Swachh Sujal Shakti ki Abhivyakti

Inspiring Stories of Women and Rural Communities

गजेन्द्र सिंह शेखावत
Gajendra Singh Shekhawat

जल शक्ति मंत्री
भारत सरकार
Minister for Jal Shakti
Government of India

MESSAGE

Our Prime Minister has mandated all of us to ensure that the women of India are supported and empowered in every facet of development. In keeping with this, our priority has been to ensure that women have equal access to economic opportunities and are able to contribute to the country's growth and development.

As the Minister for Jal Shakti, I would like to state that my team of officers and I, through our flagship programmes of Swachh Bharat Mission Grameen (SBM-G), Jal Jeevan Mission (JJM) and National Water Mission, are making consistent efforts to ensure ease of living, dignity, enhanced quality of life and empowerment of women.

Safety and dignity of women were the inspiration behind the Swachh Bharat Mission, launched by our Prime Minister on 15 August 2014 from the ramparts of the Red Fort. His clarion call led to a Jan Andolan and through the efforts of the people of India, particularly women, the sanitation coverage in rural India, which stood at merely 39% in October 2014 even after 67 years of India's independence, crossed the 98% in just a little over four years of the Swachh Bharat Mission (SBM).

Women have been the driving force behind this success and it was they who led the construction and use of toilets, not only in their own households but also across their villages and districts. Women from Self-Help Groups, women government officials as well as women civil society activists joined forces to achieve an Open Defecation Free India!

In their roles as Swachhagrahis, Sarpanches, Rani Mistris or Jal Sahiyas, their contribution to the programmes cannot be overstated. I salute them and all the women awardees present at the Swachh Sujal Shakti Samman for their tireless contributions to providing access to water and sanitation for all.

Our Flagship Missions, in addition to creating a cleaner and hygienic environment, have opened up various income-generating opportunities for women. During the implementation of these programmes, women have been employed as sanitation workers, given training in waste management, and provided with equipment and supplies necessary to carry out their duties. Furthermore, the Mission has led to the creation of micro-enterprises in the waste management sector, especially in plastic waste management and in the preparation and sale of bio-fertilizers. These activities have opened up new avenues and opportunities for women to start their own businesses in segregation, recycling and re-use of waste and thereby earn a steady source of income.

The Ministry of Jal Shakti owes its success to all our womenfolk from small towns and villages across the country who have worked tirelessly for the campaigns. They are our 'Change makers' and our 'Trailblazers.' I salute them and thank each one of them, individually and collectively, for their persistent efforts towards the making of a Swachh Sujal Bharat.

Jai Hind!

(Gajendra Singh Shekhawat)

Office: 210, Shram Shakti Bhawan, Rafi Marg, New Delhi-110 001
Tel: No. (011) 23711780, 23714663, 23714200, Fax : (011) 23710804
E-mail : minister-jalshakti@gov.in

Message

Smt. Vini Mahajan
Secretary
Department of Drinking Water and Sanitation

The father of modern South Africa and champion of women rights, Mr. Nelson Mandela, said "Freedom cannot be achieved unless women have been emancipated from all forms of oppression."

The two flagship schemes of the Department of Drinking Water & Sanitation- Swachh Bharat Mission (Grameen) and Jal Jeevan Mission (JJM)-have been working towards achieving the goal of empowering the nation's soul, the Women, and liberating them from endless drudgery, and disease.

SBM(G) since its inception has accelerated progress towards a more gender-equal world. Given that women have always been disproportionately affected in most areas of life, it set about providing safe drinking water, adequate sanitation and menstrual hygiene facilities, allowing them to lead safe, productive, dignified and healthy lives.

This year's International Women's Day campaign theme is **'Embrace Equity'**. To understand the theme better we need to make a distinction between equality which means providing the same resources or opportunities to each individual or group of people, as opposed to equity which recognizes that each person has different circumstances, and there is need to allocate the desired resources and opportunities that will lead to an equal outcome.

The Swachh Bharat Mission (Grameen) is certainly working towards both equality and equity. Understanding that women and adolescent girls menstruate and that they need safe sanitation services to manage this hygienically and with dignity, SBM(G) is ensuring separate toilets for boys and girls in schools. The Mission is also encouraging dialogue on menstruation – a natural biological process- within the community, and education on safe menstrual hygiene management which includes the use of clean absorbents and safe disposal facilities.

Besides, the Mission is also providing equal livelihood opportunities for women in solid and liquid waste management including training them in various aspects of the implementation of the programme. With such opportunities, women have taken up leadership roles in managing solid and liquid waste to bring about visual cleanliness

to their villages. They have understood the importance of hygiene and safe sanitation for the health of their families. They are storming male bastions by turning into entrepreneurs or masons, driving pickup trucks and managing programmes efficiently. Such actions have offered them alternative livelihoods that have helped them earn an income, and at the same time given them a sense of worth as they contribute to society.

In many parts of the country, Women, as the water manager for the entire family, are forced to walk long distances carrying loads of vessels. The flagship Jal Jeevan Mission scheme is marching ahead to end the century-old drudgery faced by our women and young girls and providing dignity to rural women. Today, women are part of 'Har Ghar Jal' programme right from community mobilization, to drafting of Village Action Plan and monitoring in-village water supply works including operation & maintenance. With tap water connections at homes as well as at schools and anganwadi centres, girls are now returning to education.

It is indeed time to empower women in all spheres. In fact, I believe that none of the Sustainable Development Goals can be achieved without Goal 5, which focuses on gender equality, at the forefront of our efforts. It is time to empower women and girls everywhere, so they can reach their potential.

As our Missions continue unabated, we acknowledge the women who have overcome barriers, leveraged their strengths, and taken leadership roles, to bring about positive change in terms of health, dignity, safety, and well-being in their communities.

Be it as Sarpanches, Swachhagrahis, ASHA or Anganwadi workers, Water Warriors or even members of Village Water and Sanitation Committees or Self Help Groups, these women changemakers at the grassroots, who have contributed so much in the journey towards making of a 'Swachh Sujal Bharat' will be celebrated and honoured by the Hon'ble President of India during the Swachh Sujal Shakti Samman (SSSS) that will be held on March 4, 2023. I believe this will go a long way in motivating other women across India and achieving an inclusive water, sanitation and hygiene (WASH) system.

This Women's Day, I would like us to put our hands together for our women. Together, let us uphold women's achievements, recognize challenges, and give greater attention to their rights. Let us all demonstrate our pride in their achievements and dedication in the building of a world free from all ills for humanity.

(Vini Mahajan)

Preface

Ministry of Jal Shakti, under the aegis of the Department of Drinking Water and Sanitation (DDWS), has been implementing two flagship programmes of the Central Government, i.e., Swachh Bharat Mission Grameen [SBM(G)] and Jal Jeevan Mission (JJM) to ensure access to safe sanitation and potable water supply. In addition, through the Department of Water Resources, River Development and Ganga Rejuvenation, the National Water Mission (NWM), a central sector scheme that focuses on integrated water resources development and management, is underway.

SBM and JJM demonstrate the country's commitment to empowering women and providing access to clean water and safe sanitation to all people living in rural India. Safe drinking water, sanitation and hygiene are vital for human health and well-being, especially for women, young girls and children. They also contribute to childhood development, school attendance, livelihoods and dignity, and help to create resilient communities living in healthy environments.

On the other hand, NWM focuses on conserving water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management.

The implementation of all three Missions has been lined with narratives of courage, tireless efforts, innovation and more – by women, individuals, communities and district teams to bring about a Swachh Sujal Bharat.

Presented in this book are case studies that showcase the efforts made by individuals, especially women, and communities on various thematic areas of each Mission, viz. Making the village ODF Plus Model, GOBARdhan/ Biodegradable Waste and/or Plastic Waste Management, Greywater Management and/ or Faecal Sludge Management, Operation and Maintenance of water supply schemes, community mobilization, ease of living, reduction in age-old drudgery, water conservation, etc.

Through this book, the Ministry of Jal Shakti presents a tribute in the form of 108 stories from the grassroots to bring women leaders and efforts made by the community in the WASH sector to the forefront and connect them to National leadership, thereby motivating other women and individuals in achieving an inclusive water and sanitation system.

Contents

The Sanitation Journey Continues

The Sanitation Journey Continues

Providing access to safe sanitation for every rural household leading to an open defecation free (ODF) India forms the core objective of Swachh Bharat Mission (Grameen) (SBM(G)), which is considered to be the world's largest behaviour change programme. It achieved the seemingly impossible task of increasing sanitation coverage from 39 per cent in 2014 to 99 per cent in 2019 with over 11.05 crore toilets built until the present, across rural areas of 36 states and union territories that declared themselves ODF during the five-year campaign.

The campaign achieved a stellar success due to a combination of political leadership, public financing, partnerships and people's participation, with the Prime Minister leading it from front with the resolve to eradicate the practice of open defecation in five years. It was truly a jan andolan (people's movement) as more than 60 crore people from all spheres of life contributed to making the programme a phenomenal success.

SBM(G) put India on the path to achieving the UN Sustainable Development Goal 6.2 – to achieve access to adequate and equitable sanitation and hygiene for all, and end open defection, paying special attention to the needs of marginalized, women and girls and those in vulnerable situations, by the year 2030. Studies indicate that toilet usage is 93.4 per cent following the implementation of SBM(G) with significant economic, environmental and health impacts, contributing to empowerment of women in particular.

The Union Cabinet approved Phase II of the SBM(G) with a total outlay of Rs. 1,40,881 crore in February 2020 to focus on sustainability of the ODF status, ensuring that toilets were being used, no one was left behind and to implement solid and liquid waste management (SLWM) in villages to achieve visual cleanliness of the village surroundings.

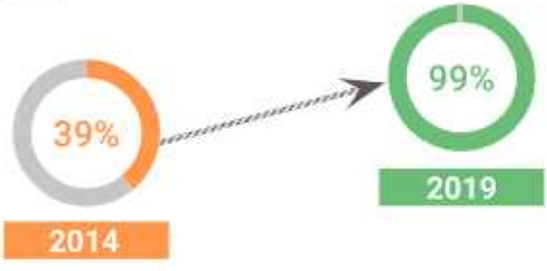
SBM(G)-II, which is being implemented in a mission mode from 2020–21 to 2024–25, aims to deliver ODF Plus to the villages, encompassing sustainability of ODF status, bio-degradable waste management, plastic waste management, greywater management, faecal sludge management and modalities for convergence with other schemes.

Just like the implementation of SBM(G)-I was filled with narratives of courage, tireless efforts, innovation and more

– by individuals, communities and district teams to make ODF behaviour an accepted norm – the Phase II of the flagship mission is similarly eliciting the enthusiasm and drive of the people towards promoting clean and green villages while also ensuring the health and well-being of our communities in the spirit of 'Swachh Bharat, Swasth Bharat'.

This book documents some of the efforts and the achievements under each of the SBM(G) Phase II verticals.

Sanitation coverage in India



Total outlay for ODF sustainability approved by Union Cabinet in February 2020

INR **1,40,881 crore**

Toilet construction

11.05 crore across rural areas of 36 states and union territories

Toilet usage post SBM(G) implementation

Women of Swachh Bharat Mission Grameen

Introduction

Women have always been disproportionately affected by lack of sanitation and poor hygiene practices that have had an adverse effect on their health. Access to sanitation facilities, especially in the home, has increased women's dignity, health and safety as they are no longer needed to walk in the dark to relieve themselves.

Throughout the SBM(G) campaign, the contribution of women has been phenomenal to say the least. From breaking stereotypes to overcoming the bias in the communities, they have taken on multiple roles to achieve the goals of the Government's flagship programmes while contributing to the health and well-being of their communities.

Among the various roles women have taken are that as Rani Mistris to construct toilets; Green Ambassadors to collect, segregate and treat waste; caretakers to operate and maintain community sanitary complexes; health promoters to promote COVID-appropriate behaviour; interpersonal communication (IPC) practitioners to build awareness about best practices in hygiene and sanitation; swachhagrahis to engage in sanitation work; entrepreneurs to start barthan banks or make sanitary napkins amid scores of other roles, all of which have led to sustainable benefits for their villages.

The grit and determination and more importantly the versatility women have displayed time and again have demonstrated that with the right support, women are capable of achieving the impossible. Often, they are adaptable enough to acquire new skills, embrace new ideas and go the extra mile to empower themselves. Indeed, the women of our villages deserve our heartfelt appreciation for their stellar efforts.

Case study

1

Swachhata champion donates land for GOBARdhan project

When Smt. Richhawati, an active community leader and self-help group (SHG) member, heard that the community biogas plant sanctioned for their gram panchayat (GP) in 2021–22 was being shelved owing to non-availability of community land and inadequate finance, she donated 2,500 square feet of land that she owned for the project, which would cater to the clean fuel needs of the community.

The village community, which has a large cattle population, was looking forward to the community biogas plant under SBM(G), which would benefit 20 households. Smt. Richhawati's magnanimous gesture has set the wheels in motion for the construction of the GOBARdhan plant, located in Salmatta GP in Sitarganj block of Udham Singh Nagar district in Uttarakhand.

It was after a series of meetings with the panchayat representative and community consensus that the project was first approved. But the construction of the unit could not be started at the scheduled time for various reasons. A patch of common panchayat land was first identified, but it was far from the cluster of 20 households. The technical agency had advised that the land should be located close to the cluster of households so that biogas connections could be easily made to them.

A beneficiary of the cluster, Smt. Richhawati, who owns an individual biogas plant, is an active community social worker and a member of a self-help group run by National Rural Livelihood Mission (NRLM). In fact, all households in the cluster that belong to the Scheduled Tribe category own land near the cluster.

Having learnt about the benefits of a biogas plant, Smt. Richhawati did not want such a valuable project to be dropped owing to non-availability of land. As soon as she decided to donate her land for the project, the proposal for land donation was sent to SWAJAL (SBM-G) district office, following which all formalities were completed. A donation letter (Dan-Nama) for 2,500 square feet of land was prepared and the project for a 45 m^3 community biogas plant costing INR 18 lakh and benefitting a cluster of 20 families was started in the financial year 2022–23. The construction work of the plant is about 45 per cent complete and the entire project is expected to be operational by September 2022.

Outcome

The knowledge that a biogas plant can provide clean fuel and alleviate the suffering of women prompted the Smt. Richhawati to donate the land. The woman's magnanimous gesture benefits 20 families.

Case study

2

Women are at the helm of garbage collection in Gadag

In various gram panchayats (GPs) of Gadag district in Karnataka, the responsibility of waste management has been entrusted to the Sanjeevini Women Self-Help Federation of Gram Panchayats. The activity ensures sustained income for rural women who are offered an alternate source of livelihood.

"We have decided to involve women in this initiative. It is an encouraging sign that many are coming forward for the job. They have become good drivers while contributing immensely to the sanitation drive," said Mr S. Bharat, CEO of the zila panchayat.

In the first phase, 30 women have been trained and commissioned to the job. They were taught to drive the garbage collection truck so that they could carry out all the functions independently. The move has been viewed with interest, welcoming even, given that women on the wheel is not a common sight in the villages.

Currently, three women have been appointed for each panchayat's waste management unit. Plans are in the pipeline to train an additional 100 women to cater to the needs of the 122 GPs in the district. For the role, women who have completed higher primary and secondary school have been selected and they are paid an honorarium.

Outcome

The women drivers seem to be enjoying their role, even though many are first-time drivers, and some had not even ridden a bicycle before. It is an alternative source of livelihood and given that they are doing something important to keep their villages clean is a source of pride and satisfaction.

Case study

3

J&K launches women-led solid waste management pilot project

Taking the SBM(G) campaign forward, the union territory (UT) of Jammu and Kashmir has launched solid waste management (SWM) projects in two gram panchayats (GPs) of each of the 20 districts on a pilot basis on International Women's Day 2022.

Organized by the Government of Jammu and Kashmir (J&K), Department of Rural Development and Panchayati Raj and Directorate of Rural Sanitation, Jammu and Kashmir, the virtual launch was held at the Convention Centre of Hospitality and Protocol, Jammu, on 8 March 2022.

In her address, Smt. Mandeep Kaur, Commissioner and Secretary to the Government, Rural Development and Panchayati Raj, J&K, talked about the need to transform the villages into ODF Plus by which villages can achieve visual cleanliness by sustaining ODF status and effective management of solid and liquid waste.

She stated that as far as waste collectors are concerned, given that they provide a valuable service to the community, the UT will ensure that they are provided with medical insurance and other benefits on priority.

Outcome

Through the project, women from all 20 districts have been involved in the important work of solid waste management, which would bring cleanliness to their villages. The project has empowered women, enabling them to contribute meaningfully to society.

Case study

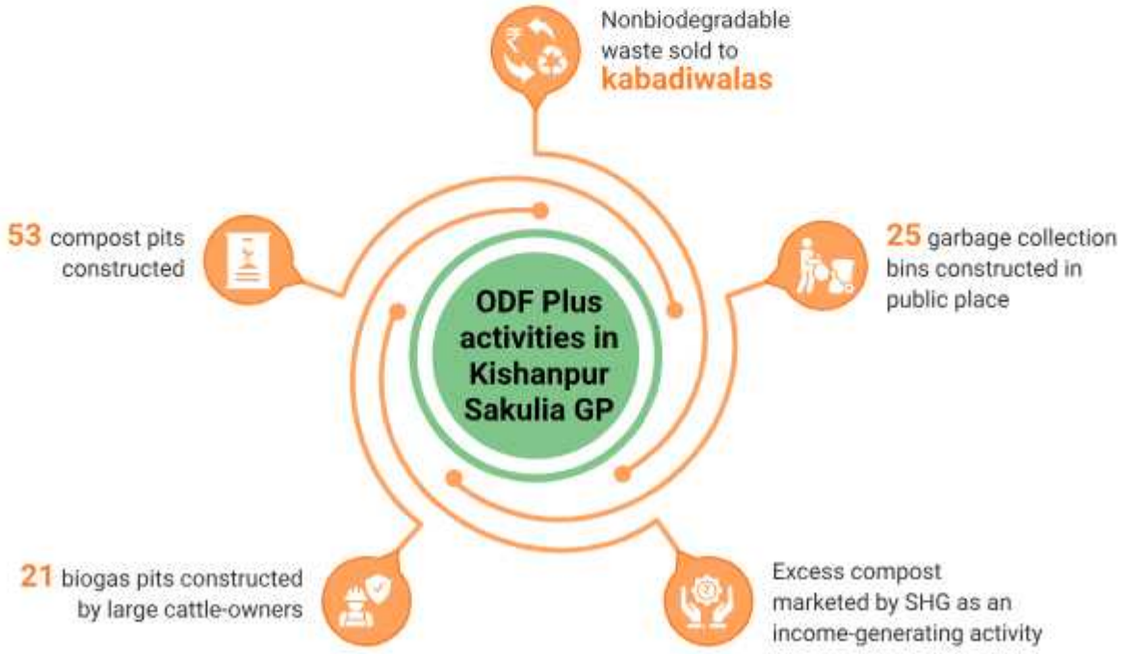
4

SHG women make money with manure

In a SBM(G) initiative that generates additional income for the community, the self-help group (SHG) women of Kishanpur Sakuliya gram panchayat (GP) in the Nainital district of Uttarakhand are using cattle dung, agricultural waste and slurry from biogas plants to create organic compost for use in agricultural fields as manure and for sale.

Given that the chief livelihood of the village communities in the Haldwani block is agriculture and animal husbandry, there is an uninterrupted supply of cattle dung and agricultural waste to produce manure. The extra compost that cannot be used in their fields is sold in the market.

Kishanpur Sakulia GP had been selected for solid and liquid waste management works in 2016–17 as a public participation and demand-based programme. In this regard, a detailed action plan was prepared and implemented by the District Project Management Unit (SWAJAL) in Nainital with the support of the GP officials, the Water and Sanitation Sub Committee and the village community.



As per the plan that was intended to make their villages ODF Plus, a total of 21 biogas and 53 compost pits were constructed by the families that owned more cattle. The generated biogas helped households save money that was earlier spent on LPG cylinders and use the slurry generated as organic manure. Further, 25 garbage collection bins were constructed in public spaces for the safe disposal of non-biodegradable waste, which was sold to the kabadiwalas.

Observing the good quality of manure being produced, social worker Girish Chandra Joshi and his colleagues came up with the idea to market the compost through the Shagun women SHG as an income-generating activity. They held detailed discussions with the SHG and it was decided that the compost in excess of that used by the beneficiaries in their kitchen garden and fields could be collected at one location by the Shagun SHG for grading, packaging and marketing.

Outcome

The SHG women of Kishanpur Sakuliya gram panchayat are producing good-quality manure from the biogas plants. They receive income from the sale of excess manure that is marketed.

Contributing to society has given them a sense of purpose and they are able to supplement their family's income.

Case study

5

Gorakhpur women set a shining example in waste management

At 8 a.m. each morning, Geeta, Sarita and Reena Devi from Kotha village of Gorakhpur district in Uttar Pradesh set off to begin their task of collecting garbage from the 5,000-odd households in the village. Equipped with gloves, masks, aprons and a garbage collection vehicle, they complete the task in about two hours.

The collected garbage is then taken to the Resource Recovery Centre (RRC) where it is segregated into biodegradable waste (kitchen or wet waste) and non-biodegradable waste (metal, paper and plastic). The RRC has 12 compartments into which the waste is segregated. Thereafter, while the wet waste made up of vegetable and fruit peels is converted into vermicompost, the remaining dry waste is kept aside and sold to junk collectors. The women, besides their monthly wage, receive some income from the sale of dry waste and organic compost.

Earlier, the village, with support from the Panchayati Raj Department, had constructed a Solid Waste Management Centre at a cost of INR 15 lakh. About a dozen women from the Ambedkar self-help group, Kotha, Kauriram, Gorakhpur, have been involved in implementing the waste management project. Although a small beginning, the RRC constructed in Kotha village is used for waste management as per the guidelines issued under SBM(G) Phase II.

The success of the initiative has prompted the District Swachh Bharat Mission Grameen Samiti, Gorakhpur District Magistrate Shri Krishna Karunesh, Chief Development Officer Shri Sanjay Kumar Meena, District Panchayat Raj Officer Shri Himanshu Shekhar Thakur and District Consultant (IEC) Shri Bachcha Singh to set up similar centres in more than 1,000 villages of Gorakhpur district.

Meanwhile, the Pradhan of the village, Smt. Sunita Yadav, along with her husband, has been involved in creating awareness about the Swachh Bharat Mission and the need for cleanliness, appealing to people to support the campaign wholeheartedly.

Gorakhpur's DPRO Himanshu Shekhar Thakur is credited with starting the RRC and training women to effectively manage waste.

Village waste management

Garbage collected from **5,000** households in village

Solid Waste Management Centre constructed at **INR 15 lakh** cost

More RRCs planned to be set up in over **1,000** Gorakhpur villages

Outcome

The contribution of women to this project is significant. Their noble task of cleaning up the village as they engage in solid waste management has given them a sense of purpose and pride. They are able to provide for their families through the additional income they earn.

To read more, scan here

Case study

6

Women trainers, motivators steer Tamil Nadu's sanitation campaign

Tamil Nadu has a large sanitation workforce of about 66,000 who are called *Thooimai Kaavalars* or protectors of the environment. The workforce consists of both men and women. They are normally assigned to door-to-door collection and segregation of waste, composting of biodegradable waste, storage of non-biodegradable waste and its sale to recyclers and keeping their allotted streets and lanes clean. In performing this invaluable service to society, they are considered heroes of SBM(G).

Here is an account of T.M. Gracy Helen, a swachhata champion who has been working tirelessly to transform villages in her district into model ODF Plus villages:

A master trainer from Kovandakurichi village panchayat in Pullambadi block of Trichy district, T.M. Gracy Helen has been a member of a women's self-help group (SHG) since 2000. Having been appointed as a sanitation master trainer in 2015, she has performed various roles effectively in community mobilization and earned the title of a role model motivator in her district by promoting safe sanitation and personal hygiene practices among the rural people through regular visits to schools and anganwadis.

In Phase I of SBM(G), she motivated 1,520 beneficiaries in her block to construct and use twin pit toilets, which immensely contributed to making her village panchayat open defecation free. She has been a key influencer in propagating sanitation messages in all the available platforms not only at village level meetings but also at public health centres, schools and anganwadi centres. Her communication skills played a major role in bringing about the behavioural change in her village. What attracted children and others the most were the awareness sessions which she made as interesting as possible through her sanitation songs. Trained in community-based monitoring (CBM), she monitors the usage of toilets by mapping and engages the community to keep track of toilets that are not in use.

With the commencement of SBM(G) Phase II, Helen has been actively involved in monitoring and maintaining the integrated sanitary complexes and ensuring their proper usage towards sustaining the ODF status. As state-level master trainer, she has trained more than 2,000 motivators, panchayati raj institution (PRI) representatives, Village Poverty Reduction Committee (VPRC) members, panchayat-level federations (PLF) and SHG members of various

districts. She has also conducted special drives in SC/ST habitations, encouraging people there to construct twin pit toilets and use them regularly.

Today, she accompanies Thooimai Kaavalars for a door-to-door collection of waste and ensures that households segregate waste at source and encourages onsite composting of wet waste. She continues to mobilize people in her village and conducts rallies and awareness campaigns to eliminate the use single-use plastics (SUP), while presenting to them alternatives – both in schools and in PLF/VPRC meetings.

To promote greywater management, she encourages households to cultivate kitchen gardens. She has also motivated people to construct individual soak pits at the household level under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), explaining to them its benefits. All such activities have contributed to making her village visually clean. Her priority now is to make her village a model ODF Plus village.

Outcome

Helen has earned respect in the villages where she supervises solid and liquid waste management (SLWM) workers and conducts other IEC activities to raise awareness on various ODF Plus verticals.

People look up to her and seek her advice in managing waste. In this sense, she is considered a swachhata champion.

Case study

7

Sirnapally women combat plastic pollution

SWAP, which stands for Sirnapally Women Against Plastic, aims to establish a sense of urgency to reduce and eliminate the use of single-use plastics (SUP) and prevent plastic pollution at source. The team was formed in Sirnapally gram panchayat (GP) of Indalwai mandal in Nizamabad district of Telangana.

Spearheaded by women, the unit, which was formed to provide an empowerment opportunity for women, aims to make the village plastic-free. Their current aim is to create a healthier and cleaner village by saying no to SUPs.

SUP ban

Early on, Sarpanch Sri Telu Vijay Kumar and Panchayat Secretary Sri P. Ashok Kumar of the GP, which consists of 825 households and a population of 3,806 individuals, decided to take a holistic approach to manage plastic waste as a part of solid waste management, in keeping with Phase II of SBM(G). Before implementation of the nationwide plastic ban, they conducted Gram Sabhas with village-level functionaries, elected representatives and shopkeepers and passed a resolution to ban SUPs in the village.

Plastic collection units

Plastic collection bins have been placed in various public spaces to prevent the pile up of food wrappers and soft drink bottles at street corners and choking of drains. Nearly eight plastic collection centres have been set up and these are emptied and transported to segregation sheds by GP workers every Sunday.

Anti-Plastic Day

The SWAP team, along with village functionaries, inspected local shops and conducted 'anti-plastic raids'. About 47 kg of plastic bags were seized on Anti-Plastic Day.

Eggs for plastic

Under this programme, three eggs were given in exchange for one kg of plastic. For this programme, Sri Ganesh, a ward member, donated eggs instead of plastic. Nearly 300 kg of plastic were exchanged for eggs.

Wall paintings to enhance awareness on ODF Plus

To bring about behaviour change among the village community, wall paintings adorning the walls of public buildings spread messages advocating safe sanitation practices and the importance of solid and liquid waste management.

