (MCED), a state government agency, was deployed to support WSSD in the entire process of the recruitment and training of BRC functionaries.

After initial scrutiny of applications, shortlisted candidates appeared for a web-based test, conducted by authorized computer training centers. Successful candidates were called for personal interviews at the Divisional Headquarters. The selection panel comprised the Deputy Commissioner (Development), Superintending Engineer, Deputy Director (Health) and Regional Manager, MCED. It was noticed that only 650 candidates could appear for the personal interview due to lack of provision of travel cost and distance to the Divisional Headquarters. Therefore, the venue of interviews was shifted to the District Headquarters. The selection panel at this level comprised the Chief Executive Officer, Zila Parishad, Executive Engineer, District Health Officer, and MCED Project Officer. As a result, 1,363 members were selected against a requirement of 1,250 (353 BRCs and 897 Community Resource Centers [CRCs]). The WSSD approved a total of 1,500 positions, including 20 percent to deal with drop-outs.

The course has been designed to equip the BRC functionaries with knowledge and information on all aspects of the rural water supply and sanitation sector in Maharashtra. The course material was developed by WSSD in consultation with stakeholders. An expert group of five trainers at the state level engaged to develop module and training modalities. This group trained five principal trainers from each division (Maharashtra has six revenue divisions), creating a pool of 30 principal trainers. These principal trainers in turn trained five master trainers per district (Maharashtra has 33 rural districts), creating a pool of 165 master trainers.

The training module was designed by WSSD along with the Water and Sanitation Support Organisation (WSSO) consultants, UNICEF, and MCED to ensure that the BRC functionaries maximized their learning through classroom sessions and also gained practical exposure to the functioning of water supply and sanitation schemes and institutions. Emphasis was also placed on their learning assessment.

During the training period, monitoring/observation visits by officials from the Zila Panchayat, WSSD, UNICEF, and MCED made a difference in terms of improvements in the quality of training.

The key challenges, recommendations, and learnings that emerged from this activity include:

- Structured orientation of all government functionaries involved in the training and management of the BRCs is a prerequisite to get support at the district and block levels;
- Availability of candidates with mass communication/social sciences/rural studies background with two years' work experience was a challenge. The eligibility conditions may be revised to accommodate prospective candidates from other backgrounds;
- Remuneration was one of the biggest constraints in attracting and retaining potentially good candidates. Periodic review and enhancing their pay may be helpful to ensure continuity;
- Conducting classroom and debriefing sessions as well as the field training approach have provided sectoral knowledge to BRC functionaries for better performance;
- Communication with a large number of candidates was a challenge initially but the use of SMS, e-mail, and the Internet made the process easier; and
- A mechanism for periodic reporting and assessing capacities of the BRC functionaries and appropriate training support by the Ministry of Drinking Water and Sanitation can ensure that these resources are nurtured well.

BRC functionaries during a field visit in Satara district, Maharashtra

A 27-day training calendar was prepared, divided into three sessions:

- **During the 12-day classroom session, the participants were oriented on all aspects of water supply and sanitation and field visits organized to practically conduct exercises such as Participatory Rural Appraisal (PRA);**
- **The 12-day field training session was designed to ensure that the participants got an opportunity to visit various sites, including water quality testing laboratories, water treatment plants, and water supply schemes. Discussions with Gram Sabha and Village Water Supply Committee (VWSC) members were facilitated; and**
- **The debriefing session of three days was planned to measure learning of the BRC members.**

For more information, contact: Director, CCDU, Maharashtra, tscccdu@rediffmail.com

The document is available online at http://www.arghyam.org/sites/default/files/WQM%20BOOKLET.pdf. Contact Arghyam at info@arghyam.org, 080 41698941/42 for more information and copies of the document

NGO CORNER

A New Framework for Water Quality Management

Bengaluru-based Arghyam (a non-profit foundation focusing on domestic water and sanitation) has prepared a water quality management (WQM) framework for rural areas. The framework lays out a phased and process-driven approach to WQM and is based on the work by prominent nongovernmental organizations (NGOs) in water quality (WQ) from across the country. The phases that have been identified for a sustainable WQM program are:
(1) Assessment of baseline situation;
(2) Participatory planning;
(3) WQ monitoring;
(4) Implementation; and
(5) Operation and maintenance.

The activities in the framework include a mix of education and capacity-building on the software side, and monitoring and technology on the hardware side, mainstreamed through existing institutions. The first three phases of the framework focus on education and capacity-building of the local community, planning finances, sourcing data, and building/strengthening the village institutions. These institutions are then actively involved in the later phases of selection, design, implementation of safe water interventions as well as post-implementation monitoring. During the analysis of responses, the resource numbers were normalized for a project covering 20 villages with 200 households each. Some key observations from the NGO projects in WQ that were studied:

- NGOs working within the framework have been using various quality checks at the end of each activity phase;
- The projects studied for the framework ranged from three to five years;
- The project budgets varied between ₹0.5-1.9 crore;
- Expenses on the software activities ranged between 12-20 percent of the total budget across all projects. In contrast, spending on the hardware activities ranged between 35-50 percent. The remaining expenses were salary and administrative costs;
- About six to 12 staff members were involved in WQM across all projects;
- Several factors influenced the resource requirements during the different phases of WQM. In particular, the current state of the intervention area in terms of existing infrastructure, social capital and cohesion, and so on, had a significant impact on the resource requirements; and
- The projects were mostly funded by donors, the community, and the state government. Community contributions varied between 5-15 percent of the overall budget. Some of the organizations leveraged NREGA and NRDWP-WQ funds available with the state governments.

Target Audience

Donors will be able to screen proposals of prospective organizations and work with them to improve the project design. NGOs working on WQ issues should be able to use this framework as a planning and budgeting tool and identify the possible financial leveraging possibilities. Government agencies will find it helpful to understand and adopt the best practices in WQM from the NGOs and incorporate these into their interventions and water safety plans.

This document should also help all the concerned sector players to understand the different phases of a WQM project and get a broad, directional sense of the time, human and financial resource requirements within each phase.

Arghyam presented this framework at the recently concluded WQ conference organized by the Ministry of Drinking Water and Sanitation in New Delhi. Arghyam can provide knowledge and technical support to government agencies interested in implementing this framework.

For more information, contact: priyad@arghyam.org

GENDER CORNER

Deepmala Pathak

Deepmala (17) of Itarhi Village of Buxar, Bihar, has become an example of resilience and courage to all her peers. After watching a story track in *Kyunki Jeena...* on open defecation she decided that she would have her father build a toilet in their home for her and the women of the family.

When she initially approached her father, her request was turned down. He believed that building a toilet was a waste of money and that the matter was not to be discussed again. Deepmala, however, was of a different opinion and waited for the right moment to approach her father once again.

This moment came in the months leading to her brother's wedding. By suggesting that guests would feel uncomfortable without an in-house toilet she convinced her father to construct it. The result of her persistence was not only beneficial for her family, but the message spread to the whole village. Many more homes are now following the example given by Deepmala and are building indoor toilets.

Courtesy: UNICEF

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