One ward-one week programme

In a decentralized manner, work was carried out in one ward per week by the SWAP team and in this way all wards were covered in the programme. For the sustainability of this programme, during a village meeting held in the first week of every month, individuals who have done good work in combating plastic pollution are felicitated.

Initiatives for plastic waste management

- Ban on **single-use plastic**
- Installation of **plastic collection bins** in public spaces
- Setup of **8 plastic collection centres**
- Observance of **Anti-Plastic Day**
- **Shop inspection** and anti-plastic raids
- **3 eggs** in exchange for 1kg of plastic
- **Wall paintings**
- **One ward-one week** programme
- Felicitation of **anti-plastic champions**

Outcome

The ban of SUPs in Sirnapally has taken people back to their old traditions. They use reusable containers to carry their food and use woven teak leaves instead of plastic covers, as every individual feels it is his or her responsibility. Best of all, they are happy that they are able to protect the environment. The credit goes to the sarpanch, panchayat secretary, the SWAP team and the village community as it was a collective effort.

To read more, scan here

Case study

8

Remya is an ambassador of waste management

From a housewife who earned a small income as a domestic labourer, Remya from Chottanikkara gram panchayat in Ernakulam district of Kerala has become an advocate of sanitation services. She is a member of Kerala's green army, locally known as Haritha Karma Sena (HKS), and is respected as a trainer, an influencer and a swachh warrior in the truest sense.

Remya was fortunate to have been recruited into the 28-member HKS of her gram panchayat (GP). The social entrepreneurship group is mandated by the state government to carry out local waste management interventions.

Given that the women went door to door to collect waste and other items discarded by households, the community initially looked down upon them. Despite the various community-level awareness programmes that were held, people did not readily cooperate, and some even abused them while others gave them unsegregated waste. But equipped with support of the local body, they were courageous enough to reject unsegregated waste and took the responsibility to educate the community.

Recalling an incident in the past, Ramya said that she once heard a child calling to her mother that the waste pickers had come. She immediately corrected the girl, saying that they were not collecting waste but plastic, which is a resource and a source of livelihood for them.

The situation gradually changed for HKS in Chottanikkara with the active leadership of Remya. Over the years, she has been involved in community education initiatives, and the videos on solid waste management on social media have helped her in the task. Today, she can confidently state that the community demands their services, welcomes them and respects them for the essential services they provide. Some households even support them in the secondary segregation of waste.

As of August 2022, the coverage of households for waste collection is 79.97 per cent and 67 per cent for commercial establishments.

HKS has provided economic security, a greater level of dignity, social respect and much more to the women who now are a powerful voice in the community. Remya has also represented her HKS in various forums including those at the national level and this has changed her life. She perceives the opportunity to get a fixed income, while contributing to a social cause as a great opportunity.

Outcome

Remya and the group have been actively involved in COVID management activities. They formed a vital component of the Rapid Response Team functioning at the ward level. Their hard work and courage in carrying out tasks that others feared earned them social acceptance as they sanitized public spaces and households after transferring the infected persons to treatment centres.

To read more, scan here

Case study

9

Women trained to implement SBM(G) activities in Budaun

To ensure that all villages become ODF Plus soon, women have been enlisted in the sanitation workforce of Budaun district in Uttar Pradesh and they have been trained to implement solid and liquid waste management (SLWM) activities in accordance with the guidelines of SBM(G) Phase II.

Under SBM(G), 56 villages have been selected to be transformed into Model ODF Plus villages with arrangements in place to manage all kinds of waste and to make these villages appear visually clean. To support the waste management activities, the district administration intends to provide the women of self-help groups with rickshaws and e-rickshaws to carry out door-to-door collection of solid waste.

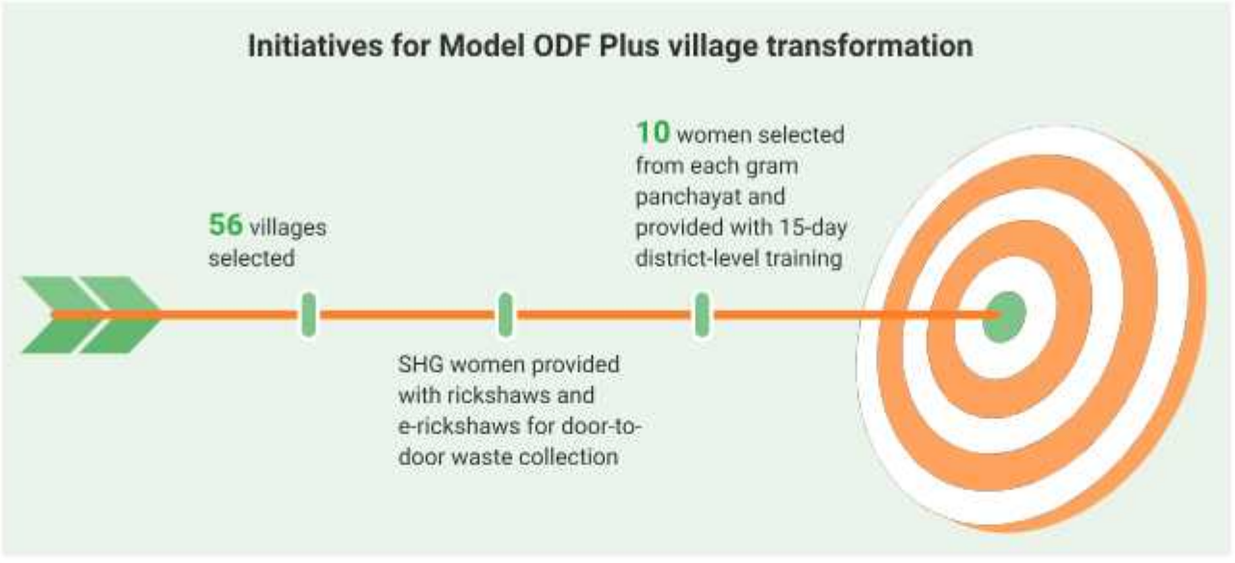
To strengthen their capacities and build awareness on the need for SLWM, 10 women were selected from each gram panchayat and provided with a 15-day training at the district level. This included classroom training for the first six days in the auditorium of the District Institute of Education and Training (DIET). During the sessions, women are taught about the various kinds of waste, process for the collection of waste from households and separation of the collected waste into organic and inorganic waste.

Ways of recycling and selling different kinds of waste to generate income for their gram panchayat as also establishing forward market linkages are being included in the training.

Women are encouraged to take the cleanliness oath on the last day of the classroom training – an action that would dedicate them to the sanitation cause to bring about health and well-being in their communities.

On completion of the six-day training, ground training exercises were started, which began with a survey. Information about the gram panchayat was collected and the village community was told about the need for SLWM activities. Availability of garbage dumps, kitchen gardens if any, use of organic fertilizers, management of greywater generated in their households and the need for payment of waste collection charges are conveyed to the families.

The focus of the activity is to ascertain if individual households are ready to pay the stipulated fee for garbage collection.



Outcome

Trained women in this district have dedicated themselves to the sanitation cause. It is with a sense of pride and achievement that they carry out their daily activities to bring about cleanliness to their villages. Trained in all aspects of ODF Plus, they form the district's sanitation workforce that plays a vital role in transforming their villages.

Case study

10

Tax Sakhis play a vital role in swachhata, village development

Aiming to provide town-like facilities in all the villages, the district administration of Bhopal in Madhya Pradesh has launched the concept of Tax Sakhis with the help of women self-help groups in the district. The Tax Sakhis have been entrusted with the task of collecting all the taxes for the panchayats, including that for swachhata, across the villages.

The move, initiated under the leadership of CEO of zila panchayat, Shri Ritu Rai, in April 2022, is much needed given that the panchayats lacked resources to provide services such as door-to-door waste collection, ensuring hygiene and cleaning of public spaces and water bodies, providing regular water supply and other amenities.

The leadership also realized that the existing method of collecting taxes through panchayat secretaries was inefficient and non-transparent. Hence, they felt the need to create a separate cadre of tax collectors who are both efficient and trustworthy, the job providing them an opportunity to earn a livelihood.

For the collection of various taxes levied by the gram panchayat, two Tax Sakhis have been appointed at each gram panchayat. The women collect various taxes such as property tax, sanitation tax, water tax and bazaar tax on behalf of the gram panchayat. From tax collection to its digital entry on the Panchayat Darpan portal of the government, the entire work is done by the SHG women.

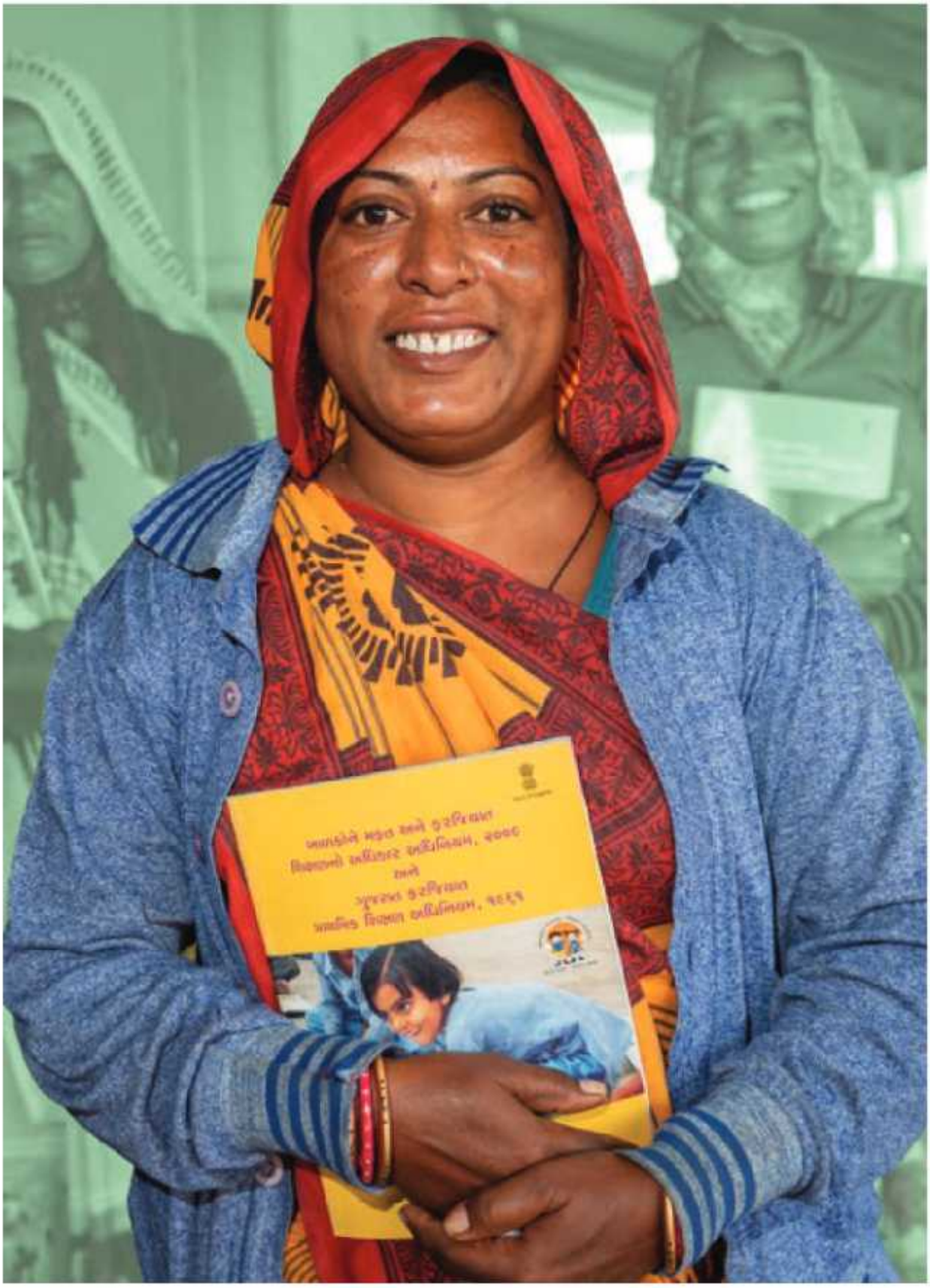
ODF Plus services: Resource challenges

In this regard, all the necessary orientation and technical training have been provided by the zila panchayat to the concerned Tax Sakhis. Further, other orientation and training sessions are being provided to them from time to time.

Outcome

The Tax Sakhis start collection around the 10th of every month and their working hours are dependent on how fast they are able to convince the people to pay up. The entire process is done within 5–10 days in some places, while it can take 15–20 days in others. From the total amount collected, the Tax Sakhis receive a 10 per cent commission, which can range from INR 3,000 to INR 10,000 a month. The process has given women a new identity.

To read more, scan here



Women Leaders of Jal Jeevan Mission

Introduction

Water is a basic necessity for all mankind. Lack of availability of potable water adversely impacts health and nutrition. In the absence of access to potable water at home, women and young girls are forced to spend huge amount of time and energy every day to fetch water for the family. In this backdrop, Jal Jeevan Mission has been launched by Hon'ble Prime Minister on 15 August 2019 from the ramparts of the Red Fort in his Independence Day speech.

Jal Jeevan Mission is envisioned to provide access to piped water through individual household tap connections by 2024 to all households in rural India in adequate quantity (55 lpcd) or prescribed quality (BIS:10500) on a regular and long-term basis at affordable service delivery charges, leading to improvement in living standards of rural communities. The mission focuses on decentralized, demand-driven, community-managed water supply system with the paradigm shift from 'water supply infrastructure' to 'water utilities'. With tap water connection to rural households, the 'Har Ghar Jal' programme is helping in improving the quality of life, especially of women and girls, and is also enhancing ease-of-living in rural areas.

To implement the mission, institutional arrangements at various levels have been made and State PHE/RWS Departments are playing a critical role. They are helping Gram Panchayat and/or its subcommittee, i.e., Village Water and Sanitation Committee (VWSC)/ Paani Samiti, etc. to plan, implement, manage, operate and maintain its in-village water supply systems.

A sense of ownership is being instilled among the village communities as they are at the centre of the mission. In villages, local communities especially women are encouraged to participate in and take ownership of water resource management, water supply and greywater management and its reuse. Paani Samiti/ VWSC, consisting of 50 per cent women members, is constituted in every village which looks into water management issues including daily operation of pump, undertaking minor repair, sensitizing the community on the importance of safe drinking water, its judicious use, water conservation and greywater management. Over 5 lakh such committees have been constituted under Jal Jeevan Mission.

At the time of the launching of the mission, only 3.23 crore (16.69 per cent) of the households in villages had access to piped water connections. By providing tap water connection in over 11 crore rural households, Jal Jeevan Mission has ended the century-old drudgery faced by women of walking long distances in search of water.

Case study

11

Woman Sarpanch in Punjab leads the 'Water for All' movement

Intervention

It is a typical busy morning for Kulwinder Kaur Brar. Even as she hurriedly wraps her household chores, her mind is making preparations for meetings ahead with stakeholders, government officials, corporates and NRIs, and mostly importantly briefings with her own team. Kulwinder's life is very much like any other senior corporate woman, with just one exception – she is a village Sarpanch from Memha Bhagwana village in Bhatinda district of Punjab who has imbibed the contemporary work style for the greater good.

In childhood, Kulwinder saw village women suffer due to paucity of potable water in the village. She was resolute to change their plight. Soon after becoming the Sarpanch, she started working towards the cause. Her idea and intent were remarkable; but to kick-start, funds were required. She started crowdfunding, initially reaching out to NRIs and corporates for donations to build the infrastructure.

With the launch of Jal Jeevan Mission, the 'Har Ghar Jal' scheme was soon sanctioned for Memha village. With limited availability of water posing a serious concern, most people decided to pay money towards installation of water connection. But there were few households in the village who were unable to afford the capital expenditure. It was decided in the Gram Sabha to waive off the charges for these very poor households, whose expenditure was borne through Panchayat funds.

Jal Jeevan Mission's IEC campaign helped in sensitizing the community on the importance of safe drinking water, role of women in water management, and judicious use of water. Under Kulwinder's leadership, an all-women Gram Panchayat Water Sanitation Committee was formed in the village. To take the work further, the members of Village Water Sanitation Committee (VWSC) went door-to-door explaining how piped water supply not only saved time and energy but also provided clean drinking water of the prescribed quality.

A five-member committee was formed in the Panchayat, which periodically tested water source to assess the quality of water supplied in

the village. While skilled masons, electricians and plumbers were available in the village to dig the pipeline and provide tap water connection, women were also trained to carry out repair works.

The next step in this Mission was to get women out of the four walls of the house into public spaces and attend the Gram Sabha so that issues concerning them, particularly related to gender, water, sanitation and education, could be taken up. Although Kulwinder led the Gram Panchayat as a Sarpanch, there were very few women who actually attended the Gram Sabha. It was a herculean task for her to mobilize the women. Today, nearly 80 per cent women attend the Gram Sabha and share their concerns. Seeing a woman at the helm of affairs instils confidence in women who are now more participative and willing to take leadership roles.

Outcome

Piped water connection has transformed the life of women in Memha Bhagwana. They are free from the drudgery of fetching water from stand posts. With a running tap at home, women have time to upgrade their skills and pursue hobbies. Another visible change is that the dropout rate in schools has improved as adolescent girls are returning to school.

Today Mehma Bhagwana is an ideal Scheduled Caste-concentrated 'Har Ghar Jal' certified village, with 100 per cent functional household water connection for 328 households. But for Kulwinder Kaur, the journey has just begun as she now plans to work towards greywater management and installation of solar lights in her village.

Case study

12

Life of a pump operator in Vallam village

Intervention

Smt. G. Kala, a 48-year-old woman and mother of two, is the only female pump operator in Vallam village of Vellore district in Tamil Nadu. Her journey as a pump operator and technician began nine years ago. It was the time when her family was mourning the sudden demise of a dear friend with whom her husband worked in partnership. The friend had served as a pump operator in Kullathumeda habitation. His sudden demise brought the work of operating the pump to a halt. There was no skilled person available in the village to take up the job. Till now, G. Kala only worked as a labourer with her husband. Despite dealing with a personal tragedy, Kala stepped forward and proposed her name as a pump operator. The Department encouraged her move by providing basic training on how to operate the pump. Kala filled the vacant position in a man's world as the only female pump operator in the district and started operating three overhead tanks (OHTs).

G. Kala proudly caters to the needs of 916 households out of a total 1,510, which has reported 100 per cent tap water coverage. Five schools and two anganwadi centres also have access to potable water. Over time, a very self-motivated G. Kala has also learned the skill of carrying out minor repairs. In all these years, she has earned the respect of the community and is the "go-to person" for any leakages in the pipeline.

Under 'Har Ghar Jal' programme, G. Kala extends support to Public Health & Engineering Department by monitoring the construction work and helping map places where pipelines already exist or require new ones. Whenever G. Kala encounters any leakages, she undertakes minor repairs out of her own pocket up to INR 500. The expense is later reimbursed to her by

Beneficiaries of G. Kala's work

the Panchayat. In cases where money required for repair is larger, G. Kala seeks prior permission from the Panchayat and receives an advance to carry out the work.

Even the mason and plumber are quick to respond to G. Kala's requests. The villagers are very happy to have her in the village who is approachable even over phone. G. Kala wishes more women should come forward and take up professions such as mechanics and pump operators. "It is the women who are most affected by non-availability of water. When we can do other tasks, then why not a skilled job? I have earned love and respect from my people through this profession."

Outcome

The grit and determination of G. Kala has made her a role model for many to follow. People look up to her as a change maker who had the courage to enter the male bastion and proved her mettle. The support received from the department in upgrading her skill and from the Panchayat in giving her a free hand to take swift decisions has helped in operation and maintenance as well as timely redressal of water issues in the village.

Case study

13

Women as managers of water

Intervention

The Government of Bihar is working consistently to achieve the goal of 100 per cent tap water coverage. The State has a total of 1.66 crore rural households, with 95.61 per cent homes having access to potable water. In any Panchayat, the ward is the lowest administrative unit represented by a Ward Panch.

A seven-member Ward Implementation and Management Committee (WIMC) consisting of three or more women members have been constituted in Bihar. The task of the committee is to implement 'Har Ghar Jal' programme in non-quality affected wards. Women are considered better at managing water more efficiently as they traditionally look after their family's water requirements and are often the first to bear the brunt of non-availability of water.

Shanti Devi is a WIMC member in Khajauta village of Vaishali in Bihar. She has been a ward member for the last nine years with little participation in the community affairs. With the announcement of Jal Jeevan Mission, an opportunity came her way when she was a part of the learning team visiting the neighbouring community that had access to a piped water scheme. This village was part of Samastipur district.

The success story of the village gave Shanti Devi the confidence to take up the leadership role in implementing the piped water scheme in her village, thereby help in ending the water-related hardships faced by the community.

Role of Shanti Devi as a Ward Panch

Shanti Devi persuaded her people in the ward to collectively work towards regular supply of tap water. She started with organizing fortnightly meeting of WIMC members. After ensuring the households' access to tap water connection, she reached out to the community for timely payment of user charges, which was to be used in operation and maintenance of water supply infrastructure.

The money collected by Shanti Devi is deposited in the bank account of WIMC. Details of income and expenditure are shared at the community meeting to ensure transparency and accountability. She leads the ward members in participatory water safety planning, which involves water testing for bacterial contamination using field test kits.

Shanti Devi goes on to say, "Knowing that our water is safe is assuring for the community."

She has a sense of fulfilment in her role as a Ward Panch and describes working as a Water Warrior her key achievement in the last nine years.

Outcome

Shanti Devi has shown the way how a Ward Panch should raise the concerns faced by her people in the Panchayat and plays an important role in finding solution to the concerns encountered on ground. Her regular and timely collection of water user charge has enabled smooth operation and maintenance of the water supply structure. Today, Khajauta village has reported 100 per cent tap water coverage for all its 540 households, one school and two anganwadi centres.

Case study

14

Transformational journey of Pushpawati as a water warrior

Intervention

The world of Pushpawati came crashing when she heard the news of her husband, Somappa, falling from a pole while fixing the street light. As a result of the accident, he lost both his legs. Just three years into marriage and with an infant on her lap, a single incident completely changed her world. The only bread earner in the family was confined to bed at home, with the burden of running the household fell on the shoulders of young Pushpawati. She took to the work of mending and stitching clothes. But there was more to follow as her ailing husband very shortly passed away.

Soon Pushpawati learned that the Panchayat was looking for a replacement for the village water-man role, which was earlier taken up by her husband when he was alive. She approached the Panchayat to appoint her for this position. She told them that she was conversant with the job as she often accompanied her husband in the field and assisted him in various tasks.

In 2019, Pushpawati was appointed as the first water-women in Chikkuravathi village of Haveri district in Karnataka. Under Jal Jeevan Mission, she was sent for training as a pump operator where she was taught by the district laboratory official on how to use field test kits (FTKs) and check the quality of water.

Today, Pushpawati is leading the committee in carrying out surveillance with four other women who are trained in water testing. At frequent intervals, these committee members undertake quality tests of water source and delivery points to ascertain if the water is of the prescribed standard as defined in the Jal Jeevan Mission's guidelines. From time to time, Pushpawati conducts home visits and sensitizes the community on the importance of safe drinking water and its judicious use. During one-on-one interactions, she explains water conservation and greywater management at the household and community levels. She motivates people to regularly pay water user charges so that the infrastructure is maintained properly. As a water warrior, she collects the money from every household and deposits it in the bank account, which is then used for paying electricity bills and carrying out minor repairs.

Encouraged by the discourse with Pushpawati, many homes have set up kitchen gardens in their backyard, and greywater is channelized to irrigate these plants.

Pushapawati, while sharing her journey as a water-woman, says, "Har Ghar Jal programme has taught me a lot and helped me and my child sail through turbulent times. I am thankful to the Panchayat for allowing me to work and the department for investing in me and providing me training to improve my skill. When I recall my past, there was a time after my husband's death when I had no money to sustain and pay for my son's school fees. But today with the remuneration I draw as a water-woman, I am able to lead a decent life and take care of my daily needs."

Outcome

Rural Water Supply and Sanitation (RWSS) department of Karnataka applauds the services rendered by Pushpawati as a water warrior who performs her duty efficiently with dedication. She has been instrumental in the successful operation and maintenance of water supply infrastructure developed under Har Ghar Jal. Jal Jeevan Mission is helping create many such employment opportunities in the village.

Today, all 446 households, 1 school and 3 anganwadi centres of Chikkuravathi village receive over 55 lpcd of water regularly. The village has also reported becoming 'Har Ghar Jal'.

Case study

15

Women lead water supply programme in Athantara village

Intervention

Sunanda Das is an inspiration for many, working efficiently as a self-employed mechanic (SEM) for piped water supply (PWS) scheme in Athantara village of Khurda district in Odisha. Athantara village has 407 households covering a population of 1,790 where Sunanda has been living with her family for the last 18 years.

Sunanda was a student of class 9 when she learned that an SEM could earn a stipend of INR 300 and be provided a bicycle to commute and check the supply and maintenance of the water supply system. Sunanda was excited and applied for the position. She was interviewed and selected for a position that was dominated by men.

Sunanda was given an initial training to repair the pumps after which she became a certified hand pump mechanic. The bicycle helped her commute from one place to another. She continued her studies and completed her graduation. Today Sunanda earns a monthly remuneration of INR 4,000. In addition to the work as a pump mechanic, she supports her husband in farming.

Under Jal Jeevan Mission, she leads the operations of the in-village water supply scheme in Athantara village. Her roles and responsibilities range from operating pumps to monitoring the distribution network as well as carrying out minor repairs and reporting to the Junior Engineer in case any major repair is required. As part of the committee that carries out surveillance, she frequently conducts water quality tests in all hand pumps and delivery points using field test kits (FTKs). She is also responsible for cleaning and chlorinating the water tank, pre- and post-monsoon.

Athantara village receives tap water from four water sources: 97.54% of the population, including one school and two anganwadi centres, has access to tap water connection and only 10 households remain to be covered.

While describing her work, Sunanda says, "The journey has not been easy for me. Although I managed to convince my family to allow me to work as a pump operator in the company of men, society was not kind to me. I was often mocked

at, but I remained determined. I admit that my initial motivation to work as a pump operator was to secure a bicycle but today, I am happy to serve the community. I am praised by the villagers for the services I render – it is very fulfilling."

Outcome

By entering the male bastion, Sunanda has created a space for women. She is an important part of the water supply chain and has taken on the responsibility in all earnest. Through her work, she ensures quality water reaches every household, there is no wastage of water through leakages, and timely minor repair is initiated. This goes a long way in building the trust of the people availing the water facility.

Case study

16

Women enter male bastion in water sector

Intervention

Women are now entering areas that were earlier dominated by men. Two such women who are working hard to provide water in every rural household are Suchitra Sen, Junior Engineer (JE) in Rural Water Supply and Sanitation Department, and Arundhati Nayak, Panchayat Executive Office (PEO) in the Department of Panchayati Raj and Drinking Water.

As PEO, Arundhati is responsible for installation and maintenance of hand pump, tube well, sanitary dug well and household tap water supply, including the overall development-related works in the Panchayat. She also takes care of the grievances and issues pertaining to electricity bills. She is also assigned the task of managing sanitation and hygiene in the Panchayat.

Sunanda Das has been able to perform her duties efficiently as a pump operator because of the support she receives from the two officers Suchitra Sen and Arundhati Nayak. The trio has been responsible for the formation of Village Water and Sanitation Committee (VWSC). Before deciding on the type of water supply scheme that would be best suited for the region, a Village Action Plan was developed, which is based on the village population, water source availability within the village as well as the demand for water by the community.

As the planning for the scheme was underway, water sources were tested for quality purposes, which led to the finding of excess iron in the groundwater. To address the issue of water quality, an iron removal plant (IRP) was commissioned for treatment of contaminated water. Based on the guidelines of Jal Jeevan Mission, the supply of drinking water was increased from 40 to 70 lpcd.

The team is working hard to ensure that potable drinking water reaches all households. In Athantara village, only 10 houses remain to be provided with tap water connection. Clean and safe drinking water through tap has also reached the school and anganwadi centres. The water supplied at these learning centres is used for drinking, cooking midday meal, handwashing and toilet usage.

With a decentralized service delivery model, women in Athantara village have ensured potable water supply for the community. These leading ladies advocate for timely payment of water user charge to ensure long-term sustainability of the water supply programme.

Currently the Panchayat is using the 15th Finance Commission grant for payment of electricity charges.

Outcome

Household tap water connection has benefitted the villagers and reduced the health emergencies related to waterborne ailments. Beyond water supply, the trio has motivated women to form a self-help group (SHG). All women in the village are now part of the SHG and are availing credit as well as subsidy under different schemes.

From the loans secured through SHGs, women have taken up livelihood activities, such as livestock rearing, dairy farming, mushroom cultivation, handicraft making and tailoring, They are not just becoming empowered but also adding to the family income and improving their living standards.

Livelihood activities taken up by SHG women

Case study

17

Bhathlan village women champion water management

Intervention

The women's collective in Bhathlan village of Sanour block in Patiala, Punjab changed the lives of the village community in more than one way. It relieved the village women from their everyday drudgery and provided them an opportunity for community work towards developing a robust and sustainable in-village water supply system. The collective also undertook several progressive initiatives, which have led to improved health care, hygiene and social cohesion.

Before Jal Jeevan Mission, the villagers lived a hard life, which adversely affected the women. As women are the primary caregivers of the family, their life revolved around cleaning, cooking, cattle rearing, arranging fodder for livestock, working in the field, taking care of the elderly and children and, most importantly, collecting water from the stand post, pond or canal to meet the daily household needs.

After the announcement of Jal Jeevan Mission, Anju Bala, the Sarpanch, held a Gram Sabha to inform the villagers about the Mission and discuss the modalities of joining the 'Har Ghar Jal' programme. The villagers were informed about the provision of the scheme, which ensured tap water connection in every household, school, anganwadi, ashramshala and public institution.

Anju Lal tells, "I wanted women to step out of their stereotypical role and take up community work to ensure that potable water is available for the entire design period. After the community agreed to be a part of the 'Har Ghar Jal' scheme, a Village Water and Sanitation Committee (VWSC) was constituted during the Gram Sabha. As directed under the guidelines, women were made members of the VWSC. After initial hesitation, women took command of the committee. They learned new skills and started interacting with and sensitizing the community on the importance of clean drinking water. The water sources were mapped and people were encouraged to pay a one-time grant towards installation of piped water connection. In subsequent meetings, the Village Action Plan (VAP) was prepared based on the available water sources, the village population and the demand for drinking water. Public Health and Engineering Department (PHED) officials provided the guidance in drafting the VAP."

After common consensus, the VWSC members framed their rules and regulations, which included

fixing a date for making payment towards water user charges. Clear instructions helped people adhere to the timelines. The community willingly came up with penalty for cases of late payment. Funds collected were used towards the operation and maintenance of water supply infrastructure. The Panchayat used the user charge amount for paying electricity bills and undertaking minor repairs.

With consistent efforts made by the Sarpanch, the Scheduled Caste-concentrated village is today Har Ghar Jal-certified. All 96 households, school and anganwadi centre are receiving tap water on a regular basis.

Outcome

In a short time, the women in Bhathlan village became changemakers under the dynamic leadership of the woman Sarpanch. Apart from ensuring regular supply of water, they made concerted efforts to protect the water sources for long-term sustainability. The intensive campaign resulted in behaviour change for judicious use of water.

Case study

18

Three women's persistence solves water crisis in the village

Intervention

This is the story of Jashoda Mohanta, Rashmi Rekha Mohanta and Jayanti Mohanta and how they led the charge to prioritize women's needs, safety and health for their community and get piped water supply in their village.

Jashoda Mohanta arrived at Ghodaghaguri village as a bride in 2012. She was shocked to learn that there were no taps in the houses, whereas back at her home in Sialijoda they had the facility of running tap water.

Ghodaghaguri in Mayurbhanj district of Odisha was suffering a severe water crisis. Houses on one side of the village depended on water from a small canal, which received water from the spring. Others living on the opposite side of the village depended on a pond which was close to the forest.

Jashoda remembers her struggle and tells, "For women, it was a daily struggle. Though the village had seven tube wells, only three had water fit for drinking. The remaining four wells provided only muddy water, which was unsafe for drinking or any other household chores."

Jashoda decided to change this sorry state of affairs in her village and started talking to women in her vicinity on improving the situation. She would often remember her easy life back home in her village Sialojoda, in Keonjhar. Jashoda soon realized it was a complete waste of time everyday looking for and fetching water for daily needs. She desired putting her time to better use. With the hope of improving the situation, Jashoda met the President of Village Development Committee (VDC) Rashmi Rekha Mohanta and member of VDC of Jayanti Mohanta.

While narrating the ground situation in Ghodaghaguri, Rashmi recalls, "Earlier nearly 900 people depended on three tube wells. With excess extraction, the water was available only at 200 metres below the surface. The only thought that would enter my mind early morning as I got off my bed was to carry pots and wait in a queue to collect water. A large part of the day was spent walking up and down 8–10 times getting water for household chores. For washing clothes and bathing, I used to travel 2 kms away to a pond. It was a tedious task and the entire day was

consumed in managing water woes but then there was no choice left for us. We needed water for survival and had to make do with what was available to us."

Champamani Mohanta, a member of VDC, narrated her grievance, "Getting water, washing everyone's clothes and cooking food were a woman's responsibility. So when we demanded piped water in the home, the men in the family did not support us. They would spend their day playing cards and the night drinking alcohol. We were sneered at and criticized for our efforts to get tap water connection in the village."

Champamani's husband, Nanda Kishore Mohanta, was quick to reply against the acquisition, "Men go to work and earn money for the family. I did not support my wife as the cost for installing the tap water connection and laying the pipe was high. But now with 'Har Ghar Jal', everything is in place and I am happy for her. Her drudgery of fetching water for the family has finally ended."

Jayanti Mohanta, a member of VDC, cannot hide her excitement as she says, "This is a dream come true. Now I can make meals and serve food to my family on time. Earlier my mornings were spent taking rounds to the public stand post. It made me sad as my son would leave early morning for coaching classes without breakfast. But today, I can not only cook and serve warm food to my son before he leaves for studies but also get time to rear and look after my goats. With time in hand, I am planning to increase the livestock. This will add to our family income."

Outcome

The combined efforts of the women, their grit and determination reflect how equitable access to water is an empowering factor for women that addresses the root cause of poverty and inequality. Today, the entire village benefits from the foresight and relentless efforts of the women in their community.

Case study

19

Two women pave the way in making the village 'Har Ghar Jal'

Intervention

Anjana Prajapati and Raju Devi are two flagbearers with a steely resolve and the power of persistence, who have helped their village Manda Bhopawas of Jaipur in Rajasthan become 'Har Ghar Jal' under Jal Jeevan Mission. Today these women are all smiles, but earlier they had to put in tremendous efforts to achieve this feat. Getting a tap water connection was not as easy as it might look to many. It was a long and tough road to get a tap water connection for every household in the water-stressed village.

Manda Bhopawas is a typical Rajasthani village that faces perennial water woes. The women who have been the primary water managers for centuries bear the brunt as they often trek 3–4 kms every time to fetch water for the household. Often, water is collected from the tube wells owned by well-off individuals in the village. Most of the time the owners of these tube wells refuse water, which they say is for personal and not community consumption. Uneasy situations sometimes crop up, leading to altercations and even scuffles. Every day is a struggle for the women fetching water.

To mitigate the problem of water scarcity, around 10 years ago, the local administration dug up two tube wells and constructed three ground-level water storage tanks of 50,000 litre capacity. But this was not sufficient. It could cater to only 84 families whereas the other 385 households, spread across one main village and 19 habitations called 'dhaanis', were left without water.

Soon even these two tube wells started showing signs of water depletion, resulting in dwindling water supply. It led to a situation where water tank was used to supply water every 5–6 days. Frequent power failure turned the situation worse. It was at this time that Anjana Prajapati and Raju Devi decided to come forward and take charge. They gathered the community especially women and raised their common demand for piped water supply for every home and not just a select few in the village following the principle of Jal Jeevan Mission of 'leaving no one out'

With the community on their side, the two women made repeated representations to the Gram Panchayat members and pushed for potable

water for the entire village. Despite the movement of the proposal moving at a snail's pace, Anjana and Raju Devi did not give up. With the announcement of Jal Jeevan Mission in 2019, the movement picked up speed. State Public Health and Engineering Department (PHED) approved an augmented drinking water scheme for Manda Bhopawas village. Augmentation of the existing water infrastructure included two new borewells, pipe distribution line totalling 1,800 metre, construction of one overhead service reservoir (OHSR) and 1 ground-level reservoir.

The community was mobilized and a Village Action Plan (VAP) was prepared. Both Anjana and Raju Devi played a stellar role in this process by explaining to the community members the importance of potable tap water at home. The VAP was presented to PHED officials and the proposal was eventually approved. It was decided to extend tap water supply for every household in the village.

Anjana Prajapati and Raju Devi were made members of the committee that conducts tests to check the quality of water supplied. Training on the use of field test kits (FTKs) was imparted to them. They are now well-versed with the process of uploading the test results on the JJM portal, which can be viewed by the public. Any contamination found is immediately reported to the higher authorities for corrective action.

Of the 319 households in the village, today 222 households, 3 schools and 2 anganwadi centres have access to tap water. With water supply work in progress, the coverage today stands at 69.59 per cent.

Outcome

Jal Jeevan Mission with its community-driven bottom-up approach have kept women at the centre of the programme. They are assigned crucial roles, resulting in the development of responsible and responsive leadership at the grassroot level in the villages. Anjana Prajapati and Raju Devi are examples of the important role women play in the upkeep of the water supply scheme.

Case study

20

Women lead water conservation

Intervention

Geeta Devi is the Chairperson of Ward Implementation and Management Committee (WIMC) in her village Mubarakpur in Samastipur district of Bihar. She has led the water supply programme in Ward 13. As a WIMC member she is instrumental in organizing meetings and raising issues that are important in their daily life, thereby ensuring that the concerns raised at the habitation level are taken up in the Gram Sabha meetings.

As Jal Jeevan Mission assigns important responsibilities to women in planning, monitoring operation and maintenance of the water supply programme, Geeta Devi has supported the Panchayat by monitoring the water supply work during the infrastructure construction and ensured that the work is in accordance with the approved plan and that no house was left out.

As part of WIMC, Geeta Devi regularly checks the water supply in the household and makes sure that water reaches all houses twice a day with adequate pressure, covering even the tail-end homes.

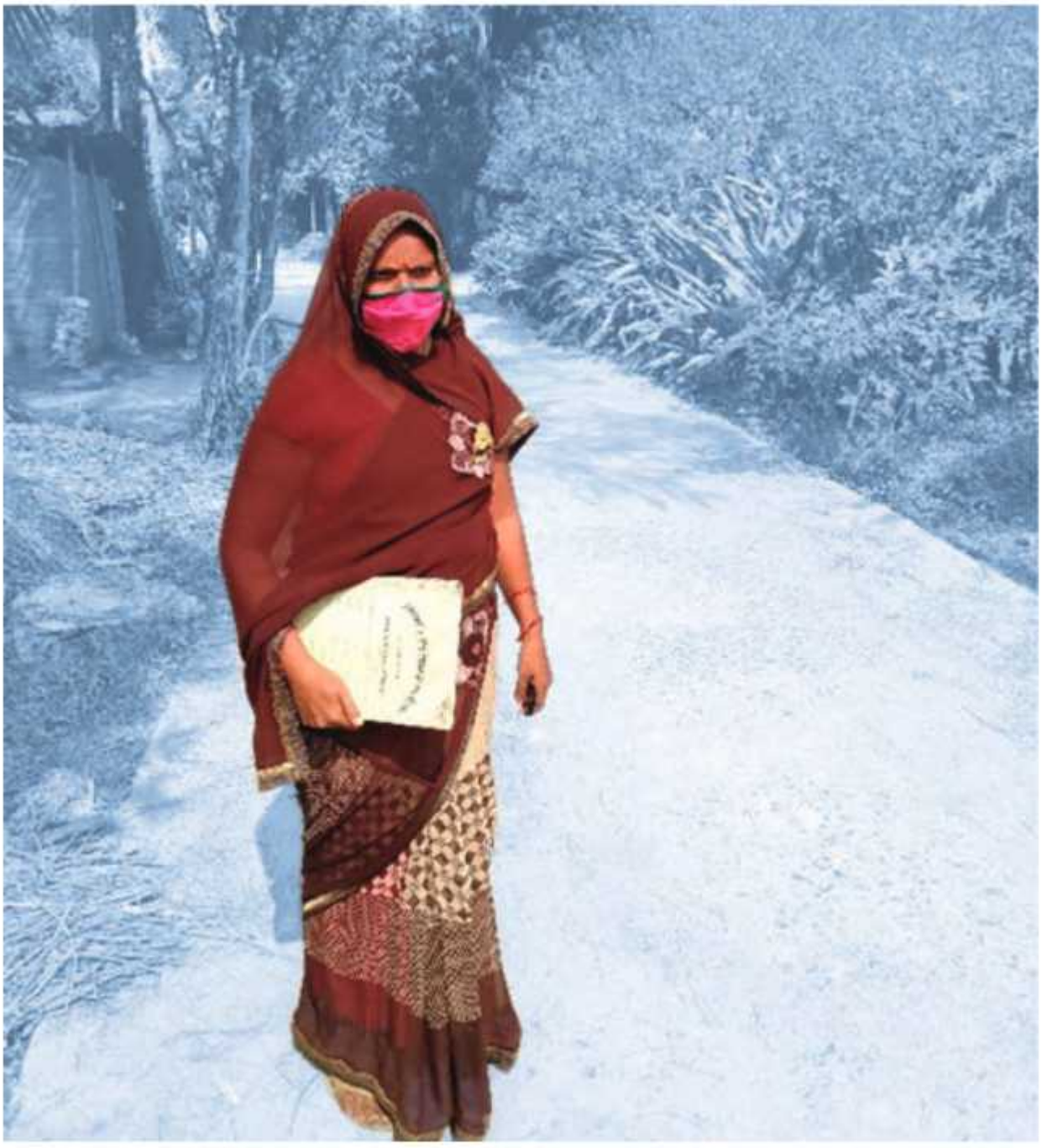
She conducts house-to-house visits during which she explains the importance of clean drinking water, conservation of water, a limited natural resource, and how contaminated water can adversely impact the health of all especially children. Common water-related ailments such as diarrhoea and dysentery greatly affect the well-being of the child and is often the reason of stunted growth.

Geeta Devi is responsible for collecting the water user charges in her ward. Her task is to also maintain the monthly Ward Account and record details of the money collected from each household. The money collected is deposited in the WIMC bank account, which has been opened for the said purpose. The funds so collected are used to pay the electricity bills and carry out minor repairs from time to time. The community is informed about the funds collected and expenditure incurred during the meeting, which is important for building transparency and accountability.

Geeta Devi performs other duties even beyond the tasks assigned to her. She attends the chaupal where water quality issues are discussed and participates in the water safety planning survey for her ward. She values the training received from the Department, which has given her confidence and provided her the skills to respond to the concerns of the community.

Outcome

'Har Ghar Jal' programme will be sustainable in the long term only when people from the ward are involved and take active part in not just installation of the tap connection but also its maintenance. The role played by Geeta Devi has been crucial for the success of the programme in her village.



Case study

21

An inspiring story of gender role reversal

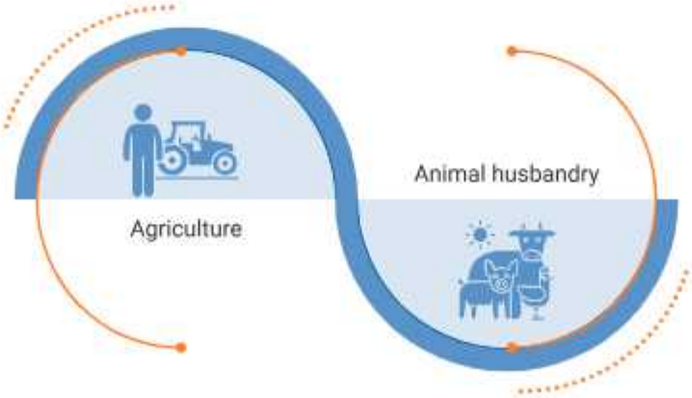
Intervention

Reshmi and her husband Arun Chaturvedi are a truly today's couple as they work together to make their ends meet. Both contribute equally to household chores along with bringing up their child. Arun gets income by working in a shop while Reshmi works as a pump operator – certainly a flip to what a conventional society decides for most of us. This is not a story from urban India but from the remote village of Madhya Pradesh, where development is seeping in not just through infrastructure but also by blurring gender barriers, gradually and steadily.

Reshmi belongs to village Dulhara, in Umariya district of Madhya Pradesh, which is like any other rural area of Madhya Pradesh. Here agriculture and animal husbandry are the main sources of livelihood. But this village has one major exception – women here are breaking the barriers of conventional gender disparity and taking the leadership role.

Reshmi is not the only village woman who is into the contemporary role. The Village Water & Sanitation Committee (VWSC) here has

Main sources of livelihood in Dulhara village



eight women and six men, who are steering the progress of water works in the village. The committee under the women leaders efficiently manages the collection of water user charge and sensitizes villagers on the judicious usage as well as the maintenance of tap water connection.

Madhya Pradesh Jal Nigam Maryadit (MPJNM) is implementing a multi-village water supply scheme (MVS) covering 19 villages of Manpur Block of Umariya district of Madhya Pradesh. This MVS will provide treated drinking water for the entire region through household tap water connections. The operation and maintenance of scheme will be carried out by Jindal Water Infrastructure Limited (JWIL) in coordination with VWSCs. The operation of metres is carried out by deploying valves of these villages. The scope and level of activities of women are ever-increasing in villages under many developmental programmes, with the State encouraging women to be involved in the operation and maintenance of multi-village schemes.

Similarly, Rekha Pradhan is a tribal woman who completed her class 10 school education and now works as a pump operator in village Kathar. She travels daily 3 km to Kathar from her house in Bharmila village. Her husband is a labourer working under MNREGA and is very proud of her wife's determination and hard work. Rekha is a torchbearer for other tribal women of her area as she has overcome multiple challenges to create a niche for herself. "I wish to learn more and train other women of my society," says Rekha with a determined look in her eyes. Manpur MVS has one more pump operator, Ms. Gyani Yadav of Kolar village who holds a graduate degree, setting an example for other women of her community.

Outcome

Traditionally, women were considered to be the best managers for household water usage and maintenance. Today, these women pump operators and VWSC members are proving this notion and even beyond. They can be the best choice for water management – at any level – as their sensitivity towards the subject is the key to the optimum implementation. Thanks to Jal Jeevan Mission for making the silent evolution happen.

Case study

22

Community participation in the implementation of in-village water supply system

Intervention

Valana village of Gujarat today is a happy place for its women and children. The leap from no tap water connection to 100 per cent tap connections in a span of a few months is worth a case study to be put out in public domain. When the whole world came to a screeching halt due to the COVID-19 pandemic, the Rural Water Supply department of Gujarat was steadily working towards water security.

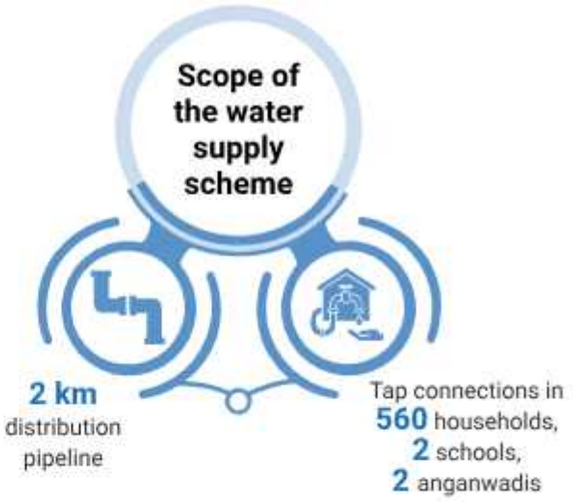
Valana village comes under Ahmedabad district of Gujarat. It was a water-deprived place a few years ago. There was no tap water connection in the village and the nearest water source was also one kilometre away. During harsh summers, the depleting water table and non-availability of clean water forced the village community to consume contaminated water. The physical stress of walking long distance in search of water on rough terrain adversely affected the health of women and young girls. But the story of Valana village has been flipped for good.

Vasantben Bharwad, the Sarpanch of Valana village, is now a happy and proud woman. She recalls the day when villagers expressed unwillingness to pay the one-time community contribution for in-village water supply scheme. She adds, "People of my village are poor agricultural labourers. They did not have the capacity to pay for the installation of tap water connection. Their first priority was to feed the family. I understood their plight but as a water manager, I wanted a solution to the water woes that we faced every day. So, I motivated the community, which was not an easy task. It finally led to many rounds of meetings with the people. Eventually, they agreed to make the community contribution. I am happy that we are now getting potable water at our homes. It has ended our age-old drudgery."

Vasantben runs a small tea stall near the highway. While she works at her tea stall during the day, in the evening after closing the stall she would meet people and motivate them to contribute towards the water supply scheme. During her interactions, she learned that many women faced problems due to inaccessibility of water. She focused on them and explained the health issues that arise due to drinking contaminated water. The women

used to fetch water from a far-flung well, usually carrying multiple water pots on their head and as a result they had patchy bald heads. In monsoon, they were forced to walk through muddy paths, resulting in foot infections. Children had skin infections and stomach problems as they were drinking unsafe water. The repeated efforts of Vasantben reaped results as the villagers finally paid the community contribution, which resulted in development of water supply structure and installation of household tap connection.

Vasantben credits the achievement to the joint efforts of Jal Jeevan Mission and the local village community. Vasantben mobilized the community and motivated the women to participate in Gram Sabhas. The scheme consists of a 2 km distribution pipeline with 560 household tap connections including tap water connection in 2 schools and 2 anganwadi centres in the village. Valana is now a Har Ghar Jal-certified village.



Outcome

Both Valana village and Vasantben are excellent examples of public will, women's involvement and community participation. The thirst for development that motivates them to contribute to the water supply scheme is an example worth replicating in other areas.

Case study

23

JJM changing lives, fulfilling the aspirations of women in a true sense

Intervention

Every change is not brought about by holding massive rallies and shouting slogans. Empowering the community by bringing them out in the public arena and building their capacity leads to a more impactful and long-lasting change. Reservation of seats for women in the Panchayats has encouraged them to participate in the development of villages.

38-year-old Sanju Yadav is one such woman who was elected as the Sarpanch of Bamair Gram Panchayat in Jhansi district of Uttar Pradesh. After winning the election, women flocked to her because they found ease in talking to a female leader about their daily concerns such as toilets and water facilities for women and young girls in homes and schools, a primary health care centre for treatment, and domestic violence.

Entry into public life gave Sanju the opportunity to understand real-world problems. While walking through the village, she would often come across puddles of stagnant water from the kitchen, handpumps and wells, which became a breeding ground for mosquitoes. She was determined to improve the quality of life of her people by providing household and community toilets, and tap water connections in every home, school, anganwadi centre and Panchayat Ghar. Although toilets were available, many were non-functional due to lack of water availability. Women and young girls of her panchayat were spending a huge part of their time fetching water.

Sanju was keen to understand how change could be brought about in her panchayat. Suddenly she got a chance to attend the Rapid Action Learning (RAL) training organized by one of the development partners for Jal Jeevan Mission in Lucknow. Wearing a smile, Sanju Yadav says, "This is the first time I went out of my village all alone. Though I was nervous, I was very happy to learn about the Jal Jeevan Mission, which will help me to reduce the age-old water woes of my sisters and daughters. In the training, I learned about the need for and importance of forming Paani Samiti, developing the Village Action Plan, water quality monitoring and surveillance, solid and liquid waste management, and many more related to water. Meeting and interacting with representatives from 11 other districts gave me

Outreach of tap water connection scheme

378	2	2
households	anganwadi centres	schools

the opportunity to understand the good practices, innovations and community engagement carried out in their respective areas."

Upon her return, she focused her attention on women's participation in the planning, execution of water supply scheme, judicious use of water, management, recycling and reuse of greywater, and behaviour change. Through the training, she learned how women can be skilled in different vocations that can provide employment opportunities to women and help them improve their family income. The role of women under Jal Jeevan Mission is not limited to being beneficiaries who gain access to water through tap connections, but they also play an important part in the planning, execution, operation and maintenance of water supply schemes.

Outcome

Women are no longer running against time. Many women have gone back to work as their morning tasks are completed well in time. With consumption of safe water, water-related ailments have considerably reduced especially among infants and children. Today all 378 households, 2 anganwadi centres and 2 schools in the aspirational gram panchayat are getting tap water regularly.

Case study

24

Jal Jeevan Mission – A life-changing mission for women and children of aspirational panchayat Jannivalasa

Introduction

While many would have believed that providing tap water connections in households would end the drudgery of women as they get water within the comfort of their homes, there is a need to pause and witness the daily tasks performed by a woman. She takes care of not only elders and children in the family but also livestock which often adds revenue to the family income. A typical day in a rural woman's life begins before the sun rises on the horizon, and she happens to be the last one to sleep. The lady of the house manages to rest only when all other family members including children are put to bed. Throughout the day, she runs from one place to another. To add to her work is the task of fetching water to quench the thirst of the family members and meet the requirements of other household chores.

This routine was followed by all women in Jannivalasa panchayat in Vizianagaram district, which has 378 households. The women spent their mornings collecting water from the wells and borewells. As the prime occupation in the village was farming, the only way to earn was to till the land either on one's own field or that of others. The work of farming starts early morning, but as the women were busy fetching water in the wee hours, they could not find time to work on the farmlands or under MGNREGA. Even dropping infants and toddlers at the anganwadi centre on time seemed a huge task. Children who could walk with their mothers went with them and helped carry small bottles of water. It meant a loss of livelihood, education and daycare for the children.

Jal Jeevan Mission has not just brought water to the homes but ensured that tap water connection

reaches every school, anganwadi centre, ashramshala, health centre and panchayat office

B. Satyavathi, an Anganwadi worker, is happy to get tap water connection in the anganwadi centre. It has eased the life of the anganwadi worker and the helper, who are getting clean and safe tap water. It has also improved the attendance of the children at the centre. Now the children are brought to the centre on time by their mothers.

Provision of water in the household has brought about a remarkable change in the social life of the villagers. Earlier in many houses the young women would go to work as earning money was important to meet the domestic needs, while the elder women would be seen carrying water. The children were left at home without supervision while the grandparents were out collecting water. But now the scene in the village has completely changed. The change is welcomed especially by the women as they happen to be the primary water managers and caregivers in the family.

People in the panchayat are happily paying the user charges for the operation and maintenance of water supply schemes. A monthly charge of INR 50 is being collected from every household to meet the recurring expenditure towards honorarium to the pump operator, electricity charges and minor repairs.

Outcome

Sanju is working towards strengthening the VWSC and subcommittee constituted for water quality surveillance. These committees are responsible for water quality testing, community interaction, collection of water user charges, and so on. Every small step will help achieve the goal set for the Mission of reaching every rural home with safe and clean drinking water on a regular and long-term basis. Jal Jeevan Mission, in its true sense, is changing lives and fulfilling the aspirations of many women like Sanju Yadav.

Case study

25

A sigh of relief for Ameratoli's women

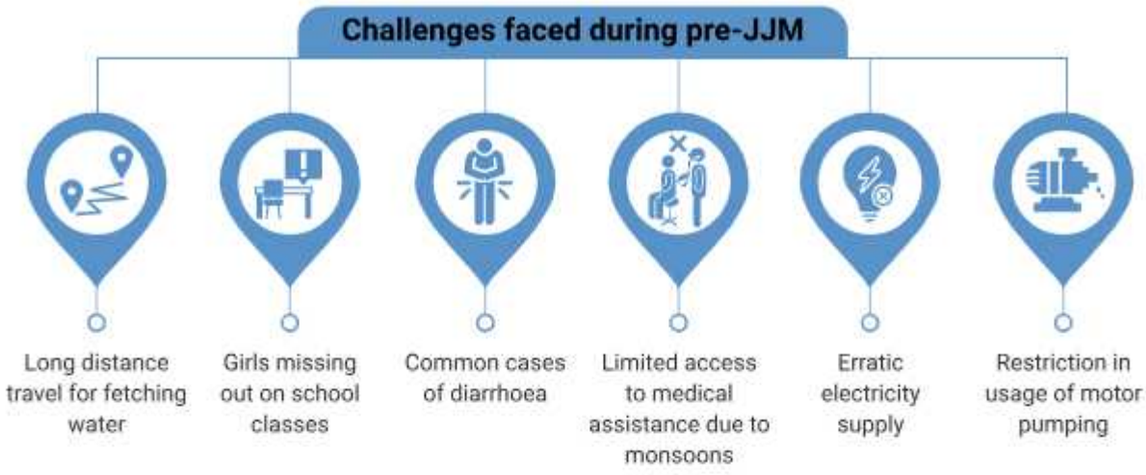
Introduction

Ameratoli, a tribal village located in remote areas of Chhattisgarh, is home to the Uraon community. The village is spread across four habitations; two of them, namely Ameratoli and Sikatatoli, have hilly, corrugated topography resulting in separated and scattered houses. The daily sight of the arduous journey women and young girls undertake to fetch water from 'Chuan' (open well) located outside the habitation is painful. The quality was questionable with high TDS and bacteriological contamination, which is not acceptable for the health of the community. Young girls had to sacrifice school hours to drudge over long distances, as survival took precedence over education. But this was the only water source despite its contamination.

This resulted in overall poor health of the community, with diarrhoea being a common disease. Adding to the misery, the monsoons limited their access to the rest of the district, disconnecting them from any external medical assistance. Another major challenge faced by them was the erratic electricity restricting the usage of motor pumping until now.

However, the onset of Jal Jeevan Mission brought rays of new hope among the residents of both habitations. The Public Health Engineering team supported the sector partner and discussed with the community members about their water supply requirements in special Gram Sabhas. When the community learned that provision would be made to provide sufficient water for their drinking and domestic water needs, including their livestock, their happiness knew no bounds. A Village Water & Sanitation Committee (VWSC) was immediately set up to conduct baseline surveys and prepare the Village Action Plan (VAP) by mobilizing the wider community.

To address the challenges of electricity, a solar power-based piped water supply system was proposed for both habitations. Under the new scheme, 1 HP DC/ 1,200 W photovoltaic submersible pump has been installed along with an HDPE water storage tank of 10,000 litres at 12-metre staging of galvanized fabricated steel structure and household tap water connections. Around 84 households now have the provision of a 24x7 tap water supply of prescribed quality. While regular chlorination is being ensured by VWSC, water quality testing is being conducted by five women in the village trained in using field test kits (FTKs).



Outcome

The community's happiness is evident and their overwhelming joy can be seen especially on the faces of women and young girls. After having faced years of drudgery in fetching water, getting water on demand is a boon. Young girls are now returning to school and women are having a moment of rest as they are now freed from the mundane trips to fetch water. Witnessing the success of the solar-based water supply scheme, the State is focusing on using renewable energy to provide potable water to about 68 thousand households located in such hard-to-reach areas.

Case study

26

Self-help group addresses the thirst of a water-stressed village

Introduction

Thalegaon village in Kalamb block of Yavatmal district, Maharashtra has the typical hot climate and dry topography of the Vidarbha region with scorching summers, going up to 47 degrees Celsius and experiencing sporadic rainfall. Though the village had several wells, the problems were compounded during the summer season as the water in the wells became shallow. In addition, the rainy season brought its own set of challenges as the water in the wells got muddy and dirty. For women who also worked as daily wage labourers, it added to their drudgery as they also had to look around for additional water sources and attend to their work as well.

The news of the 'Har Ghar Jal' scheme brought relief to these women as they would have access to drinking water at their houses, soon. But it would still take some time before the piped water supply reached their homes. For Pratibha Bawankar, a resident of the village and the Block Manager with Maharashtra State Rural Livelihood Mission - Umed looking after Institution Building and Capacity Building (IBCB), issues of water quality and availability needed to be addressed as children often fell sick. She also mentioned frequent visits to the doctors, subsequent medication and accompanying expenses, further stretching the family budgets.

Mamta Lakhpati, who is the Cluster-level Federation (CLF) Manager for Unnati CLF, was also one of the affected women. Jal Jeevan Mission promotes installation of Community Water Purification Plants (CWPPs) as a purely short-term measure to make provision of 8–10 lpcd clean tap water supply for drinking and cooking purposes till piped water supply is provided.

So when Mamta made an appeal at the State level to ensure that their cluster women have immediate access to safe water, the respective District Mission suggested piloting a CWPP. The sector partner supported the development of a social enterprise plan using affordable credit from the CLF funds and self-help group (SHG) Bank linkage. As TDS was high (< 800) in the groundwater, the project plan was prepared accordingly.

The women SHG members had done their research and made door-to-door visits to raise awareness on the benefits of drinking clean water. The plant would be owned and run by women. To keep the social objective of affordability intact, they sold twenty-litre containers at INR 10 each to every household. The plant arrangement ensured that the water was chilled and stored in specially insulated jerry cans. In addition, they engaged a local transporter to supply jerry cans to the houses, ensuring that women had no storage issue. The business owners who used to sell water jars for INR 30 threatened them, but the SHG members were confident and faced every odd situation.

Within just a month of its launch, the CWPP named 'Jansewa Aqua Cool' has supplied purified clean drinking water to 100 households in the village. As a result of their tenacity, planning, and goodwill, the SHG members are running a sustainable social enterprise and have become an example for other SHG women.

Outcome

After learning about the success of the innovative model, SHG women from nearby areas in Yavatmal and other districts have also started sending proposals for installing CWPPs till the time tap water reaches each household. Today all 260 families of Thalegaon village have access to household tap water connections. Women here not only are ambassadors of safe and clean water supply, but also hold the potential to ensure service delivery for any welfare-based scheme.

Case study

27

JJM brings a new ray of hope to Patthalgadwa

Introduction

Patthalgadwa tola (habitation) of Mayel village, which falls under Chitarpur Block of Ramgarh district in Jharkhand State, is mainly inhabited by the Mahato people whose main occupation is agriculture. Until the recent past, this habitation lagged behind in most of the parameters pertaining to ease of living, be it a road or safe drinking water. There was only one solar-powered overhead water tank situated at one end of the cluster of houses. All the people of Patthalgadwa habitation had to fetch water from this source of water, which was a few thousand metres away from the farthest house. This led to wastage of time and caused inconvenience and drudgery, especially to the womenfolk of the tola.

Around three years ago, Sarita Kumari from Hazaribagh was wedded to Santosh Mahato in this tola. Like other women of the tola, she too had to trek all the way to the public stand post situated below the overhead water tank at the other end of the habitation. If she needed water for the house during the night, she dared not go alone to fetch it, especially during winter or the rainy season. Some other elderly women in the house had to be woken up to accompany her. And this would happen with almost all women of Patthalgadwa tola. Thus, women of the tola were often deprived of sound sleep.

However, all that changed with the announcement of Jal Jeevan Mission by the Prime Minister of India, Shri Narendra Modi, on 15 August 2019. The announcement brought a ray of hope to the women of this tola as this would bring direct water supply into their homes! The women put forth their problems to the panchayat bearers. The gram panchayat functionaries met officials of the Department of Drinking Water and Sanitation working at the district level, who responded positively and quickly to their needs. The officials helped the people of Mayal village in forming the Village Water and Sanitation Committee (VWSC) and in preparing the Village Action Plan (VAP) that incorporated the needs of Patthalgadwa tola.

As per the VAP, an overhead storage tank of 4,000 litres capacity was constructed and tap connections were installed for Patthalgadwa tola. This has brought broad smiles to the faces of women of this tola as it fulfilled their dreams of having potable water within the confines of their homes. Now they need not go out to fetch water, thereby saving them time and energy that

can be used to look after themselves and lend a helping hand to the male members of the family in augmenting the family income.

A jubilant Sarita Kumari chuckles in happiness, "Three years ago when I entered this village as a new bride, I had to suffer the drudgery of going out to the public stand post every day and every time whenever there was need for water. Due to this, I could not do certain things like cooking food at will. But now that we have fresh water in our households, we are able to do so many things simultaneously – without stepping out of the house. This has not only saved my time but also enhanced my safety and dignity. The women of our tola are very happy now and thankful to the JJM as it has really brought a new ray of hope in our lives".

Outcome

All 25 families of Patthalgadwa habitation now get potable water flowing from taps at their homes. All seven schools and eight anganwadi centres of the aspirational village Mayel has access to tap water connection. Women are engaged in income-generation activities utilizing the time saved and are able to spend quality time with their families.

Water Warriors of National Water Mission

Introduction

National Action Plan on Climate Change (NAPCC)

The National Action Plan on Climate Change (NAPCC) was released by the Hon'ble Prime Minister on 30 June 2008. The NAPCC laid down the principles and identified the approach to be adopted to meet the challenges of impact of climate change through setting up of following eight National Missions namely:

i. National Solar Mission

ii. National Mission for Enhanced Energy Efficiency

iii. National Mission on Sustainable Habitat

iv. **National Water Mission**

v. National Mission for Sustaining the Himalayan Eco-system

vi. National Mission for a Green India

vii. National Mission for Sustainable Agriculture

viii. National Mission on Strategic Knowledge for Climate Change.

National Water Mission

National Water Mission (NWM) was established in 2011 under NAPCC with the objective of **"conservation of water, minimizing wastage and ensuring its more**

equitable distribution both across and within States through integrated water resources development and management". Ministry of Water Resources drafted a Comprehensive Mission Document of National Water Mission, which was approved by the Cabinet. The Mission Document identified the following five goals for NWM:

i. Comprehensive water database in public domain and assessment of the impact of climate change on water resource

ii. Promotion of citizen and state actions for water conservation, augmentation and preservation

iii. Focused attention to vulnerable areas including over-exploited areas

iv. Increasing water use efficiency by 20 per cent

v. Promotion of basin-level integrated water resources management

Implementation of National Water Mission is a component of "Research and Development Programme in Water Sector and Implementation of National Water Mission" Scheme, which is a Central Sector Scheme and has been extended up to the financial year 2025–2026. The Scheme has two components viz. "Research and Development Programmes" and "Implementation of National Water Mission".

The initiatives of National Water Mission includes "Jal Shakti Abhiyan" – 2021, 2022; Catch the Rain – 2020; financial assistance to districts for GIS mapping of water bodies and preparation of scientific plans; setting up of Jal Shakti Kendras; Sahi Fasal Campaign; State-specific Action Plan (SSAP); baseline studies for improving water use efficiency (WUE) in irrigation sector; mass awareness/ capacity building/trainings; water talks/ dialogue with DMs; workshops; webinars; empanelment of NGOs, etc.

Also, to increase the water use efficiency, a dedicated agency named **Bureau of Water Use Efficiency (BWUE)** has been formed under National Water Mission on 20 October 2022. BWUE has been set up for promotion, regulation and control of efficient use of water in irrigation, industrial and domestic sectors. It will focus on good practices in saving water, reusing water, recycling water, recharging water and, above all, respecting water.

Case study

28

Story of Gayatri Sharma

GAYATRI SHARMA

Community resource person at the Foundation for Ecological Security (FES),

Bavdi village, Jahazpur city, Bhilwara district, Rajasthan

Problem

Water-scarce region, women walk miles to fetch water from long distances.

Intervention

The community resource person launched a community programme on water literacy. She analysed several technologies and shared her inferences with the communities for adopting efficient water conservation practices.

Outcome

Young water warriors joined her campaign to save water. The construction of numerous water-harvesting structures resulted in the recharge of the groundwater table.

Gayatri Sharma, a sociology student from a water-scarce region in Jahazpur, launched a community programme on water literacy through which she demystified the science of water. Women in her village were compelled to walk miles to fetch water from nearby villages. To relieve them of their drudgery, Gayatri launched a simple water literacy programme on the conservation of water right from the household level to the community level, which helped bring awareness among the

children, students, community members and people of adjoining villages as well.

Gayatri has been associated with the women of her gram panchayat (GP) and the adjoining ones, helping them understand the significance of conserving every drop of water. She demonstrates the use of several technologies such as well water depth monitors and construction of water-harvesting structures and shares her analyses and inferences with the communities, motivating them to adopt efficient water conservation practices.

Her efforts resulted in the construction of water-harvesting structures across the block and, within just a couple of years of the intervention; the block is dotted with green pastures and biodiversity.

Launch of water literacy programme by Gayatri

- Demystified the science of water
- Brought awareness among children, students, community and adjoining villages
- Demonstrated use of technologies such as well water depth monitors and water-harvesting structures
- Motivated communities to adopt efficient water conservation practices

Case study

29

Story of Radha Meena

RADHA MEENA

Farmer

Mahukala Village, Budhni tehsil,
Sehore district, Madhya Pradesh

Problem

Lack of piped water supply and water scarcity in the village.

Intervention

One of the farmer women from the village mobilized other women in the village to form a water user committee, developed a village water security plan with the support of the community and actively engaged with the district officials for the distribution and operation and maintenance of piped water supply system.

Outcome

Fully functional piped water supply in the village and establishment of a strong women-led water user committee.

Radha Meena, a farmer, belongs to Mahukala, a village that does not have piped water connections and therefore lacks access to safe drinking water for the community. Women of the village used to spend four to six hours a day to arrange drinking water for their families. To solve the problem of water scarcity, Mardanpur Nal Jal Scheme was introduced in the village; however, there was no mechanism for the operation and maintenance to

implement the scheme. Men in the village did not seem to be interested in solving the issue and most households showed no support.

Radha Meena herself took the lead in mobilizing other women to form a strong water user committee, which eventually led to a fully functional piped water supply scheme with minimum defects in the village.

Radha Meena took the initiative to form a drinking water subcommittee and also develop a water security plan with the support of the community. She actively sought an estimation of tap connections required and mobilized households while explaining to them the economy of piped water. The water tariff and taxes were also fixed. She took responsibility for the distribution of piped water and grievance redressal related to its operation and maintenance. The committee, through the panchayat, voiced its opinion to the government department to include the village in the piped water supply scheme. In coordination with Jal Nigam officials, it worked with contractors and solved the problem of water pressure in all the six identified taps.

Radha Meena wants to ensure sufficient amount of water in each household of neighbouring villages so that every woman can spend her time to realize her dreams instead of spending it on the arrangement of water for her family.

Case study

30

Story of Sarswati Barik

SARSWATI BARIK

Community mobilizer

Pachapada, Nalgunda,
Bhadrak district, Odisha

Problem

High dependency on groundwater, wastage of water and wastewater stagnation near hand pumps.

Intervention

A community mobilizer created awareness among the community on water conservation and sanitation and formed Women's Water Forum in the gram panchayat.

Outcome

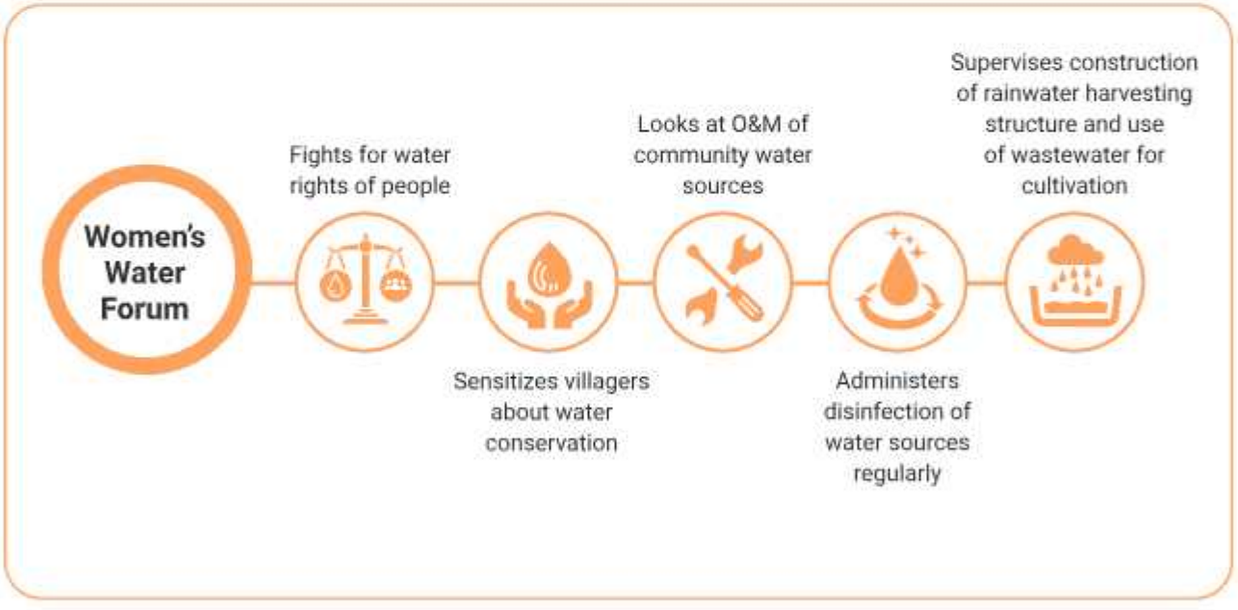
As a result of the measures taken by the community mobilizer, people began to adopt water conservation and management measures, thus showcasing women's leadership in water management.

Sarswati's house is situated in a saline zone near the Bay of Bengal. Here, the hand pump is the major source of drinking water and freshwater aquifers are available at 1,000 feet below the ground level. People are mostly dependent on the community hand pump or stand post for fresh drinking water. This situation motivated Sarswati to join Pragati Jubak Sangha, a local nongovernmental organization (NGO), and work on water conservation and management.

Sarswati started her work at the community level and organized women's self-help groups (SHGs) to promote their socioeconomic empowerment, including on issues of water sanitation and hygiene. She conducted weekly and monthly SHG meetings where she led discussions on water safety, conservation and management on a regular basis along with other socioeconomic issues. She even organized a special door-to-door campaign for sensitizing people on the importance and proper management of water.

She created community awareness and mobilization to bring about a change in the behaviour of the village community. She also formed the Women's Water Forum in the gram panchayat (GP) with the representation of women leaders from different villages. She is facilitating the forum, which fights for the water rights of people, and sensitizing people in the village about water conservation. The forum also looks at the operation and maintenance of community water sources such as hand pumps and ponds administers disinfection of water sources regularly. The forum also supervises the construction of rainwater harvesting structure and use of wastewater for agriculture and vegetable cultivation.

Sarswati was part of various watershed, afforestation and livelihood activities. She facilitated the construction of two water-harvesting structures in the village. Her continuous efforts influenced people to adopt water conservation and management measures in their locality.



Case study

31

Story of Ramandeep Kaur

RAMANDEEP KAUR

Social worker

Palia Kalan, Lakhimpur Kheri district, Uttar Pradesh

Problem

Lack of access to safe drinking water, river pollution and groundwater contamination.

Intervention

A social worker was instrumental in setting up a women's group for water management, showcasing leadership, and ensuring community capacity building on water management.

Outcome

Women's participation and leadership in water governance was the outcome, with community participation in water management and planning.

Ramandeep Kaur from Lakhimpur Kheri in Uttar Pradesh is a postgraduate in social sciences. Her journey on water governance began when she joined Grameen Development Services (GDS), a local nongovernmental organization (NGO), working on the transboundary rivers of South Asia project. She was instrumental in setting up and leading a women's group for water management. Through the Village Water Management Committee, she helped extract knowledge on water-related issues and impact of the private sector on local water bodies.

Following her intervention, the women's group collaborated and worked with the private sector and government officials to resolve the issue of water contamination. She also led the group in implementing the citizen science approach for advocating water governance.

Ramandeep faced various roadblocks and overcame them to solve the problem of polluted water in her village. Initially, the women would not step out of their homes to participate in water committees due to various reasons such as illiteracy, cultural and social norms and lack of confidence. She took up the task of organizing these women through constant engagement with them in their homes. She pursued the issue by sensitizing and educating not just the women but also the rest of the local community on water-related issues. Today, the local women have a voice in decision-making and are using water quality data for advocacy on local water issues. Many women in the village have assumed leadership on water issues by themselves. Community members have started making integrated plans on water management.

In the future, Ramandeep plans to set up linkages with various government schemes on water and create transformational leadership in the community. She also plans to engage with the local private sector on water-related issues and support the community in its demands for rights over water.

Case study

32
Story of Akali Tudu

AKALI TUDU

Farmer

Surgi village, East Singhbhum district, Jharkhand

Problem

Depletion of groundwater led to water scarcity, loss of rabi crop production and severe shortage of drinking water in wells and tube wells.

Intervention

A farmer mobilized the community to dig around 70 ponds in the block and thereby initiated a pond-based livelihood programme for farmers to cater to employment needs.

Outcome

Her efforts resulted in the restoration of groundwater levels and strengthened village water security. Implementation of integrated pond-based farming led to an increase in farmers' income and a reduction in-migration among daily wage workers.

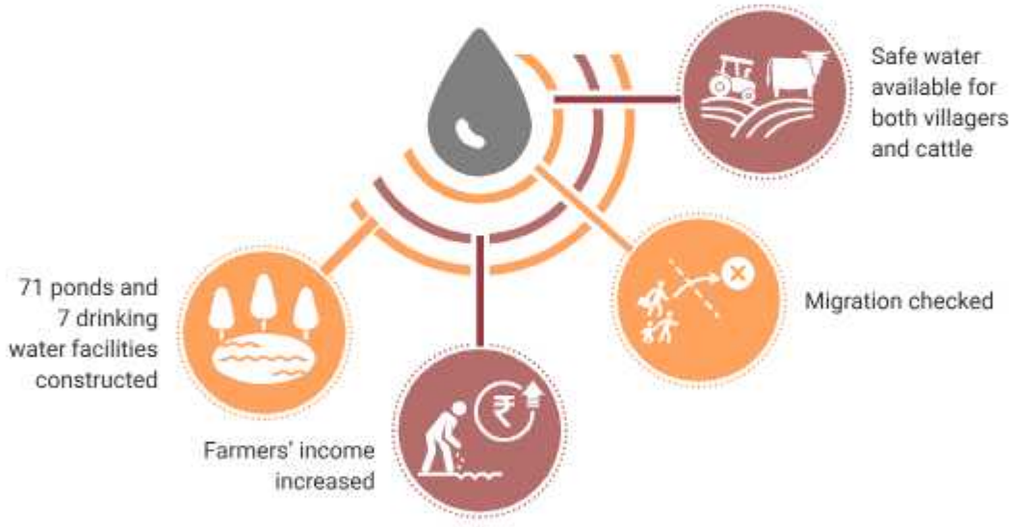
Akali Tudu hails from a remote village in the Gurabanda block, East Singhbhum district of Jharkhand. Villagers were facing acute water shortage for agricultural activities and for use by animals and households since 2010–11. She recognized the imminent need for creating a rainwater harvesting infrastructure in the village. She formed a self-help group (SHG) in 2012 and

registered an organization named Jumid Tirla Gawnta Trust in 2014 to collect funds for water conservation activities and agricultural work. Her Trust partnered with Tata Steel Foundation to construct ponds and drinking water facilities.

Akali faced several challenges along the way including hindrances posed by extremist elements in the area. But due to her persistent efforts and courage, she has been able to create 71 ponds and 7 drinking water facilities in neighbouring schools. The pond-based livelihood programme has increased the income of farmers and has put a check on migration. The improved groundwater levels resulting from rainwater harvesting also contribute to rabi crop cultivation. Drinking water facilities ensure safe water for both the villagers and the cattle. Presently, Akali is working with 350 farmers.

She wants to create more ponds in her area and wishes to create awareness on preservation, conservation and judicious use of water. She wants to inculcate a scientific approach to farming among the farmers with a focus on climate resilient farming. Akali aims to enable the construction of wells and other water-harvesting structures in every farm field of her village.

Water conservation in villages



Case study

33
Story of Aruna Das

ARUNA DAS

Farmer

Amtola Joinpur village,
Lakhimpur district, Assam

Problem

Flooding in the village due to overflowing of accumulated rainwater in the dam.

Intervention

A social worker mobilized Women Water User Groups (WWUGs) for protecting the villages from flooding, water management and leadership.

Outcome

Her initiative solved the issue of flooding by the construction of embankment to protect the community from floods.

Aruna Das is a social worker from a Dalit Assamese family and a resident of Amtola Joinpur village, a flood-prone area near the embankment of the Ranganadi River. In the summer, an upstream dam operated by the North Eastern Electric Power Corporation Limited (NEEPCO) on Ranganadi usually fills up with rainwater. To stop overflow, NEEPCO releases the water, which goes on to flood the downstream villages. Floodwater damages roads, embankments and bridges. Aruna Das organized a rally voicing her concern

about flooding of villages and pushed for the successful completion of an embankment on the river.

Aruna leads the Women Water User Group (WWUG) of Amtola Joinpur village, which works on water-related issues such as safe drinking water, dam-induced floods and water scarcity in the winter.

She facilitated a rally with the support of the WWUGs. Under her leadership, the groups made every effort to solve water-related issues in the village. The embankment project is now protecting the community from floods and villages are safely using water. Aruna emerged as a woman leader in this remote village of Assam. She was selected as the Secretary collectively for 10–18 SHGs that form a Village Organization. She was trained in water conservation and governance, leadership and communication skills by People's Action for Development (PAD) with the support of Oxfam India.

She continues to contribute to water-related issues and wants to strengthen her knowledge and capacities on water governance.

Case study

34

Story of Sunita Patil

SUNITA PATIL

Farmer

Wawad village, Nandurbar district, Maharashtra

Problem

Water-stressed village, dependency on tankers, lack of community unity and political factionalism.

Intervention

A farmer mobilized the community towards water conservation and built rainwater harvesting structures, constructed earthen bunds and planted trees in her land to lead by example.

Outcome

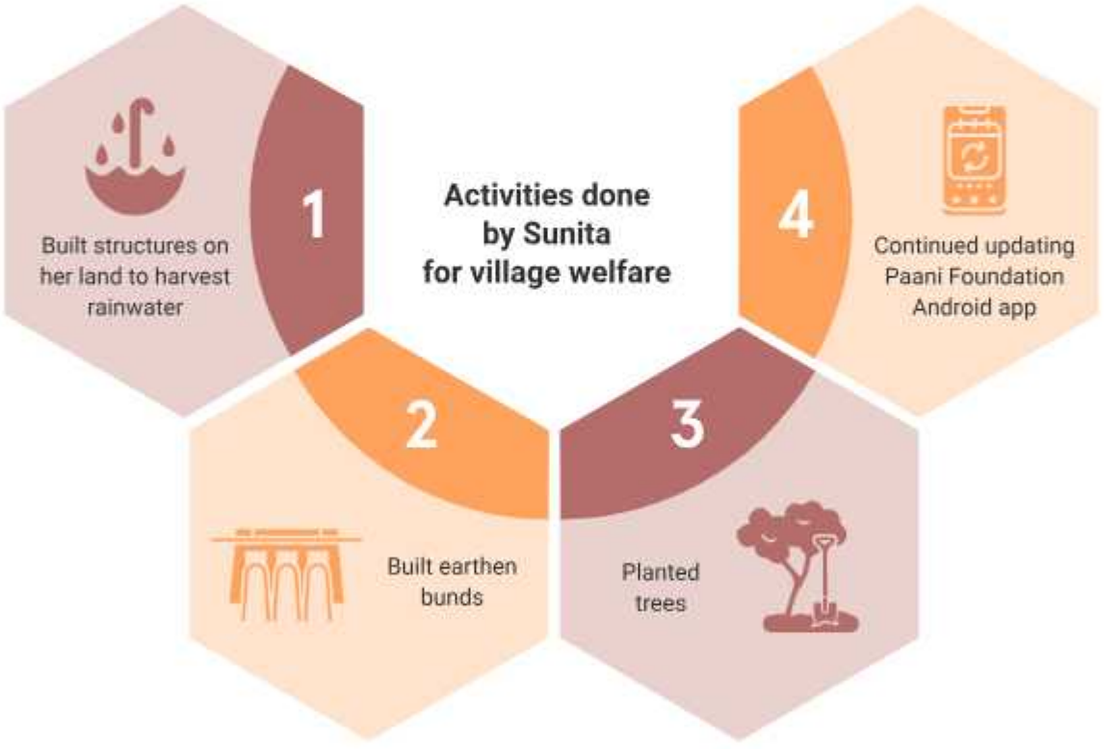
Women joined hands to work for water conservation, which led to rising groundwater levels in the village.

Sunita lives in Wawad, a water-stressed village, where dependency on tankers has been a major problem for many years. She was a watershed management trainee with Paani Foundation and was determined to solve her village's water crisis. She had to face many challenges such as political factionalism, substance addiction among the village youth and their lack of willingness to participate in the village during her efforts. Yet, as a lone ranger, Sunita tirelessly worked towards water conservation despite lack of support.

She built structures on her land to harvest rainwater and contribute to the welfare of the village. She also built earthen bunds and planted trees. She continued updating the Paani Foundation Android app meticulously, with data and photographs of work carried out in her village. Seeing Sunita's relentless efforts, members from her anganwadi group as well as some other women joined her in the efforts, which bolstered her confidence. They decided to work together and contribute to mitigating the depleting groundwater levels in the village. In the summer of 2020, due to the efforts of Sunita, her husband and a few supporters, the village did not have to buy water from outside. They managed to conserve water in the village itself.

Prior to 2018, Sunita says that she had "not even seen a panchayat office, nor was aware of what a Panchayat Samiti does". Today, she sees herself as a community leader and is not afraid of being the first one to carry out any work around water and environment issues – even if she has to work as a lone ranger for the major part of the journey.

Sunita is continuing her water conservation and management efforts through her continued participation in Paani Foundation's Samruddha Gaon Spardha. She is currently leading efforts to measure the well water levels in her village.



Case study

35

Story of Lilabati Mahata

LILABATI MAHATA

Social mobilizer at PRADAN

Dhobakuria village, Jhargram district, West Bengal

Problem

Water-stressed dry zone with complete dependency on rainwater for irrigation and lack of water conservation, resulting in frequent crop failure.

Intervention

The social mobilizer engaged in creating community awareness and mobilized women towards soil and moisture conservation and regeneration of natural resources by making them self-dependent and facilitated the process through a collaboration between self-help groups (SHGs) and the gram panchayat (GP).

Outcome

About 1,250 households in around 85 villages adopted methods for efficient water use in agriculture and more than 3,500 members of women's SHGs gained confidence as they acquired knowledge of various natural resources management and crop practices.

Lilabati Mahata worked as a labourer in agricultural fields in the water-scarce region of her village where the major need was conservation of natural resources, especially soil and moisture.

However, due to lack of water conservation and irrigation management, the rainwater was flowing from upland to downstream to the river, resulting in a water-stressed zone and frequent crop failure.

Lilabati formed a self-help group (SHG) and started cultivation on leased land by taking a loan from the SHG. She gradually started spreading awareness among the members of SHGs and the whole community to bring rigorous engagement on issues such as soil and moisture conservation and regeneration of natural resources, resource mapping, patch demarcation and problem identification. Current and aspired land-use assessment for appropriate activity planning such as treatment of forest upland and creation of water-harvesting structure were some of the practices she promoted among the community in making themselves self-dependent. A paradigm shift in the perspectives was evident around holistic development among members of the Panchayati Raj Institution (PRI), SHG as well as the community. Through her engagement with the community, she succeeded in helping the community to adopt efficient water use in agriculture involving more than 1,250 households in around 85 villages. The initiative also helped in enhancing practices of agriculture along with better production and upliftment of economic conditions. With this journey, more than 3,500 members of women's SHGs acquired knowledge of various natural resources management and crop practices.

Lilabati aspires to establish women's identities as farmers in society through natural resource management.

Case study

36
Story of Neetaben Patel

NEETABEN PATEL

Community development expert

Dang district, Gujarat

Problem

Unavailability of water for domestic consumption and irrigation, severe impact on health and livelihoods, distress migration.

Intervention

The community development expert facilitated water conservation efforts, strengthened community-based institutions for water conservation and efficient water management, mobilized women to raise water issues with the panchayats and advocated with Panchayati Raj Institutions (PRIs) and other stakeholders.

Outcome

The initiatives led to water-sufficient villages, showcasing women's leadership and active participation in water committees; women gained technical expertise on soil and water conservation and management as well as livelihood enhancement.

Neetaben hails from a remote tribal village in the Navsari district of Gujarat. She faced many hardships to access water throughout her life, which motivated her to start working on gender and water-related issues. She later joined the

Aga Khan Rural Support Programme where she worked as a development organizer in the tribal hinterlands of Dang, Narmada and Bharuch districts. She realized that the unavailability of water for domestic consumption and irrigation has a severe impact on the health and livelihood of people. She noted that barriers in accessing water for irrigation affected crop production and, eventually, food security and livelihoods, forcing people into distress migration.

Her work has mostly been around facilitating water conservation efforts to improve livelihood opportunities for local communities and strengthening community-based institutions for water conservation and management. She took the lead in nurturing leadership skills of women, demanding better infrastructure for water accessibility and advocating with PRIs and other stakeholders. She facilitated collaboration between the community, PRIs and concerned government agencies.

All these efforts have turned many water-stressed villages into water-sufficient villages. There is a visible impact on both groundwater and surface water availability. As a result, many farmers have now started growing rabi crops and also engage in animal husbandry in the region. The drudgery of women and girls has reduced; women are now active members of water committees and, above all, have gained considerable technical expertise on soil and water conservation and management. The direct and indirect impact of livelihood enhancement has also helped in addressing many gender issues and ensuring better life quality for women and girls.

Neetaben now plans to work on sensitizing communities on the judicious use of water. She plans to emphasize these emerging issues over time.

Case study

37
Story of Vasantha

VASANTHA

Reporter for community media at Keystone Foundation

Sigur, Nilgiri district, Tamil Nadu

Problem

Poor water quality and emerging health issues among adults and children due to its consumption.

Intervention

The volunteer reporter for community media stressed on the importance of water quality testing and monitoring. She also created community awareness on water hygiene. She mobilized other women to spread awareness and collect news for the community media.

Outcome

Regular water testing has kept people aware of their water quality and brought awareness about water hygiene; a simple solution of boiling water before drinking was adopted for the prevention of skin allergy problems.

Vasantha is an indigenous woman from Anekatty village in the Nilgiri district of Tamil Nadu. The poor water quality in certain villages of her region led to health issues such as skin allergies and children falling ill during the monsoons, which became a major concern. There was speculation in the village that poor water quality was causing

health issues, but there was no official data to confirm it.

Owing to the water problems in her region, she joined Keystone Foundation as a volunteer reporter for community media, 'Nilgiri Seemai Suddhi'. She linked the emerging health issues and undertook regular water quality testing and monitoring in her region. She struggled at first to unite people and take forward this work with community participation. Eventually, she got everyone on-board, especially the village elders and leaders of the area. She received training in water quality testing and monitoring and harnessed her skills to test water quality using basic water parameters and E. coli tests in 15 villages of the Sigur area.

Regular water resource testing has kept people aware of water quality. Also, interlinking water quality and health has yielded awareness about water hygiene. Besides being a news reporter, Vasantha has further engaged with the community to disseminate awareness on water quality related issues. Over time, she has evolved into a confident community leader and continues to strengthen her skills and capacities.

She wants the water testing activity to scale up in other areas and also hopes to execute more programmes on water as part of community media. She aims to build an empowered community and wishes to enhance the value of water to more than a consumable good.

Case study

38

Story of Kunti Gupta

KUNTI GUPTA

Social development worker at Sehgal Foundation

Nuh district, Haryana and Muzzafarpur district, Bihar

Problem

Poor water quality and lack of community awareness.

Intervention

The social development worker engaged in capacity building of the community on water management and water testing. She facilitated the installation of over 110 filters and five soak pits. She also worked on water-saving irrigation technologies and introduced a low-cost household water treatment technology to the village community.

Outcome

Irrigation water-use efficiency, wastewater management, creation of alternative livelihoods and adoption of household water treatment technology led to a reduction in medical expenses incurred due to waterborne diseases.

Kunti has over 13 years of experience in grassroots development. She started working on life skills education in the Nuh district of Haryana and later moved to water management. She began training communities on thematic areas of water. She has

played an active role in sensitizing communities on access to clean drinking water and wastewater disposal through the promotion of soak pits. Nuh was a water-scarce region and water salinity was an issue. Lack of awareness about waterborne diseases was a major challenge that Kunti had to handle.

Kunti has evolved in her role from a field coordinator to a project coordinator and has extensive experience in working with communities across Haryana and Bihar. She has been instrumental in managing corporate social responsibility projects on water management and agricultural development in Bihar. In the course of her work, she has facilitated the installation of over 110 filters and five soak pits in five villages in Muzaffarpur district. On the agriculture front, she engaged in propagating water-saving irrigation technologies such as solar pumps and farm mechanization by promoting zero tillage machines and potato planters among farmers. Kunti has been working with women on the promotion of goat farming and creating goatpreneurs to generate alternative livelihoods. She introduced communities to the JalKalp water filter, which is a low-cost, household-level water treatment technology developed by the Sehgal Foundation. Families now use filtered water for drinking and cooking, instead of the hand pump water which they used earlier.

Kunti aims to create a cluster-based ownership model for drinking water technologies, which will provide access to technology even to the poorest of poor households. She believes that women and water have a deep connection; they are the primary users of water and it is important to build their capacities. She encourages more women to come forward for managing water resources.

Case study

39
Story of Pareshamma

PARESHAMMA

Community resource person at the Foundation for Ecological Security (FES)

Thamballapalle village, Chittoor district, Andhra Pradesh

Problem

Decline in groundwater levels due to growing water-intensive crops in a water-scarce region.

Intervention

The community resource person promoted the cultivation of millets, advocated benefits of eating millets and incentivized farmers by giving millet seeds free of cost.

Outcome

About 50 farmer families started growing millets. Around 200 families made millets a part of their diet.

Pareshamma is a Dalit woman who works as a community resource person in the drought-prone district of Chittoor. Tomato and paddy are the main crops grown in this region. The continuous cultivation of these water-intensive crops severely affected the groundwater table in the village. Pareshamma had attended several training programmes on millet cultivation, crop water budgeting, sustainable agriculture practices and groundwater management. She was introduced to less water-intensive millet cultivation and

decided to promote it in the village. Initially, she found it challenging to convince farmers to make the shift from paddy to millet cultivation as millets fetch less money than paddy.

She started promoting the benefits of eating millets and dissuaded people from consuming paddy, which was treated with chemicals and pesticides. She facilitated meetings and discussions, bringing up the issue of the disappearance of millets from the diet over the past 40 years and trying to impress upon the farmers that millets required less water than paddy or tomatoes. She and her team started incentivizing farmers by giving them seeds free of cost. As a result, she was able to motivate farmers to shift to millet cropping. Today, about 50 farmer families are growing millets in the Thamballapalle region. Around 200 families out of 700 have made millets a part of their diet.

Pareshamma's drive to promote water and food security among her village community is still a continuing endeavour. She wants to boost the production and consumption of millets in other villages as well, starting with her native village. She believes that, to resolve water issues in her region, there should be a ban on drilling new bore wells and there is a need to undertake soil and water conservation works.

Case study

40

Story of Sartama Devi

SARTAMA DEVI

Farmer

Patara village, Uttarkashi district, Uttarakhand

Problem

Shortage of drinking water for domestic animals generally during the time of grazing due to which drudgery of women increased.

Intervention

A farmer revived four traditional water storage structures and constructed two new structures. She also mobilized the village community to act collectively. She also built the first ferro cement tank to conserve rainwater.

Outcome

These initiatives provided easy access to water for animals and reduced women's drudgery. It also motivated them to do volunteer labour for the first ferro cement tank structure.

For Sartama, farming and livestock rearing has been a major source of income, but she faced the critical issue of drinking water availability most of her farming life because of continuous shortages in water availability in her village Patara.

Reliance Foundation started its development work in her village in November 2018. It took up a series of campaigns and capacity building programme such as Jal Shakti Abhiyan,

Swachhata Hi Sewa, wall paintings, field training on leadership, volunteerism, water budgeting and water conservation techniques to make the community aware of water conservation, revival of existing water infrastructures and to sensitize and involve the youth, adults and women in village development activities. Sartama came forward to join hands with Reliance Foundation to address the daunting water challenges of her village.

Today, Sartama heads the Him Patara Gram Sangathan, a federated body of 10 SHGs with 94 members, promoted by the National Rural Livelihoods Mission. Under the leadership of Sartama, members of Him Patara Gram Sangathan collectively decided to revive all the chal-khals present around the village with community shramdaan. Chal-khal is an age-old practice in Uttarakhand used for water storage from natural sources such as rain. The chal-khal method provides drinking water to domestic animals and the seepage also maintains the moisture content in the soil. The community also decided to build new structures near their sheds wherever accessible it is for the animals to drink water. With collective effort of women of the Sangathan, they were able to revive four traditional water storage structures and construct two new structures having 60,00,000 litres of water-harvesting capacity; seepage from these structures would maintain the moisture content of approximately 7 hectares of agriculture land, positively impacting the local ecosystem. These structures provided drinking water facility to about 275 domestic animals. This intervention also reduced women's drudgery.

This work inspired eight other villages of Dunda block and they have also become part of this water campaign. Sartama asserts this process of water conservation should be included in the community as a custom every year through collective efforts.

Campaigns and capacity building activities

Case study

41

Story of Hari Chandana Dasari

HARI CHANDANA DASARI

Collector

Narayanpet district, Telangana

Narayanpet, a border district between Telangana and Karnataka, has a cultural and religious heritage of stepwells dating back to the Chola dynasty. The region is mostly rain-fed and depends on storage in water bodies during lean seasons. In a span of five months, over 200 of the traditional water bodies have been revived thanks to the phenomenal rejuvenation and preservation efforts of the district administration. Further, the development of almost 3,000 farm ponds, formation of farmers' cooperative societies and construction of about 76 ponds have not only improved the water situation in the district but also generated employment opportunities for the migrants due to lockdown. At the helm of these efforts is the district collector Hari Chandana Dasari. The role and efforts of district administration have evoked intense community participation. A pilot project is being undertaken in which have stepwells in the district are to be revived holistically with community-centric conservation approach.

Case study

42

Story of Dr Divya S. Iyer

DR DIVYA S. IYER

MD, MGNREGA,

Kerala

Water conservation initiatives taken up under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in Kerala include the construction of contour bunds and contour trenches, gully plugging, building gabion structures, recharge of water bodies, digging farm ponds and building stone bunds, earthen bunds and rainwater harvesting pits. Dr Divya, Managing Director of MGNREGA, Kerala, said that in the past two to three years, 1,965 works of gully plugging, 13,277 of brushwood check dams, recharge of over 40,000 wells, 22,139 works of canal cleaning/side protection and renovation of over 24,000 traditional water bodies have been completed under MGNREGA.

One of the important initiatives taken during her tenure is the river reclamation (Kuamperoor River) and river re-linking (Meenachilar Meenthalayar–Kodoor) and the unique intervention – Coir Geo Textiles – for natural resource management and to provide livelihood opportunities for civil society members.

Case study

43

Story of Isawanda Laloo

ISAWANDA LALOO

Deputy Commissioner

East Khasi Hills, Meghalaya

Meghalaya receives 12,000 mm rainfall a year, the highest in the world, but the region faces water scarcity due to excessive run-offs. In view of this problem, a water conservation strategy was formulated by the state government. Meghalaya became the first state in India to come up with a State Water Policy in 2019. Adopting a bottom-up approach, District Level Committees have been formed as part of the State Policy in addition to the development of a cadre of trained water volunteers (two per village). Ms Isawanda Laloo, Deputy Commissioner, East Khasi Hills, informed that work on water conservation and rainwater harvesting structures (51), renovation of traditional water bodies (2), recharge of bore wells (9), watershed development (73) and afforestation (9) has been done. There is a provision of 'Systematic Review to Assess Progress and Enhance Impact'. Under Jal Shakti Abhiyan, 81 projects related to water conservation, renovation of water bodies, micro-irrigation and ponds were completed during the lockdown period. Ms Isawanda also talked about the concept of washing platforms, which helped in bringing people together to respect water.

Menstrual Hygiene Management

Introduction

Although menstruation is a natural biological process, affecting the world's female population at reproductive age (12–49 years), it continues to remain a cause of embarrassment and shame, coupled with deep-seated stigma about menstrual impurity, thus creating a barrier to gender equality. In India, an alarming number of girls drop out of school every year when they start menstruating and face severe health issues owing to improper menstrual hygiene. Further, archaic practices observed for generations in families forbid girls from participating in normal activities during menstruation.

In the wake of such challenges that women, particularly the girl child, face, menstrual hygiene management (MHM) is not just a step towards ensuring sanitation but a tool to empower women. It is a vital step towards protecting the girl child while safeguarding her dignity and giving her a life of opportunities to pursue her dreams. MHM contributes to achieving a gender-balanced world.

To ensure women's empowerment, MHM has been included as an important component in the Government's flagship programme, the Swachh Bharat Mission – Grameen (SBM(G)). In addition to improving the overall sanitation coverage in rural areas of India, it aims at promoting the dignity of women and children and maintaining sustainable health and hygiene benefits. It underlines the need for the construction of toilets in households and schools, which is integral to menstrual hygiene and encourages safe menstrual hygiene practices. It further calls for skill development and the setting up of sanitary napkin dispensers and incinerators in schools and public toilets.

Case study

44

Kurma Ghar to Mahila Visava Kendra – a much needed MHM initiative in Maharashtra

In a move that will significantly contribute to empowering women, providing them with a safe space and opportunities they urgently deserve, the district administration of Gadchiroli in Maharashtra, with the technical support of UNICEF Maharashtra, has started a unique initiative. Through this measure, the administration wants to put an end to the concept of Kurma Ghar or period huts where menstruating girls and women were 'exiled'. In its place, a Mahila Visava Kendra or a women's rest centre is being constructed.

Kurma Ghar, a tradition continuing for generations, breeds unhygienic living conditions and is often linked to poor health of girls and women, given that it is based on many misconceptions about menstruation and health care, lacking scientific evidence.

The Mahila Visava Kendras (MVKs), proposed in place of Kurma Ghar, would provide women a space of their own where they could go at any time and join in activities of women groups, even when they are not menstruating. In essence, they

are safe spaces offering a friendly environment to all girls and women of the district to manage their menstruation with dignity.

Shri Sanjay Meena, District Collector of Gadchiroli, commented on the trailblazing initiative: "Sometimes solutions to sociocultural traditions do not come from their eradication, rather they come from the scientific accommodation and its propagation by government agencies systematically. Kurma Ghar is one such government intervention where local-tribal traditions are aligned with proper health facilitation."

"We have already constructed 23 MVKs and 28 more are in the pipeline. Our aim is to cover all 400 villages with the prevalence of Kurma Pratha in the coming two years. We hope that this will prove to be a game changer for women's empowerment in these villages," Shri Kumar Ashirwad, the Chief Executive Officer of Gadchiroli Zila Parishad, said.

Outcome

The unconventional initiative is being welcomed by local women. They are delighted with the new facility that offers them safe living spaces and a chance to pursue their hobbies with the provision of water, clean toilets, lights and books.

Case study

45

Pink toilets in 32 GPs of Gadag

In a move to make sanitation accessible, safe and at the same time help adolescent girls overcome embarrassment during menstruation, the district administration of Gadag district of Karnataka is planning to construct pink toilets in 32 gram panchayats (GPs) across the district.

Of these, 20 units have been completed while 12 are in an advanced stage of completion, according to CEO of Gadag Zilla Panchayat, Shri S. Bharat. The cost of each unit is INR 6 lakh, which is procured as follows: INR 3 lakh from Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) funds, INR 1.8 lakh from SBM(G) and INR 1.2 lakh from the 15th Finance Commission funds for Gram Panchayats.

The pink toilet for adolescent girls was first constructed at the KH Patil Girls Senior Primary School and after successful testing, it is being replicated in other villages.

Equipped with adequate water supply, lighting, a changing room and other amenities, the washroom for adolescent girls and women is an innovation under the SBM(G) programme. Each unit has an incinerator, which can be used for safe disposal of sanitary pads and menstrual waste.

Menstrual hygiene management (MHM) is an integral part of the waste management under the SBM(G) campaign, underlining the importance of this otherwise taboo topic that impacts not just health and well-being but also education and overall development of girls and women in the country. In fact, the Department of Drinking Water and Sanitation (DDWS) has issued guidelines to support all adolescent girls and women. It outlines what needs to be done by state governments, district administrations, engineers and technical experts in line departments as well as school head teachers and teachers.

Outcome

The initiative has been appreciated by girls and women, as it helps them overcome embarrassment during menstruation. They understand that effective MHM can contribute to their health, well-being and the overall development of girls and women in the country.

Case study

46

Jharkhand promotes innovative MHM practices

From setting up sanitary pad banks to the strengthening of menstrual waste disposal systems to regular sessions on menstrual hygiene management (MHM) in schools, gender-segregated toilets and more, Jharkhand has been leading the change to prioritize women's health and sanitation needs to accommodate safe hygienic practices.

In fact, the initiatives of the panchayats of Jharkhand have created an MHM ecosystem that consists of awareness, safe usage of menstrual products and access to menstrual waste disposal facilities.

Initiatives undertaken in Jharkhand

Sanitary pad bank system in Kasturba Gandhi Balika Vidyalaya (KGBV), Tonto, West Singhbhum

The unit caters to about 600 girls, especially those girls who are unable to buy pads regularly, providing them with a vitally needed access to menstrual products. The success of the initiative is attributed to the proper stock management to ensure effective MHM. School girls manage the stock register, which helps them to calculate the pad requirements in advance, while the child cabinet ministers are responsible for ensuring regularity in the supply of pads.

SS +2 High School, Chandil block, Saraikella, Kharsawan propagates safe MHM waste disposal practices

The school is a shining example of cleanliness and good menstrual hygiene practices owing to the efforts of the teachers, students and parents. Such improvements in the learning environment have helped the school retain its students to complete their studies and contribute effectively towards swachhata. The school is not only working on campus cleanliness and beautification but it has also put a ban on single-use plastic and constructed a soak pit to manage greywater.

MHM Lobby in KGBV Jhikpani, West Singhbhum

A presentation was made by child cabinet ministers to the school-in-charge about the MHM lab, which would allow girls to learn about menstrual health and provide them rest, thereby increasing their retention in school. UNICEF supported the school authorities in setting up the lab with the arrangement of kits and other items. Using school funds, a lab was set up within a week. It is a happy space for girls to rest, learn and discuss menstrual hygiene practices on a regular basis.

Regular MHM sessions in KGBV Angada

Babita Kumari, the nodal teacher and warden from KGBV Angada, realized that lack of knowledge and awareness on menstrual hygiene were affecting girls' learning. Even though good water, sanitation and hygiene (WASH) facilities and a conducive environment were provided to the students, their lack of positive health behaviour was a major concern. Thus, Babita, with the help of UNICEF-supported field agency, conducted an awareness session combined with a training programme for girls comprising discussions, experiential learning and sharing using IEC tools.

MHM Lab in KGBV Gandey

The students of KGBV Gandey are free to use the MHM lab whenever the need arises. It is a space to discuss their concerns and needs. In addition, Mrs Archana Kumari, a swachhata nodal teacher, took the initiative to form the 'Mahwari Swachhata Group' to work as a peer group to influence girls individually as well as in a group.

Helping adolescent girls to remain in school

Reena, a student of MS Adarsh Vidyalay, Devgaon, experienced her first period during her class. The cramps and the sudden change she experienced were frightening. The MHM lab, which was available at the school, provided sanitary pads, a space for Reema to rest and information about personal hygiene and safe practices. With that, she became the first girl in the school to be retained, having developed a complete trust in her seniors and teachers.

Dialogue and awareness generation on MHM

Another example of ensuring a dialogue and awareness generation among school students on MHM in Jharkhand is New Bhagalpur Middle

School, Bermo in Bokaro. This initiative has helped about 330 girls in the school to bust menstruation myths and confidently address MHM. Proper and better toilet facilities with adequate water, regular availability of pads and dissemination of information through group awareness session have been useful MHM interventions made by the school.

Gender-segregated toilets

The Latehar district administration has been promoting gender-segregated toilets for healthy MHM in Turisot, Chandwa block, Latehar. In fact, their SBM(G) Phase II and Swachh Vidyalay Swasth Bacche (SVSB) programmes have generated impetus to take forward the WASH agenda with concerted actions in convergence.

Outcome

The community has understood that MHM is vital for their womenfolk. The initiatives have generated awareness and promoted dialogue on safe practices among students and the community. Girls are remaining in school even after menarche and are happy to use the MHM lab facilities.

Case study

47

MHM campaign during Magh Bihu in Bongaigaon

In an effort to motivate the community to practice safe menstrual hygiene and dispose their menstrual waste properly, the district administration of Bongaigaon in Assam organized a menstrual hygiene and waste management campaign during the Magh Bihu celebration.

Magh Bihu or Bhogali Bihu is a harvest festival celebrated in Assam during mid-January, marking the end of the harvest season. The people of the state celebrate the festival with community feasts after the annual harvest.

The MHM campaign was organized in collaboration between the District Water and Sanitation Committee of Bongaigaon and the Assam State Rural Livelihood Mission (ASRLM) during the festival observed on 14 and 15 January 2022.

According to the District IEC Coordinator, Ms Bhanita Devi, on day one there was a meeting of the ASRLM district- and block-level officials with Jeevika Sakhis (community resource persons). The discussions dwelt at length on the importance of menstrual hygiene and safe disposal of menstrual waste, which resulted in a plan with an agenda to conduct awareness programmes at the block level.

On the second day, during the Bhogali Mela, various IEC activities were conducted, including display of posters and distribution of leaflets on MHM, all designed by the district. Further, all stalls had adequate supply of the leaflets to distribute to the visitors of the mela.

Subject of the meeting:
Importance of **menstrual hygiene and safe disposal** of menstrual waste

Result of the meeting:
An agenda to conduct **awareness programmes** at the **block level**

Outcome

The district administration was able to reach out to a large number of people with messages on safe menstrual hygiene management. Moreover, posters and stickers were pasted in public places such as schools, health centres and community toilets of the district to generate awareness on the subject.

To read more, scan here

Case study

48

Kamrup observes month-long menstrual hygiene and sanitation programme

With a view to spreading awareness on menstrual hygiene management and the issues faced by women during menstruation, the Kamrup District Water and Sanitation Committee in Assam celebrated a month-long menstrual hygiene and sanitation programme from 28 April to 28 May 2022.

The month saw various activities including the distribution of 28,000 free reusable sanitary pads of Project Baala among adolescent girls of classes VIII, IX and X in Kamrup district and an awareness session on menstruation, which is a natural biological process, affecting the world's female population in the reproductive age of 12–49 years.

Schools also organized drawing, essay writing and slogan writing competitions for students on the subject of menstrual hygiene.

Discrimination against menstruating women is widespread and periods have long been a taboo and considered impure. Menstruating women are often excluded from social and religious events, denied entry into temples and even kept out of kitchens. To address this, the district IEC team staged a street drama busting the myths related to menstruation.

Key highlights of menstrual hygiene and sanitation programme

- Distribution of **28,000** free reusable sanitary pads
- Drawing, essay writing and slogan writing competitions on menstrual hygiene
- Street drama to bust menstruation myths
- Training session on menstruation for **1,109 men**

On 27 May, a training session was held for 1,109 men about menstruation. For the initiative, the India Book of Records issued a certificate to the district administration for organizing the 'largest menstrual health training for men on a single day'. A video featuring women and the menstruation-related challenges they experience was developed and screened.

Outcome

Adolescent girls and women understood that menstruation is a natural biological process, which affects the world's female population in the reproductive age of 12–49 years. Students have understood the need to use safe absorbents and maintain hygiene.

ODF Plus Villages

Introduction

The key objective of SBM(G) Phase II is to sustain the ODF status of villages and to improve the levels of cleanliness in rural areas through solid and liquid waste management activities, thus helping villages achieve the ODF Plus status. This objective should be achieved through continued behaviour change communication and capacity strengthening at all levels.

An ODF Plus village is defined as a village which sustains its Open Defecation Free (ODF) status, ensures the implementation of solid and liquid waste management and is visually clean.

The criteria for declaring a village as ODF Plus depends on interventions on the various verticals of solid and liquid waste management. Given that all states may not fulfil all criteria under different verticals for achieving the ODF Plus status, the Department of Drinking Water and Sanitation (DDWS) had reviewed the criteria and introduced intermediate stages in the process of declaring a village as ODF Plus as follows:

ODF Plus – Aspiring: A village in which all households have access to a functional toilet facility; all schools, anganwadi centres and panchayat ghars have access to a functional toilet with separate toilets for men and women; and the village has arrangements for solid waste management or liquid waste management.

ODF – Rising: A village in which all households have access to a functional toilet facility; all schools, anganwadi centres and panchayat ghars have access to a functional toilet with separate toilets for men and women; and the village has arrangements for solid waste management and liquid waste management.

ODF – Model: A village in which all households have access to a functional toilet facility; all schools, anganwadi centres and panchayat ghars have access to a functional toilet with separate toilets for men and women; all public spaces in the village have minimal litter, minimal stagnant wastewater and no plastic waste dump in public places; the village has arrangements for solid waste management and liquid waste management; and the village should have ODF Plus information, education and communication (IEC) messages prominently displayed through wall paintings and billboards.

Case study

49

South Maubuang is Mizoram's first ODF Plus village

Given that all households and institutions have functional toilets and measures in place for the effective management of solid and liquid waste, the village of South Maubuang in Aibawk block of Aizawl district in Mizoram has been declared a model ODF Plus village, having fulfilled all the criteria as per SBM(G) Phase II guidelines.

According to official data, the village, which has a population of 649 individuals from 116 households, has emerged as the first ODF Plus village in the state of Mizoram. The entire community had been involved in the efforts for achieving this status.

ODF sustainability

All the three schools in the village and two anganwadi centres, the community hall and the Bharat Nirman Rajiv Gandhi Seva Kendra (BNGRSK) hall have good arrangement for toilets, with the schools ensuring there are separate facilities for boys and girls. Lately a community sanitary complex was constructed near the community hall to cater to the people who congregate there for functions and events.

Biodegradable waste management

In 2021, the village won the National Panchayat Award, which carried a prize money of INR 5 lakh. The Village Council used the prize money to improve solid waste management in every household. Hence, today, 98 per cent of the total households have arrangements for the treatment of biodegradable waste material. Apart from this, the village constructed community compost pits using SBM(G) and MGNREGS funds at various institutions and schools.

Liquid waste management

As far as liquid waste management is concerned, all the households located on the downhill side of the roads have greywater flowing into their kitchen gardens. Therefore, they do not necessarily need soak pits since the greywater that is generated in the households is naturally treated. As a result, the kitchen gardens of households yield good quality vegetables such as pumpkins, maize, beans, snake beans and mustard, which are used for their own consumption.

Plastic waste management

Even though plastic products have become an integral part of people's lives, it has emerged as an important environmental challenge, particularly in the rural areas, owing to which plastic waste management is a critical criterion for declaring villages ODF Plus. In South Maubuang village, plastic waste is collected door to door by the Village Water and Sanitation Committee (VWSC) every week and then put in the plastic waste collection area of the village. When an ample amount of plastic is accumulated, it is transported to the Plastic Waste Resource Management Centre at Aibawk where it is sorted, shredded or fed into the bailing machine. The Children's Sanitation Club also collects plastics from each household in exchange for toffees.

Further, plastic bins are located at every corner of the village and a resolution banning single-use plastics has been adopted by the village. The introduction of the Plastic Waste Resource Centre ensures effective plastic disposal management.

Faecal sludge management

VWSCs with active community participation consistently ensure proper treatment of faecal sludge. Moving from traditional trench pits to single pits in the SBM(G) Phase I, all households in the village have now updated to either twin pits or septic tanks, with the latter connected to soak pits.

Outcome

The model ODF Plus village is a source of inspiration to other villages in the district and state. Its models for solid and liquid waste management are replicable. The community is proud to have contributed to the achievement and enjoys good health. The village is also visually clean.

Case study

50

Dalhoda Chaupati is the first ODF Plus village in Madhya Pradesh

Situated in Mandsaur district, Dalhoda Chaupati is Madhya Pradesh's first ODF Plus village. The gram panchayat (GP) resolution declaring this village ODF Plus was passed on 16 August 2021. The successful implementation of its waste-to-wealth project ensures effective management of solid and liquid waste, enabling the GP to achieve visual cleanliness.

The achievement can be attributed to the year-long sustained efforts of the panchayat and its residents and the implementation of the 'Waste to Wealth and Prosperity' or '*Kachre se Kanchan, Kanchan se Samraddhi*' project. It redefined the term 'waste', underpinning the belief that it can be transformed into wealth and lead to prosperity or gains, rather than remain worthless.

Located on the National Highway 99, Dalauda GP with 13,000 residents is a small town that has a Krishi Upaj Mandi and a railway station. The village, which is considered an educational hub, has 80 villages in its vicinity. Given that it has many factories, the village attracts crowds and it was common to see piles of garbage at every street corner, which began to draw stray animals. The issues of hygiene and cleanliness were put on the back burner and the situation turned for the worse during the monsoons.

With the commencement of SBM(G) Phase II, which has a focus on solid and liquid waste management (SLWM), the panchayat leaders decided to begin activities and set up a Kachre se Kanchan Centre, adhering to the guidelines of SLWM.

Kachre se Kanchan Centre

At the outset, the GP distributed 5,000 bins to households to enable segregation at source. While tricycles were used to collect garbage from households in the narrow lanes, Tata magic cars were used for areas with metalled roads. Collected waste was deposited into the Kachre se Kanchan Centre, where it was segregated, sorted and kept aside for recycling. All biodegradable waste was converted into compost.

Simultaneously, the GP began roof rainwater harvesting and built soak pits to which rainwater and greywater was channelled.

Mobilization of resources

For SLWM, the GP secured funds to the tune of INR 4,15,000 from SBM(G) and MGNREGA funds and INR 9,12,000 from the GP Nidhi Fund. It also collected a cleaning fee from residents and realized income from the sale of recyclable items and biofertilizers.

Community participation

All the 13,000 residents of the village pledged their support to the sanitation cause and volunteered their services to the project to make theirs an ideal village. During a shramdaan, they participated in collecting garbage that was dumped in street corners and burning of litter was banned in the village.

Outcome

Heaps of garbage on street corners and stagnant water during the monsoons are now a thing of the past. In fact, the initiative led to the gradual transformation of the locality with visible improvement seen in the environment and the surrounding areas that contributed to good health. People developed a civic sense and pride in their village and the project enhanced livelihoods and generated some income, while attracting tourists. Most of all, through the project, the GP demonstrated that waste can be transformed into a resource or creatively reused to deliver considerable gains to a community.

Case study

51

Kavalipuram GP is ODF Plus

Kavalipuram gram panchayat (GP) in Iragavaram mandal of West Godavari district in Andhra Pradesh has provided access to sanitation to all households and has sound systems in place for solid and liquid waste management, making it a Model ODF Plus village.

Access to safe sanitation

The GP with 756 households and a population of 2,632 had earlier constructed 741 individual household toilets and two community sanitary complexes (CSC), the latter used by 15 households before the GP was declared open defecation free (ODF).

The CSC, which is located near the solid waste management shed, has separate units for men and women. It is well maintained and accessible to all. All institutions too have been provided with toilets – two in the two anganwadi centres, two in the school and one in the panchayat office.

Solid waste management

Having appointed four sanitation workers, the GP has trained them in the collection and segregation of waste and the processes involved in solid waste management including preparation of vermicompost and using NADEP pits. Equipped with personal protection equipment (PPE) kits, they use three tricycles, which go door to door every day for waste collection. The solid waste processing centre also has adequate space for NADEP pits and an incinerator for the disposal of sanitary waste. Operation and maintenance costs as well as salaries of staff are paid using GP funds.

All the households are encouraged to segregate waste at the household level, the importance of which has been conveyed to them through IEC and interpersonal communication. Waste collected from all 756 households totals about 165 kg each

Major components of dry waste

day. While wet waste is converted into compost, the dry waste, which weighs about 85 kg each day, consisting of paper, polythene, wrappers, glass, diapers and other plastic items, is segregated and sold to recyclers. Thus far, about 0.5 tonnes of vermicompost has been generated and 50 kg have been sold at INR 10 per kg.

Liquid waste management

About 4.5 km of drainage has been constructed, covering all 756 households. These drains, which do away with the need for individual or community soak pits, are cleared of silt every alternate day and there are no issues pertaining to stagnant water anywhere in the village.

Visual cleanliness

Given that all public spaces and institutions are cleaned every day, the entire village is visually clean.

IEC messages

Several awareness programmes have been conducted for the community, panchayat staff and volunteers including door-to-door awareness on dry and wet waste, sensitizing them on issues pertaining to segregation at source, keeping their surroundings clean and maintaining their toilets. In addition, IEC messages have been painted across public spaces, making them attractive, while building awareness. Currently, a plastic eradication programme is being held for all shops and establishments in the village.

Outcome

People are happy with the systems put in place to manage solid and liquid waste and are more than willing to cooperate. Given that all public spaces and institutions are cleaned every day, the entire village is visually clean.

Case study

52

Namsai targets 109 villages for ODF Plus in 2022

The district administration of Namsai in Arunachal Pradesh, which is home to one of the largest Buddhist monasteries in North-East India, plans to transform 109 villages out of a total of 178 villages and accelerate activities in solid and liquid waste management so that they achieve ODF Plus status in 2022.

Currently, the aspirational district has one ODF Plus village and the remaining villages will be declared ODF Plus by 2023, according to Mr R.K. Sharma, Deputy Commissioner, Namsai.

The DC described the challenges of implementing solid and liquid waste management activities in the district, which has scattered villages that are sparsely populated. He said the district administration is planning to avail the convergence of funds under 15th Finance Commission, MGNREGA, corporate social responsibility (CSR) and Member of Legislative Assembly local area development (MLALAD) to complete the activities.

Outcome

With regard to plastic waste management, the district has tied up with the Urban Development Department, which has a material recovery facility (MRF). Plastic waste collected from the households on a weekly basis is sent to the MRF where it is segregated, shredded and used for road construction.

Case study

53

Aspirational district Ri-Bhoi moves towards ODF Plus

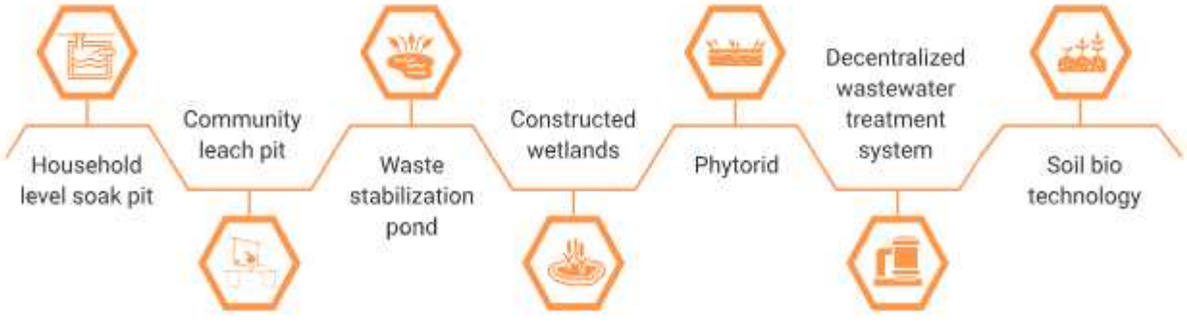
The aspirational district Ri-Bhoi in Meghalaya is gradually moving towards ODF Plus status with a number of interventions underway to manage solid and liquid waste and make its villages visually clean. It has also commenced various IEC activities to increase awareness on the different verticals of ODF Plus.

Ri-Bhoi is one of the aspirational districts identified by NITI Aayog owing its poor socioeconomic indicators.

According to state officials, household-level greywater management (GWM) is operational in 148 villages. As per the SBM(G) Phase II operational guidelines, GWM focuses on minimizing the generation of greywater (from kitchen, washrooms, livestock cleaning and others) and its effective treatment using technologies such as household-level soak pit, community leach pit, waste stabilization pond, constructed wetlands, phytorid, decentralized wastewater treatment system, soil biotechnology and others. The aim is to prevent the stagnation of greywater and overflow of wastewater from households and water collection points.

Solid waste management systems are functional at the household level in 55 villages. This means that households segregate their waste at source and convert all their biodegradable waste into compost. In addition, community storage sheds are available in 49 villages where dry waste is stored until it is appropriately disposed of.

Technologies used to treat greywater



Given that IEC is important to create awareness, increase knowledge and change attitudes, the district administration has created and put in place more than 514 IEC messages that have been posted in various public spaces of the villages. The messages spell out ways to sustain ODF status and inform the villagers about the techniques for the management of solid, plastic and liquid waste.

Moreover, the plastic waste management unit at Umktieh village is being built. Umktieh village falls under Bhoirymbong C&RD Block and situated 33 km from the state capital, Shillong. The village was bifurcated from Umktieh Umsawriang and became full-fledged in 1981. Years later, four hamlets emerged in 2011, namely Umktieh Pdeng, Umktieh Nongshiliang, Umktieh Mawkhim and Umktieh Lawsiatsniang. Although each hamlet has its own local headman, it was controlled by the Parent Committee under the name of Kynhun Dorbar Umktieh Pyllun (KDUP) (a group of four village durbars) headed by a chairman and a secretary.

As far as sanitation is concerned, Umktieh achieved Model ODF status on 2 October 2021 and intends to sustain it. It has arrangements in place for both solid and liquid waste management. Currently, it is in the process of implementing a plastic waste management unit, with the aim of becoming a plastic-free village.

The location for the faecal sludge management unit is yet to be identified.

Outcome

To strengthen the capacities of SBM(G) officials, the district administration has organized capacity building at district, block and village level in all areas of SBM(G) Phase II. It has also encouraged officials to submit data of all villages via the mobile application while ensuring that geotagging of assets is being done. The community has understood the need and importance for the segregation of waste at source and management of all waste effectively.

Case study

54

ODF Plus in the offing for Dadra & Nagar Haveli and Daman & Diu

As an integral component of sustainable sanitation, solid and liquid waste management (SLWM) can prevent and reduce environmental pollution, while promoting health of the villagers and ensuring that villages look visually clean. The union territory (UT) of Dadra and Nagar Haveli and Daman and Diu has been implementing various sustainable sanitation programmes, paving the way for the UT to become ODF Plus soon.

To promote source segregation and processing of waste in all the three districts, the UT is procuring twin dustbins for every household, which will be distributed to them to ensure segregation of waste at source.

The segregated waste would be collected by vehicles that have been fitted with separate compartments for different types of waste. Attached to each vehicle is an awareness bell that will alert households to the arrival of collection vehicles. Route chart maps for door-to-door waste collection have been provided, which both the collectors and households need to adhere to.

Additionally, the UT has hired the services of third party service providers in each of the districts to process solid waste. M/s. CD Transport will take care of waste collected in Daman; Green SWM Infra Pvt Ltd in Diu district and M/s. Rurban Clean Tech in Dadra and Nagar Haveli jointly with

the urban local bodies, that is, Daman, Diu and Silvassa municipalities.

Further, vermicompost pits have been constructed in each of the gram panchayats where biodegradable waste will be treated. Meanwhile, bulk waste generators have been procured to manage solid waste in GPs and agreements have been signed with the third-party waste collectors.

Storage sheds equipped with segregation bins have been planned for the storage of plastic waste. Presently, the recyclable plastic waste is transported to the cement factory in Kodinar, Gujarat, by the agency hired for waste management. Plans are in the pipeline to establish plastic segregation and collection centres in each district, which shall be operated and maintained by the panchayats.

Outcome

All 97 villages in the union territory have achieved Model ODF Plus status. The village communities are cooperating in waste management activities that have contributed to visual cleanliness.

Case study

55

ODF Plus activities underway in villages of Manipur

As a part of SBM(G) Phase II, Irengband and Phoibi villages in Manipur are accelerating their ODF Plus activities by engaging in solid and liquid waste management to bring about visual cleanliness. Many efforts are being taken to involve the community so that they take ownership and responsibility for the cleanliness of their surrounding spaces.

Thanks to the efforts of the Sunday Eco Club, Irengband village in Kakching district has transformed into a clean, green and healthy village. The change is particularly evident in the once barren hill called Angaan Ching (Hill) in Kakching, which is now completely green with tall trees and shrubs.

The result is attributed to community participation and continuous activities of the Sunday Eco Club, organized by the Alliance for Development Alternatives Manipur and the implementation support agency (ISA) of Kakching district for SBM(G) and JJM under PHE Kakching division, Manipur.

Sunday Eco Club activities have also made an impact in bringing about a positive behaviour change by engaging the community in the following activities.

Solid and liquid waste management

Solid and liquid waste management (SLWM) has become a matter of concern in the village. To address this problem, regular cleanliness activities are organized in the village through the Sunday Eco Club during which students and teachers play a vital role with the participation of the community.

Construction assets for ODF Plus

Construction of Pucca drains/canals

Installation of waste bins along the roads

Laying of village roads

Construction of community compost pits

Construction of assets

Construction of pucca drains and canals, installation of waste bins, laying of village roads and construction of community compost pits have been carried out in the gram panchayat under the leadership of officials from Public Health Engineering Department (PHED) and Department of Rural Development and Panchayat Raj (RD&PR). A site for dumping of plastic waste has also been identified.

Focus on liquid waste management

The Village Water and Sanitation Committee (VWSC) of Irengband along with GP leaders and the department is now focusing on liquid waste management through the construction of soak pits both at the individual and community level.

Outcome

Sunday Eco Club activities have made an impact in bringing about positive behaviour change by engaging the community in the sanitation management activities. Village leaders and officers are managing the construction of SLWM works, helping the state to advance towards ODF Plus status.

Case study

56

Nagaland's Zapami is a model ODF plus village

A true role model to other villages in the state, Zapami village in Phek district of Nagaland has defined what it means to be ODF Plus and ensure ODF sustainability through the systems that have been put in place to manage solid and liquid waste and bring about visual cleanliness.

Located in the Pfutsero subdivision of Phek district, about 82 km away from district headquarters, Zapami village has a population of 1,308 individuals and 245 households. This village represents serenity with its terraced paddy fields, verdant hills and quaint kitchen gardens. The village community practices farming and raises livestock for its livelihood.

Awards

On 16 March 2010, the village was awarded the Nirmal Gram Puraskar (NGP) 2009 for achieving full sanitation coverage status. From then on, 16 March is observed as 'Village Sanitation Day' annually. With the launching of the SBM(G) campaign by the Government of India to achieve total hygiene and sanitation, the village was declared open defecation free (ODF) in 2018. The village has consistently shown exceptional performance in sanitation and waste management, making it a model ODF Plus village today.

Hygiene and sanitation

The village council has adopted various measures, including the colony cleanliness competition, which awards the best performer at the end of each year, to achieve minimal litter in the village. In addition, mass social work or shramdaan is organized once a year. Apart from ensuring cleanliness, people are encouraged to engage in the beautification of the village by planting flowering plants and other shrubs.

Solid and liquid waste management, ODF-S

While households practice segregation of dry and wet waste and dispose of the latter at source, the village had constructed five incinerators for treating non-biodegradable waste under the Public Health Engineering Department Scheme. This system has changed the old method of burning that pollutes the environment. It has also brought about behaviour change and made the community more conscious about littering and the need to keep public and private spaces around the village clean.

Some households have taken up composting of kitchen waste in small quantities, which is later used as manure in their vegetable gardens.

Village institutions such as anganwadi centres, community hall, school, village grounds, health centre, church, heritage museum and other offices are well maintained with waste bins, ensuring minimal litter and they also have adequate toilet facilities. A community sanitation complex (CSC) was constructed under SBM(G) and drainages have been built to prevent water stagnation around the village.

Monitoring

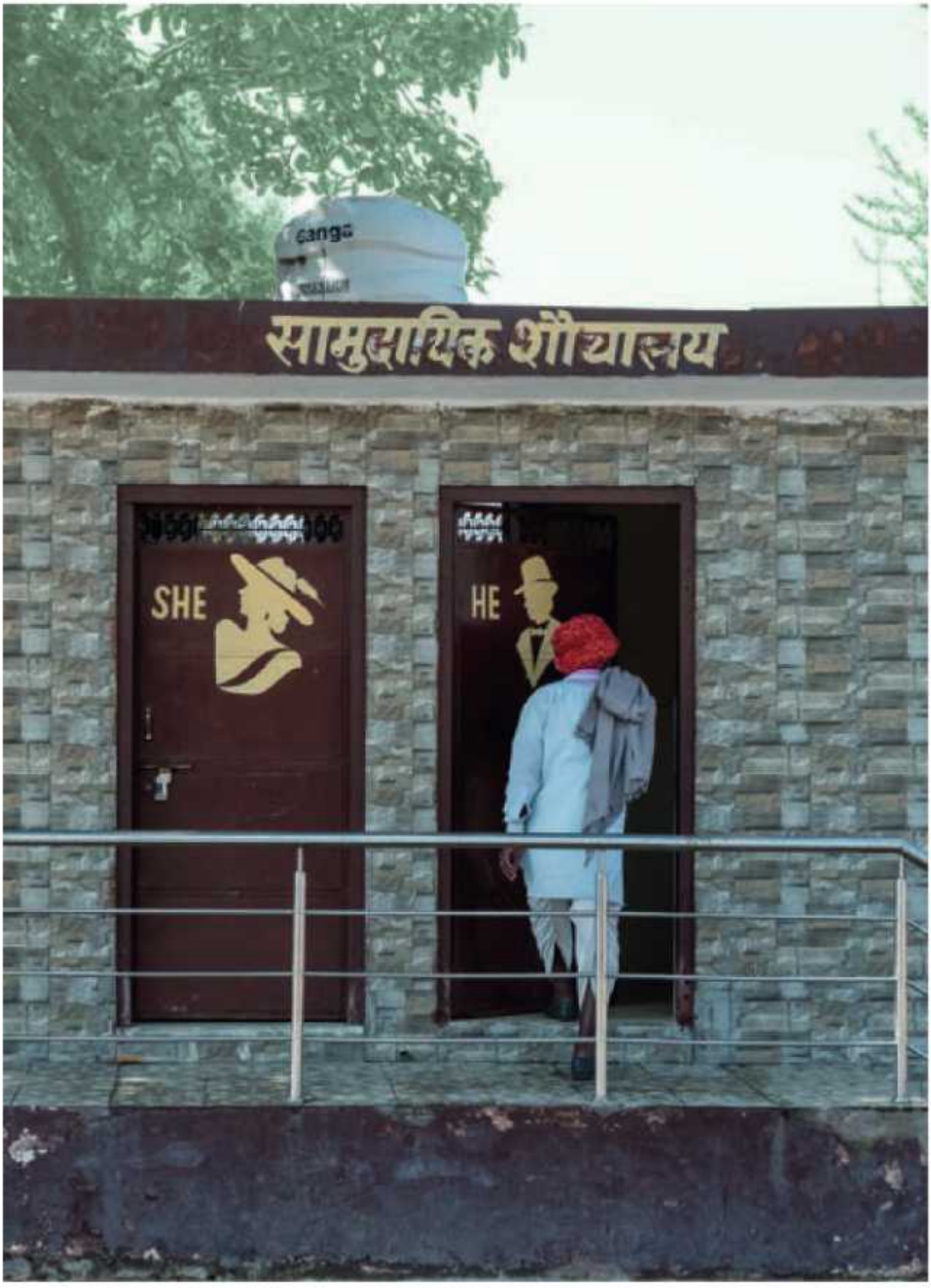
A winning strategy of the village was the engagement of an external agency to render support for solid waste management initiatives. The young male group (Linyü Kro) has donated dustbins to the village and has supported the PHE Department in propagating IEC messages on ODF sustainability. The agency facilitates solid and liquid waste management activities under the guidance of the village council.

ODF Plus activities in Zapami village

Colony cleanliness competition | Mass social work | Planting of flowering plants and shrubs | Segregation of dry and wet waste | Construction of five incinerators | Composting of kitchen waste | Installation of waste bins | Construction of CSC and drainages

Outcome

Clearly, Zapami village has acknowledged the importance of ODF sustainability and ODF Plus, which are in keeping with the SBM(G) guidelines and has implemented suitable measures, making it an exemplary village in the district. All the households and community spaces have toilets that are well maintained and the surroundings are visually clean. The village community and the PHE Department have actively worked together in a participatory mode to achieve ODF Plus status, progressing significantly in the areas of hygiene, sanitation and waste management.


सामुदायिक शौचालय
SHE
HE

Solid and Liquid Waste Management

Introduction

The importance of solid and liquid waste management cannot be overemphasized given that proper waste management can contribute significantly to preserving the environment and human health. The key objective of SBM(G) Phase II is to sustain the ODF status of villages and to improve the levels of cleanliness in rural areas through solid and liquid waste management activities, thereby making villages ODF Plus.

Solid waste management includes the management of biodegradable waste from households and institutions and cattle and agricultural activities using individual and community compost pits to convert this waste into manure. It also includes the management of non-biodegradable waste, including plastic waste, by ensuring an adequate segregation and collection system and establishing forward linkages. On the other hand, liquid waste management includes the management of greywater generated from kitchen use, washing clothes, bathing and storm water, which, in the absence of drainage systems, could be effectively treated by individual and community soak pits.

Reduction in the generation of waste at source is key for waste management. Therefore, the 3Rs – reduce, reuse and recycle – are to be promoted. States are required to intensify efforts to make people aware of the challenges in collection, segregation and management of waste. They are expected to conduct information, education and communication (IEC) interventions, designed to motivate people to create less waste, reuse waste like cow dung for manure, send plastic waste for co-processing in industries and use greywater for the recharge of groundwater.

As far as solid waste management is concerned, villages having a population less than or equal to 5,000 are entitled to INR 60 per capita and villages having a population greater than 5,000 can avail INR 45 per capita for solid waste management while INR 16 lakh per block is allocated for plastic waste management. For greywater management, villages having population less than or equal to 5,000 are entitled to INR 280 per capita and villages having a population greater than 5,000 INR 660 per capita for creating assets to manage greywater.

Case study

57

Environment-friendly waste disposal in a South Goa village

Having set up a public toilet and achieved 100 per cent individual household toilet coverage, the Nagoa village panchayat situated in Salcete taluka of South Goa district is scaling up solid waste management activities, aiming to achieve Model ODF Plus status soon.

A model ODF Plus village is the one in which all households have access to a functional toilet facility; all schools, anganwadi centres and panchayat ghars have access to a functional toilet with separate toilets for men and women; all public spaces in the village have minimal litter, minimal stagnant wastewater and no plastic waste dump in public places; the village has arrangements for solid waste management and liquid waste management; and the village has ODF Plus IEC messages prominently displayed through wall paintings and billboards.

The village panchayat has made sure that its citizens manage waste in an environmentally and socially responsible manner by practising source segregation.

Solid waste management

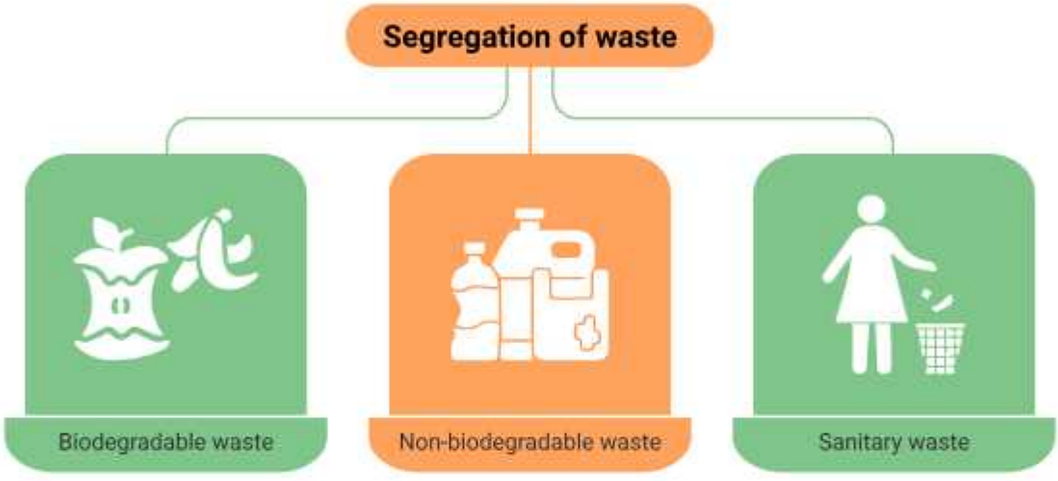
All waste is segregated into biodegradable, non-biodegradable and sanitary waste as mandated in the Solid Waste Management Rules, 2016. While households have been trained to segregate waste at source, the panchayat has also trained waste collectors to collect waste through a door-to-door collection and process source-segregated waste with the objective of achieving at least 90 per cent resource recovery. The collected waste is sent to the waste processing and recovery facility.

To process biodegradable waste, which amounts to about 500 kg per day, in a decentralized manner, the panchayat has installed an 'In Vessel Composting Machine', which converts organic waste into manure within 12 days without the heating process. Further, it is kept aside for maturing during which the raw compost is biodegraded into organic manure.

Non-biodegradable waste is further segregated into five categories – cardboard, paper, glass, plastic and metal – and sold to authorized

recyclers. The non-recyclables and rejects are baled with the help of a bailing machine that compresses scrap metal and dry waste material (except for glass) into dense blocks, which are then sent to cement companies for co-incineration.

As for hazardous sanitary waste, it is also collected and disposed using a sanitary incinerator for instant disposal of used napkins and diapers. The sanitary incinerator, installed as per the National Accreditation Board for Testing and Calibration Laboratories (NABL) certification, has been checked by the appropriate authorities. It has been installed at the panchayat material recovery facility (MRF).



Outcome

Nagoa has achieved a visual cleanliness of over 80 per cent. Being well aware of the procedure for waste being collected, the community refrains from littering the streets or dumping waste in the open.

To read more, scan here

Case study

58

Aspirational district Bhadradri Kothagudem makes headway in solid and liquid waste management

Intending to build a clean and green district while protecting its people from pollution and related health issues, the district administration of Bhadradri Kothagudem, an aspirational district in Telangana, has commenced various ODF Plus activities to build awareness and ensure visible cleanliness with the support of the village community.

Having been declared ODF in August 2019 after constructing 88,416 individual household toilets (IHHLs) under SBM(G) Phase I, the district has ensured that no one is left behind by constructing toilets for new emerging households.

To date 1,090 IHHLs have been constructed under SBM(G) Phase II. The district is now geared up to establishing solid and liquid waste management (SLWM) assets under the state-run Palle Pragathi programme.

Solid waste management

All the 479 gram panchayats in 22 mandals have established SWM sheds and procured tractors for waste collection. In addition, training sessions were conducted for field functionaries to ensure functioning of the sheds. Composting is done in all GPs as of today.

The district has also established a five-stage SWM sanitation service chain at GP level, which consists of source segregation, collection, transportation, processing/treatment and safe disposal. The process of ensuring source segregation and forward linkages of dry waste was not without challenges or resistance. But this was successfully addressed with the support of the WASH Institute and ITC Mission Sunehra Kal, which have been assisting the district in creating awareness among beneficiaries for source segregation and also conducting capacity-building sessions for district, mandal and GP level staff.

Plastic waste management

On 5 September 2019, the District Collector and the DRDA Chairman jointly issued a ban on single-use plastics (SUPs) and inaugurated a programme to produce cloth bags as alternatives to plastic. Further, they asked all government offices to create awareness about the SUP ban.

Outcome

To date, 168 GPs have achieved 100 per cent source segregation, and in most GPs, the source segregation is nearly 70 per cent. To achieve 100 per cent source segregation in all the GPs, awareness activities are conducted every week through GP functionaries and WASH Institute.

Case study

59

Waste management improves quality of life in Andaman and Nicobar Islands

Under SBM(G), hygiene and sanitation have seeped into the very fabric of the rural society, enabling people to adhere to safe sanitation practices, which have contributed to improvement in their health. In Andaman and Nicobar Islands, for instance, waste management has become a key way of life for people, who are aware of its importance, enabling the communities to join hands to recycle waste for a better quality of life.

Beodnabad, a village in Prothrapur block of South Andaman district in the Andaman and Nicobar Islands, was once infamous for open dumping as well as both indoor and outdoor air pollution owing to burning of plastics at many places. Over the past few years, scientific waste management of all types of waste, including plastics, has increased tremendously, making the village ODF Plus in the truest sense.

Waste management

Today, Beodnabad village has neither a landfill nor plastic in its litter. It does, however, generate revenue from a proper segregation of waste by the village community. All dry waste is collected door to door each day by the panchayat workers and it is then transported to the mainland for recycling. Individual households have constructed compost and soak pits within their premises to treat greywater.

Construction of a community sanitary complex

A community sanitary complex was constructed in Burmanalla (Rangachang Ward No. 3) in the GP to cater to both the tourists and the community at an estimated cost of INR 4,51,130.

IEC activities

To create awareness and interest among the community in sanitation issues, various IEC activities have been conducted. This included training and capacity building exercises by panchayat officials, accredited social health activists (ASHAs) and anganwadi workers. Such IEC activities have also played a significant role in management of the pandemic (COVID-19) and overall rural sanitation, promoting hygiene and sanitation at both personal and community levels.

Outcome

All such activities such as the construction of individual household latrines (IHHLs) and a CSC; collection of waste from households, segregation and composting and recycling of plastic waste; and construction of individual and community soak pits have helped the village achieve the ODF Plus status. The village was certified ODF Plus on 7 April 2021. The resolution was adopted during a Gram Sabha held on the same day in the presence of the community.

Case study

60

Cluster approach for solid and liquid waste management in Dehradun's hilly terrain

The district administration of Dehradun in Uttarakhand has adopted a cluster model for the implementation of solid and liquid waste management (SLWM) works in the hilly regions of Doiwala Development Block, which has scattered habitations and where transportation facilities are non-existent.

The interventions were made by the Uttarakhand Panchayati Raj Department on a pilot basis, aimed at making all those villages, whether in the plains, foothills, peri-urban or gram panchayats across the block, ODF Plus, in keeping with the SBM(G) Phase II guidelines. In this regard, the support of the village panchayats and communities was enlisted.

Eight gram panchayats were formed into a cluster in 2018: Bhogpur, Gadual, Bagi, Rakhwalgaun, Kodsi, Sarandharwala, Ranipokhari Mauja and Ranipokhari Grant. Thereafter, with the corporate social responsibility (CSR) support of IndusInd Bank, the work was carried out, supervised by a cluster committee involving representatives of various gram panchayats.

At the outset, IndusInd Bank provided two garbage collection vehicles to the Panchayat Raj Department. After distribution of dustbins to all the households, village-level solid waste management structures were constructed or set up. This included community garbage pits, individual compost pits, biogas plants, individual

soak pits and drainage channels, all of which were completed under SBM(G) scheme. With SBM(G) funds, two additional garbage collection vehicles were provided using which door-to-door collection of segregated garbage commenced in all the eight GPs.

Outcome

Solid and liquid waste is being effectively managed in these villages. From segregation at source to collection and treatment of waste, the systems are in place to bring about total sanitation to the villages.

Case study

61

Gopalganj selects 52 panchayats for solid and liquid waste management

Under Phase II of SBM(G) campaign, the District Water and Sanitation Committee of Gopalganj in Bihar has selected 52 panchayats for conducting massive awareness campaigns and work pertaining to solid and liquid waste management (SLWM), both at the ward and panchayat levels during the current year.

The SLWM campaign was inaugurated under the leadership of the District Magistrate, Dr Nawal Kishor Chaudhary, and with the guidance of Deputy Development Commissioner, Mr Abhishek Ranjan, in Basdila Khas panchayat of Gopalganj subdivision and Lamichaur panchayat of Hathua subdivision.

During the function, 4,210 beneficiaries from 23 wards were provided with two dustbins each to promote waste segregation at source.

Gopalganj ke Bhai Kachre se Kamai programme will be implemented by the Gram Panchayat Implementation Committee (GPIC), featuring community awareness programmes in 710 wards of 52 panchayats.

As many as 1,680 individuals have been selected for employment at the local level for the SLWM campaign. For every ward, the GPIC has employed two sanitation workers, and four sanitation workers and one sanitation supervisor for every panchayat.

Pedal rickshaws have been provided at the ward level to sanitation workers and a route outlined to cover the entire panchayat/ward. Sanitation workers collect waste from door to door each day and take it to a waste processing unit (WPU), which was constructed through convergence

of funds between SBM(G) and 15th Finance Commission.

While the wet or biodegradable waste is converted into compost, the dry and non-biodegradable waste is further segregated according to utility and sold to recyclers. The plastic waste would be transferred to the plastic waste management unit, which is being set up at the block or cluster level. The entire process is monitored by the sanitation supervisors.

Outcome

Sanitation supervisors in every ward manage the process of collection, segregation and treatment of waste, including the sale of non-biodegradable waste, to recyclers. People are aware of the need to manage waste that would bring about visual cleanliness to their villages.

Solid Waste Management Including Plastic Waste Management

Introduction

Over the years, the quantity of waste generated in rural areas has been increasing as a result of increased population, consumerism and commercial activities. There are more options in rural areas for reuse of waste, such as composting of biodegradable material, which can be used in kitchen gardens, agricultural fields, and so on. However, solid waste needs to be segregated at source by households and systems should be organized for regular collection after which biodegradable waste can be converted into organic manure while the non-biodegradable waste should be recycled, thereby reducing the amount of waste going to landfills.

Plastic products have become an integral part of our daily lives, resulting in increased plastic consumption even in rural areas. However, plastic waste which has detrimental effects on health while causing pollution and environmental damage has emerged as an important environmental challenge which needs to be addressed on priority. SBM (G) Phase-II strives to improve rural cleanliness through solid and liquid waste management activities, and plastic waste management is a critical criterion for declaring villages as ODF Plus.

To reduce the harmful impacts of plastic waste on the environment and human health, effective management of plastic waste is necessary. Actions need to be taken at the district, block and village level for plastic waste management using the four R principles – Refuse, Reduce, Re-use and recycle.

Villages having a population less than or equal to 5000 are entitled to Rs.60 per capita and villages having a population greater than 5000 can avail Rs.45 per capita for solid waste management; and Rs.16 lakh per Block for plastic waste management.

Case study

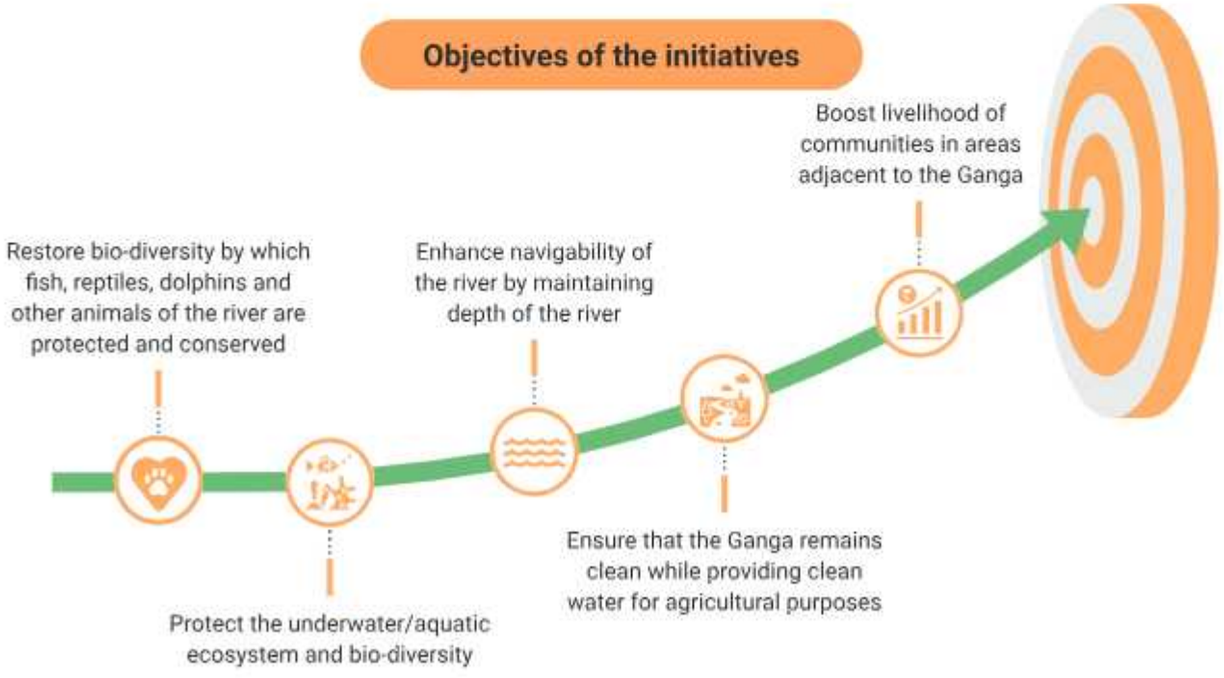
62

Howrah ZP organizes plastic removal from 18 Ganga bordering GPs

In a bid to keep the Ganga clean and pollution free, the Zilla Parishad of Howrah district in West Bengal organized a plastic removal programme in 18 Ganga bordering Gram Panchayats (GPs) with the support of the local Panchayat Samitis and GP communities that reside there.

The initiative held during April 2022 is in keeping with Phase II of Swachh Bharat Mission Grameen (SBM-G) to ensure ODF sustainability and visual cleanliness through solid and liquid waste management (SLWM).

In addition to the State interventions in this regard, Howrah Zilla Parishad together with all Blocks situated adjacent to the River Ganga and the GPs therein have come forward to keep the sacred river clean and pollution free with the support of community support organization – Aamra Susama Jalaprapat.



Outcome

The campaign has generated awareness about the need to manage waste – both biodegradable and non-biodegradable waste. It has prevented dumping of rubbish into the river, protecting water bodies and the ecosystem. The campaign mobilized the communities living in villages along the Ganga to participate in shramdaan to clean up their villages and collect waste.

To read more, scan here

Case study

63

Darbhanga gets 41 waste processing units

Foundation stones for as many as 41 waste processing units were laid in Sahbajpur and Shisho Gram Panchayats of Darbhanga district in Bihar on May 19, 2022. The initiative will put in motion activities that will contribute to scientific management of waste and revenue generation, to bring about visual cleanliness.

The cost of setting up these units was Rs. 2 crore 5 lakhs availed from MGNREGA, towards making the villages ODF Plus in adherence to Phase II of Swachh Bharat Mission Grameen (SBM-G).

The solid waste processing units were virtually inaugurated by Panchayat Raj Minister, Shri Samrat Chaudhary in the presence of Member of Parliament, Darbhanga – Shri Gopal Jee Thakur; Social Justice Minister Shri Madan Sahni; Shri Jivesh Mishra – Minister of Information Technology; Shri Binay Kumar Choudhary (MLA); Shri Sanjay Saraogi (MLA); Dr. Ramchandra Prasad (MLA); Dr. Murari Mohan Jha (MLA); Sri Tanay Sultania, DDC Darbhanga; Shri Ganesh Kumar (Director DRDA); Shri Rajiv Raushan (District Magistrate) and Shri Arjun Sahni (MLC).

The GPs of Sahbajpur and Shisho have 50 villages of which 41 were selected for the units and village officials and members of the communities were connected to the inaugural ceremony through video conferencing.

The dignitaries also flagged off as many as 19 e-rickshaws; 288 pedal rickshaws; 204 community dustbins, 51,200 household dustbins, 19 flogging machines and 456 sanitation kits that contain helmets, gloves, boots, masks, aprons, etc., which will be delivered to the 41 selected villages.

Outcome

The initiative has set the wheels in motion for the scientific management of solid waste in Darbhanga district. With the distribution of vehicles, machinery, and accessories to all 41 villages, systems are in place to manage waste effectively. The community has understood the importance of segregation of waste at source, keeping waste ready for collection and reducing the use of single use plastic.

To read more, scan here

Case study

64

Sonbhadra launches unique PWM campaign

On 6th June 2022, more than 500 households of the Semar Gram Panchayat (GP) gathered at the village centre for the launch of Mera Plastic, Meri Zimmedari (My Plastic, My Responsibility) – a campaign that would effectively manage plastic waste and curb the use of single use plastics, under the Swachh Bharat Mission Grameen (SBM-G) campaign.

All households were given large jute or plastic sacks with the campaign title printed on it, to hang on the outer wall of their homes. Over the month, they were required to put into the bag hanging outside, all kinds of plastic items (carry bags, cartons, wrappers, bottles, boxes, etc) that were to be discarded. Between 25th and 31st of every month, a safai karmi (sanitation worker) would collect the same and take it to a central point in the Block, from where it would be sent to the Ultra Tech Cement Factory located in the district.

This would be a temporary arrangement, even as plans are afoot for construction of Plastic Waste Management Units in every block of the district.

As in other places within the country, plastic has been a huge menace in the district. It was littered everywhere, blocking drains, floating in water bodies and contaminating them, piling up on roadsides, inviting stray animals to forage through them and endangering their lives.

It was to address this that the campaign was launched by Mr. Chandra Vijay Singh, District Magistrate – Sonbhadra on June 6, 2022 in the Semar Gram Panchayat of Sonbhadra district in Uttar Pradesh.

Negative impacts of plastics

Causes litter | Blocks drains | Floats in water bodies and contaminates them | Piles up on roadsides, invites stray animals and endangers their lives

Outcome

The campaign has generated awareness on the harm caused by plastic waste and the use of single use plastics. It led to the collection of plastic waste from homes and institutions of the villages and the establishment of forward linkages. The village has been cleaned by the initiative and people have joined the task force in gathering and appropriately disposing plastic waste.

To read more, scan here

Case study

65

Community, NGOs engage in shramdaan to save Tlawng River

As many as 934 members from 85 branches of the Young Mizo Association (YMA) along with officers and staff from the PHED (Public Health Engineering Department) and the local community participated in shramdaan during which they removed plastic waste from the longest river in Mizoram – the Tlawng River, cleaning 11 tributaries in the process.

All the plastic waste collected along the river during the shramdaan on July 2, 2022 was carried by garbage trucks to a proper plastic disposal ground. The initiative is a part of the Swachh Bharat Mission Grameen (SBM-G) Phase II campaign of which plastic waste management is an integral component.

The campaign was launched amid a small gathering early in the morning. The Minister for Public Health Engineering Department, Shri Tawnluia addressed the gathering, spoke about the importance of protecting the river from pollutants of which plastic was one, before he flagged off the programme.

For the officers and other staff from PHED who were detailed to help out at designated locations, the active participation in the cleanup of the river by all members, officials and local inhabitants living near the river was a heartening sight.

Plastic pollution in riverine ecosystems directly impacts livelihood, causing economic losses while increasing the risk of flooding in both urban and rural areas. The harmful effects of plastics – a persistent material that takes hundreds of years to decompose; causing ecological, economic and eco-toxicological effects that are long term – are well known.

Illegal dumping amounts to throwing of garbage which contains toxic substances directly into a river or stream, causing extensible damage to marine life and polluting the water for human use. The Tlawng River that harbours an array of species bore the brunt of this practice, its inhabitants gradually succumbing to the poison of plastics.

Mizoram under the influence of the southwest monsoon receives heavy rainfall during the months of May to September. Rainfall is the only source of water in the state that replenishes both the ground and surface water. The surface water is distributed into numerous streams and rivers flowing through the hilly terrain of the State. This is the chief source of water for the people of Mizoram as underground water is not easily accessible in the hilly terrain.

Outcome

Local community participated in shramdaan during which they removed plastic waste from the longest river in Mizoram – the Tlawng River, cleaning 11 tributaries in the process. Active participation in the cleanup of the river by all members, officials and local inhabitants living near the river was a heartening sight. People have resolved to protect their water bodies.

To read more, scan here

Case study

66

How 34-Luing Perbing GPU beats plastic pollution

Having said NO to Single Use Plastics (SUPs), 34-Luing Perbing Gram Panchayat Unit (GPU) in Ranka Block of East Sikkim has embarked on an effective plastic waste management (PWM) campaign, in keeping with the guidelines of Swachh Bharat Mission Grameen (SBM-G) Phase-II.

Sikkim has always been in the forefront when it comes to sustainable development and protection of environment. In fact, the north-eastern state has been a pioneer with regard to banning of plastics given that it was the first Indian state to ban disposable plastic bags on 4th June 1998. Sikkim government went a step further, batting for a safer environment when it banned plastic water bottles of 2-litre capacity and below from 1st January 2022.

At a national level, the first announcement for phasing out single use plastic (SUPs) was made by the Prime Minister of India on 15th August, 2019. Subsequently, the Ministry of Environment, Forest and Climate Change issued a notification on the ban of manufacture, import, stocking, distribution, sale and use of identified single use plastic items, which have low utility and high littering potential, all across the country from July 1, 2022.

Adhering to this, all GPUs of East Sikkim have turned into flag bearers of this massive campaign against SUPs. Incidentally a whopping 80 per cent of the state population resides in the rural areas.

34-Luing Perbing GPU is no exception as it has been working tirelessly towards effective implementation of the ban of SUPs in villages, in coordination with the line departments and the State Government. Over the past year, the Gram Panchayat has been conducting Gram Sabhas and organizing programmes that highlight the ill-effects of plastics on humankind and the environment, while conveying to the people the sincere efforts of government in conserving the environment.

Outcome

The GP has also been engaging in door-to-door campaigns, distribution of cloth bags with the caption – 'Say No to Single Use Plastic' printed on them and providing all households with dustbins for segregation of waste at source. It has also been constantly ensuring that residents abide by the SUP ban notification issued by the government.

GOBARdhan

Introduction

Rural India generates enormous quantities of bio-waste such as animal waste, kitchen leftovers, crop residue, market waste and faecal sludge. Reports indicate that at least 5,257 tonnes of waste per day are estimated to be generated from livestock alone. To generate wealth and energy by converting cattle dung and agricultural waste into compost and biogas and to improve the lives of village communities, and thereby contribute to cleanliness of villages, GOBARdhan project was launched. The scheme is expected result in the safe and efficient management of solid waste, especially the bio-agro waste, by engaging with people in villages so that the villages remain clean.

GOBARdhan was launched to ensure cleanliness in villages by converting bio-waste including cattle waste, kitchen leftovers, crop residue and market waste into clean fuel and organic manure. The conversion of waste into useful products leads to economic and resource benefits to farmers and households.

The Department of Drinking Water and Sanitation is working with the concerned departments, ministries state governments, public and private sector institutions and village communities to shape this scheme as a 'jan andolan' so that a collective action of the community on GOBARdhan is achieved.

GOBARdhan will benefit rural people in general and women in particular from the use of clean fuel and improved cleanliness in villages, leading to health benefits for the villagers. This initiative will support biodegradable waste recovery and conversion of waste into resources, reduction of greenhouse gas (GHG) emission, reduction in the import of crude oil, as well as boosting entrepreneurship and promoting organic farming.

DDWS has made a funding provision of up to INR 50 lakh per district for GOBARdhan plants.

Case study

67

J&K inaugurates its first GOBARdhan plant

The first GOBARdhan project in Jammu and Kashmir under SBM(G) Phase II was virtually inaugurated by Smt. Mandeep Kaur, Secretary, Rural Development Department, Union Territory of Jammu and Kashmir, on 19 April 2022 in Gagian village of R.S. Pura block in Jammu district.

The capacity of the project is 45 cubic metres and is expected to benefit about 20–25 households when it becomes operational. It would also provide gas for cooking meals in the government anganwadi centre of the village.

Present at the launch were Director of Rural Sanitation, J&K, Shri Charandeep Singh, along with panchayati raj institution (PRI) members.

The project is expected to change the lives of the community by providing clean cooking fuel, thus improving the health of women who were cooking using firewood. On the other hand, the rich slurry that is produced can be used as manure to promote organic farming.

The union territory of Jammu and Kashmir has accelerated ODF Plus activities across its villages over the last few months. This included a capacity building programme for trainers in the last week of March 2022 and another for sarpanches of the Kashmir division on ODF Plus components, such as biodegradable waste management, liquid waste management, plastic waste management and faecal sludge management, which would contribute to visual cleanliness of villages.

Outcome

The use of clean cooking fuel has transformed the lives of the community and the health of women in particular. Organic farming is being promoted with the use of slurry as a manure.

Case study

68

Ambegaon gets 41 biogas plants

The Panchayat Samiti of Ambegaon in Pune district of Maharashtra has installed as many as 41 biogas plants in its villages, surpassing the target of 35 biogas plants set for the financial year 2021–22 by the Panchayat Samiti Agriculture Department, Government of Maharashtra, under the National Biogas and Organic Fertilizer Management Programme.

The farmers of the area are currently using renewable energy generated from agricultural waste and animal dung, produced by decomposing of organic matter by certain bacteria under anaerobic conditions. A mixture of methane, hydrogen and carbon dioxide is produced. This combination of gases, which can be used as renewable energy, can be generated out of agricultural waste, food waste, animal dung, manure and sewage.

The National Biogas and Fertilizer Management programme is a central government's plan under the 20-point programme. The scheme has been implemented by the Agriculture Department of Pune Zilla Parishad since 1982–83. The scheme is getting good response from rural farmers in Pune district.

The Ambegaon taluka is home to a large tribal community and the village community was made aware of the importance of renewable energy. The community was encouraged to set up biogas plants. Further, through the Panchayat Samiti Agriculture Department, the farmers were informed of the scheme.

Outcome

Biogas plants provide clean fuel for cooking, reducing the use of LPG and other conventional sources of energy. It encourages the beneficiaries to use organic fertilizers and reduce the use of chemical fertilizers. Further, it improves the standard of living of women in rural areas, reducing discomfort from the smoke generated when using firewood and also reducing the emission of carbon dioxide and other greenhouse gases. It also helps mitigate climate change. When the installation of biogas plants proved to have these benefits, people were ready to install such plants on their own.

Benefits of Biogas plant

01 — Provides clean fuel for cooking

02 — Reduces the use of LPG and other conventional sources of energy

03 — Encourages the beneficiaries to use organic fertilizers

04 — Reduces the use of chemical fertilizers

05 — Helps mitigate climate change

06 — Improves the standard of living of women in rural areas

07 — Reduces the emission of carbon dioxide and other greenhouse gases

08 — Reduces discomfort from wood fire smoke

To read more, scan here

Case study

69

NDDB trains beneficiaries of Gujarat in GOBARdhan

To enhance the skills of rural communities in setting up flexi biogas plants and managing them efficiently, the National Dairy Development Board (NDDB) organized various capacity building programmes for beneficiaries mobilized by the District Rural Development Agency (DRDA) in Gujarat.

The training was timely, given the importance of GOBARdhan projects that help manage waste, generate organic manure, protect health by reducing vector-borne diseases, promote household income and savings with reduced expenditure on LPG; they also promote employment and income generation opportunities for SHGs and farmers and reduce greenhouse gas emissions, among others.

Further, operation of a GOBARdhan plant is technical in nature and requires considerable planning before it is installed. Among the aspects that need to be taken into account are site selection, which depends on the availability of feedstock and uninterrupted supply of organic waste; project preparation while allowing for monitoring and maintenance costs; capacity and technology requirements; and the utilization plan for the biogas and slurry that are generated.

Till date, NDDB has trained 822 participants from 15 districts of Gujarat. The participants were 569 men, 165 women and 91 District Rural Development Agency (DRDA) officials.

Outcome

The training programmes were a mixture of classroom sessions and field visits to provide the required knowledge about setting up a project and flexi biogas plants. They also included details of the GOBARdhan scheme and technical aspects of the biogas plant with both theoretical and practical sessions. Participants had an opportunity to visit and interact with flexi-biogas users at Mujkuva village and visit the SuDhan slurry processing centre where they got to observe and understand the practical aspects of flexi biogas and value-added products generated through biogas slurry.

Other training programmes planned in the future are for 50 participants each from the districts of Valsad, Bhavnagar, Narmada, Navsari and Porbandar.

Case study

70

Hariharpur gets a biogas plant, 100 families to benefit

Hariharpur gram panchayat (GP) in Khajni block of Gorakhpur district in Uttar Pradesh will soon have a functional biogas plant, constructed under the SBM(G) Phase II programme. The plant of 45 cubic metre capacity, which is the first of its kind in the district, is expected to benefit as many as 100 families.

The plant, built at an estimated cost of about INR 25 lakh, has been constructed within the Vrihad Nirasharit Gaushala Kendra (cow shelter) premises, which houses about 450–500 cows. The clean fuel generated in the plant will provide electricity to the premises and provide cooking gas.

Each day, cow dung collected from the Gaushala is fed into the biogas plant by a person assigned to manage the biogas plant, which is of the floating dome variety, powered by a 5 KVA generator.

Plans are in the pipeline to sell the bio-fertilizer generated in the market and to other households in the GP and use the profits for operation and maintenance of the plant.

For its ODF Plus activities, INR 60.6 lakh was allocated to the GP as per its DPR for solid and liquid waste management. All techniques of solid and liquid waste management have been adopted in the village – from waste segregation

Hariharpur GP

1,470 households

9,631 population

Declared ODF on 15 October 2019

Biogas plant constructed at a cost of **INR 25 lakh**

at source to composting. Plastic waste is collected, segregated and stored before it is sold to recyclers. The GP has made provision in its budget for the construction of soak pits to manage greywater generated in the households.

The village with 1,470 households and a population of 9,631 was declared ODF on 15 October 2019 and now is marching steadily towards declaring itself as ODF Plus.

Outcome

Clean fuel generated in the plant lights up the premises and provide cooking gas. Proceeds from the sale of bio-fertilizer is being used for operation and maintenance of the plant. The unit that provides clean fuel to 100 families has brought about visual cleanliness to the villages.

Case study

71

Tripura sets up GOBARdhan projects in all its eight districts

In a remarkable achievement, in keeping with Phase II of SBM(G), the north-eastern state of Tripura has taken up 16 cluster-based model GOBARdhan projects in all its eight districts (two in each district) using funds from the SBM(G).

The state has selected the Tripura Renewable Energy Development Agency (TREDA), a constituent organization of the Department of Power, Government of Tripura, as its technical agency to implement and execute the project.

GOBARdhan projects have been set up in the following villages

- Dhalai district: Dhanchandra GP in Durgachowmuhani block and Avanga GP in Salema block
- Gomati district: Purba Malbasa GP in Amarpur block and Barabiya GP in Tepani block
- Khowai district: Purba Kalyanpur GP in Kalyanpur block and Purba Ramchandra Ghat GP in Khowai block
- North district: Huplong GP in Jubarajnagar block and Baghan GP in Kadamtala block
- Sepahijala district: Raghunathpur GP in Bishalgarh block and Kamalnagar GP in Boxanagar block
- South District: Kanchannagar GP in Bagafa block and Thaibung GP in Satchand block
- Unakoti District: Ujandudpur GP in Kumarghat block and Nalkata GP in Pecharthal block
- West Tripura District: Meghlipara and Tulakona GPs in Old Agartala block

The cost of each project is INR 20 lakh and a total of INR 320 lakh has been made available for the 16 projects.

For each of the projects, as many as 45–50 households have been selected to set up GOBARdhan plants on their own land. Cow dung is the major raw material for operating these plants. A plant capacity of 1 cubic metre has been installed in each household.

Prior to the execution of the project, a preliminary survey was conducted by the TREDA, in collaboration with the concerned block level officials and public representatives, to finalize the names of the beneficiaries who had the requisite number of cattle available at their respective homes.

Outcome

The biogas plants to be operated and maintained by the community will provide clean fuel for their use as well as organic manure. It also would help keeping their villages clean and save expenses of purchasing other forms of fuel.

Greywater Management

Introduction

Wastewater from water collection points and households overflowing on the village paths or stagnating in low-lying areas is a common sight in villages, particularly during the monsoons. The adverse effects of unsafe disposal of wastewater on human health are quite serious and pervasive. Stagnant ponds of wastewater or improper drains in villages can lead to increased risks of exposure to diseases such as malaria, dengue and filariasis. If the increasing amount of wastewater generated is not treated properly, it can also lead to a contamination of groundwater through natural percolation.

Therefore, the SBM(G) Phase II guidelines propose that greywater management (GWM) interventions be undertaken in convergence with the implementation of Jal Jeevan Mission (JJM) in villages, as envisaged in the Village Action Plan (VAP). The amount of greywater and its flow and discharge arrangements should be taken into consideration while designing greywater management interventions.

The Department of Drinking Water and Sanitation (DDWS) has allocated adequate funds for greywater management. Under its funding norms, villages having a population less than or equal to 5,000 are entitled to INR 280 per capita and villages having a population greater than 5,000 can avail INR 660 per capita.

Case study

72

Ghughwa's pond water quality improves with GWM system

With support from WaterAid, a greywater treatment system has been installed in Ghughwa village in Patan block of Durg district in Chhattisgarh to improve water quality of the village pond as the contaminated water in the pond led to health issues among the community members. Since the plant became functional in June 2021, the village pond has become visibly clean in four months much to the delight of the residents.

The new greywater treatment system, constructed at a cost of INR 5,51,899, has dramatically improved water quality and health of the residents with the pond now appearing clear and devoid of plant algae that covered the surface earlier.

Background

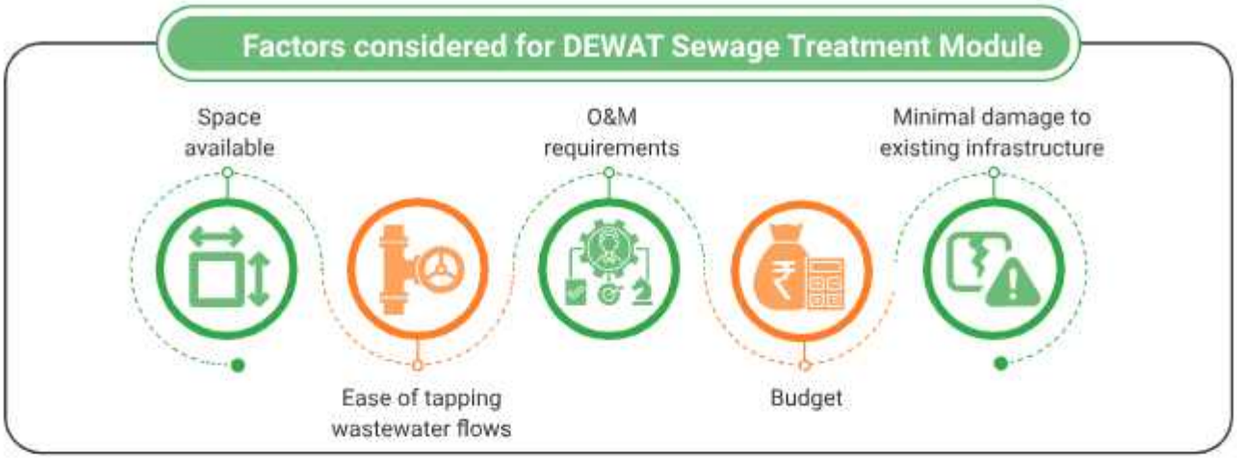
Earlier, people in the gram panchayat with 272 households and a population of 1,078 used the pond water for bathing and other uses. The poor state of the pond could be attributed to the main drain into which wastewater from 159 houses was collected and channelled into the pond, polluting the water. Owing to poor water quality, people developed various skin-related problems.

Incidentally, there was a small canal in the village, which was used for agriculture and refilling of the pond. In the absence of a wastewater treatment facility, a greywater treatment facility was proposed at the end of the drain joining the canal to prevent entry of solid waste including plastic into the pond.

A detailed study was carried out over a 24-hour period by WaterAid to calculate the quantity of greywater flowing through the drain by adopting a detailed methodology of flow measurement including quality testing of a sample.

DEWATS sewage treatment

Considering the space available, ease of tapping wastewater flows, operation and maintenance requirements and budget requirement, the DEWAT Sewage Treatment Module was chosen, incorporating the existing infrastructure into the design to the extent possible, with minimal disturbance or damage to the existing arrangement so as to install a cost-effective treatment system.



Outcome

The water quality of the village pond has improved tremendously and the health issues that the community members suffered previously from contaminated water have been contained. Since the plant became functional in June 2021, the village pond has become visibly clean over a period of four months. People are happy, particularly those living near the pond relieved of the stench and overjoyed at general cleanliness.

Case study

73

Tamil Nadu's Ariyanendal is a model village for GWM

Thanks to proactive initiatives undertaken by the Ariyanendal panchayat, the village today is a model village boasting of 100 per cent end-to-end management of greywater. With the ongoing implementation of the Jal Jeevan Mission project, the village also has 100 per cent access to safe drinking water.

Situated in the aspirational district of Ramanathapuram on the Madurai–Rameswaram National Highway, Ariyanendal village panchayat is one of the 39 village panchayats in the Paramakudi block. It is home to 761 families and a population of 2,560 spread across two hamlets, namely Ariyanendal and Vagaikulam. From unpleasant living conditions, the village has been transformed to a green and visually clean village, making the community proud.

Problem of stagnant greywater

Previously, stagnant water was a major issue in the village in the absence of a wastewater disposal system, causing inconvenience to motorists and pedestrians alike. Greywater often overflowed into either of the eight narrow and disorganized roads. These issues prompted the panchayat representatives and the public to register a complaint on the poor state of affairs to the district management. Sadly, individual soak pits posed a bigger concern owing to the unavailability of land.

Action taken

To find a solution to the problems that ailed the village, the district administration, with the support of village-level motivators and enthusiastic individuals, organized a transect walk, which concluded with a special Gram Sabha in which the village panchayat president, ward members and the entire village community participated.

A village wastewater map was drawn and all households were plotted on the map, with the residents providing active inputs. A total of 410 houses were identified on the south side of the National Highway and 273 houses on north side. Thereafter, a mapping of sewage sources and destination points was done, followed by the drawing of a village-level greywater management plan. Finally, a needs assessment was carried out and the actual number of individual soak pits, community soak pits, vertical and horizontal soak pits, and drainage works required were identified.

Outcome

After the implementation of the greywater management plan, the narrow streets of the village have now become cleaner. The individual and community soak pits and the installed drainage system are used to effectively manage all greywater generated from households and establishments. As the village community was actively involved from the planning process, the community members are aware of the importance of greywater management and are contributing to maintaining the soak pits and cleanliness of their village.

To read more, scan here

Case study

74

Inline treatment for GWM in Haveri

Haveri district in Karnataka has set up a unique inline treatment system for the management of greywater generated from households and establishments. The technology, which is both nature-based and cost effective, is successfully used for treating all greywater before it is let into the river.

Situated on the banks of the Tungabhadra River, Kodiyal gram panchayat (GP) has a population of about 8,500 with adequate water available for meeting all the village population's needs. However, the wastewater generated in the GP would previously pollute the river that flowed alongside. The 'Nirmal Haveri' campaign was taken up to address this critical issue.

The pilot project was a combination of a two-stage sedimentation pond followed by a constructed wetland as an inline treatment and a bypass drain to address the wet weather flow.

What is Inline treatment?

The system consists of a horizontal subsurface flow constructed wetland that is dependent on the treatment target and the amount and quality of the influent. The removal efficiency of the wetland and maximum possible flow are determined by the surface area and cross-sectional area of

Components of inline treatment project

the wetland. Generally, a surface area of about 3 sqm per cum of pre- and secondary-treated effluent is required. Settler/settler and anaerobic baffle reactor (ABR), sedimentation tanks, sedimentation drains and sedimentation ponds can be used as primary treatment modules.

Outcome

The liquid waste management system is currently functional and effectively used for treating greywater generated from households. The structures also ensure the sustainability of water sources. The Rural Drinking Water and Sanitation Department (RDWSD) also carried out a special campaign 'Swachha Grama, Swachha Parisara' under information, education and communication (IEC) and human resources development (HRD) activities to educate the rural masses regarding greywater usage in their kitchen gardens. The advantages of reclamation of water and reducing dependency on freshwater for non-potable usage were emphasized.

Case study

75

DEWATS technology for GWM in Bharasar village

In a shining example of public–private partnership towards achieving ODF Plus status under SBM(G) Phase II, Bharasar village in Kutch district of Gujarat has adopted DEWATS technology for sustainable management of greywater.

Background

Bharasar village in Kutch district of Gujarat, with a population of 4,026, has been provided with tap water connections and a minimum supply of 55 litres per capita per day under Jal Jeevan Mission to all 624 households. But the village then encountered a new challenge. A whopping 70 per cent of the water supplied to households was converted into greywater that either flowed into the open or into water bodies, contaminating them. It also led to vector-borne diseases and posed other environmental and health risks.

The absence of a system for greywater treatment at the village level was greatly felt. Although wastewater from 150 households was connected to a drainage line, the greywater was discharged into the open. Moreover, the remaining 474 households were connected to another drainage line that discharged greywater into a stream outside the village, polluting the water body.

Issue

The issue was identified by the Sarpanch and PRI members while preparing the Village Sanitation Plan (VSP) for the implementation of SBM(G) Phase II for solid and liquid waste management (SLWM) at the village level. Bharasar gram panchayat made sincere efforts to repair and construct the drainage system for managing greywater. However, it was not a permanent solution. To identify a solution and appropriate technology to manage greywater in the village, the Sarpanch requested technical assistance from the Swachh Bharat Mission (Grameen) team of Kutch district.

Strategy

Around that time, UNICEF and PriMove initiated handholding and capacity building support to the PRIs and community leaders on the key components of SLWM as per SBM(G) Phase II

guidelines to bring about visual cleanliness to villages.

With a focus on managing greywater sustainably, the development partners assisted Bharasar GP to revise their Village Sanitation Plan (VSP) based on a comprehensive assessment of the liquid waste management situation in the village. The process revealed that about 200 kilolitres per day (KLD) of wastewater consisting of both black and grey water was being generated.

Further technical assistance in the form of preparation of a Detailed Project Report (DPR), combined with capacity building, community mobilization activities and resource mobilization activities, was provided. This was followed by discussions and strategic meetings among the PRI, SBM(G) district team at the district and block level and UNICEF to identify a suitable liquid waste management (LWM) system for the village. Among the multiple options available to address the wastewater management needs of Bharasar, the DEWATS (Decentralized Wastewater Treatment System) technology was finalized by the PRI members and approved by the District Rural Development Agency (DRDA), Kutch district.

Outcome

UNICEF, PriMove, DRDA and Bharasar gram panchayat had envisaged making Bharasar village a model village in June 2021. The village has now become one of the best examples of public–private partnership (PPP) through the involvement of a donor who provided financial aid for the development of the village. As a result of these efforts, Bharasar has become self-reliant, capable of treating around 200 KLD of wastewater at the village level. The gram panchayat plans to reuse the treated water for irrigation. Bharasar gram panchayat's efforts for prioritizing wastewater treatment with community ownership and focusing on operating the treatment plant is a way forward for achieving ODF Plus status and sustaining it in the long run.

Case study

76

Bhiwani adopts Nehveen model for community level GWM

To augment the groundwater table, which is quite low in the area, the gram panchayat of Jitanwas in Kairu block of Bhiwani district in Haryana has experimented with an innovative Nehveen model to manage greywater at community level.

According to district officials, the intervention, which cost INR 1.49 lakh to construct, caters to approximately 200 households and the structure has helped increase groundwater level by 2 feet. Based on the result, the district administration has selected 84 villages where similar Nehveen model treatment plants will be set up under SBM(G) Phase II.

As per the SBM(G) Phase II guidelines, the chief principle for greywater management includes the 3Rs – reduce, reuse and recharge – which focuses on minimizing the generation of greywater and substituting the use of freshwater. Research indicates that 65–70 per cent of water supplied to households in rural areas is converted into greywater (from activities such as bathing, washing dishes and laundry).

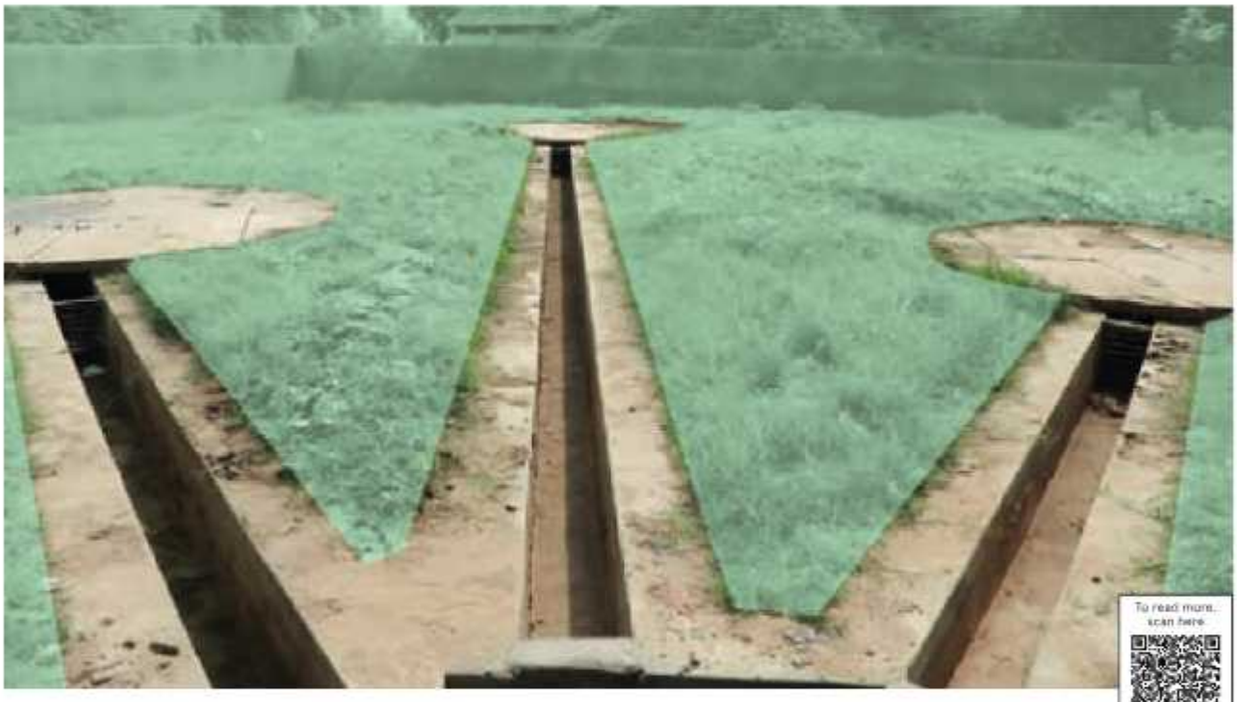
The large greywater management Nehveen model is a combination of a soak pit and a leach pit. A soak pit is a dug-out pit that is filled with graded stones and gravels, recommended

Principles of greywater management

for installation near hand pumps and stand posts at community level as a measure for the management of the greywater generated and replenishing the groundwater table. On the other hand, a leach pit is either a constructed honeycomb brick masonry with cavities in alternate layers or a stacking of concrete rings having five to six holes in each ring where treated water is allowed to penetrate into the ground and enhance the groundwater table.

Outcome

Ever since the Nehveen Project was set up in Bhiwani district of Haryana in 2022, as many as 2,19,000 kilolitres of greywater generated in households of the district has been successfully managed and the process has increased groundwater levels.



Faecal Sludge Management (FSM)

Introduction

Faecal sludge management (FSM) is one of the key components to be implemented as part of SBM(G) Phase II. Delivering safe sanitation critically hinges on effective FSM in rural areas as a considerable number of toilets are linked to on-site sanitation systems, such as septic tanks and single pits. The overflow from filled-up septic tanks and indiscriminate disposal of emptied faecal sludge into open areas, water bodies, irrigation fields, open drains and areas outside the village pose a public health hazard and also has a negative impact on the environment.

The twin-pit toilet system provides the best form of FSM as it provides in situ treatment, thus avoiding the need for the collection, transport and treatment method of waste management. Therefore the conversion of single pits to twin pits is recommended to be prioritized where possible in all districts. Where twin-pit systems are not feasible, other safe disposal options, such as toilet-linked biogas plants and vermi-composting toilets, can be adopted.

Under the ODF Sustainability initiative, the Department of Drinking Water and Sanitation (DDWS) promotes retrofitting the existing single-pit toilets into twin-pit toilets and connecting septic tank toilets to air vents and soak pits. It also aims to generate awareness on the safe disposal of faecal sludge in rural households.

As per the DDWS funding norms, each district can avail INR 230 per capita (rural population) for faecal sludge management.

Case study

77

FSTP in Dhenkanal renders an essential service to many GPs

The faecal sludge treatment plant (FSTP) in Dhenkanal district of Odisha, commissioned in October 2018, caters to the faecal sludge management needs of the Dhenkanal municipality and rural areas in its periphery.

The urban–rural convergence for faecal sludge management (FSM) in the district was launched in December 2020 and 17 selected gram panchayats located within the 10-kilometre radius of the Dhenkanal municipality initially entered into a formal agreement to avail the existing urban faecal sludge and septage management (FSSM) services without creating additional FSSM infrastructure. The urban FSM services was further extended to another 32 gram panchayats located within the 20-kilometre radius of the municipality in November 2021.

Spread across an area of 1.5 acres, the FSTP, which has a capacity of 27 kilolitres per day (KLD), is projected to serve 22,003 households by 2030, and its effluent quality is good, as the measured biological oxygen demand (BOD) of the discharged effluent is less than 30 mg/l. BOD is a measure of the amount of oxygen required to remove waste organic matter that in the process of decomposition from water by aerobic bacteria (those bacteria that live only in an environment containing oxygen).

Features of the Dhenkanal FSTP

The technology adopted for the FSTP is unplanted drying bed, decentralized wastewater treatment system (DEWATS) and advanced treatment systems for treating both sludge and wastewater. The FSTP consists of a screen and grit chamber, stabilization reactor, sludge drying bed, integrated anaerobic baffled reactor and anaerobic filter (ABR and AF), planted gravel filter (PGF), collection tank, sand and carbon filter and pasteurization unit.

The gravity-based system does not need electrotechnical equipment for pumping. The solar pasteurization unit ensures the reduction of pathogens after drying at the sludge drying bed (SDB).

As far as desludging services are concerned, at present three cesspool vehicles have been engaged – two of them having a capacity of 3,000 litres and one with 1,000 litre capacity to serve both the urban and rural households. The 1,000-litre vehicle helps in accessing the narrow lanes in rural areas.

Outcome

Since the system has minimal requirement for technical manpower, it is effectively managed by the area level federation (ALF) of the self-help group (SHG) members. Area level federations (ALF) have been engaged to manage the entire operation and maintenance of cesspool emptier vehicles as well as the FSTP.

Significantly, the Dhenkanal FSTP serves 110 GPs and urban local bodies (ULBs) in the region. Between April and October 2021, 34 leach pits and 33 septic tanks were emptied, promoting ODF sustainability among 65 households and one commercial establishment. Fee collected from households amounted to more than INR 1 lakh during the period, ensuring service sustainability. Moreover, the plant utilization has increased from 60 to 80 per cent.

https://sbmgramin.wordpress.com/2022/01/24/fstp-in-dhenkanal-renders-an-essential-service-to-many-gps/

Case study

78

Kumhari FSTP – an example of rural–urban convergence

The faecal sludge treatment plant (FSTP) commissioned in the peri-urban town of Kumhari in Durg district of Chhattisgarh is a unique example of rural–urban convergence. The plant caters to the urban area as well as the households of six panchayats situated nearby, as planned from the construction stage.

After trial runs in the week of 8 November 2021, each module of the plant was further tested in December 2021. The plant is working well and can be made operational soon. The main emphasis is on safe collection, transportation and treatment of faecal sludge. Communities have been provided with information about the plant through an awareness campaign.

The model project was constructed in the Kumhari cluster at an estimated cost of INR 47.78 lakh. Kumhari Nagar Palika Parishad has a total of around 7,516 households and the six GPs considered under the Kumhari cluster have a total of about 2,074 households out of which around 80 per cent of households are accessible for desludging.

FSTP model project

Estimated construction cost: INR **47.78 lakh** (Kumhari cluster)

Total households in Kumhari cluster: **2,074**, out of which 80% accessible for desludging

Total households in Kumhari Nagar Palika Parishad: **7,516**

Background

Kumhari cluster comprises a total of six gram panchayats (GPs) – Dhaba, Kapsada, Khapri, Murra, Pandhdevri and Sankara – and the Kumhari Nagar Palika Parishad. The cluster has no underground drainage system. On-site sanitation systems containing faecal sludge were being desludged using mechanical equipment such as vacuum pumps and the faecal matter was disposed into the open, which is an unsafe practice, posing innumerable health and environmental risks.

It is common knowledge that the most preferred form of toilets promoted by SBM(G) were the twin pit toilets, which are easy to construct, cost effective and able to effectively convert faecal matter into manure. However, some households have opted for the septic tank that requires periodic desludging and treatment. In this situation, FSTPs such as the one in Kumhari have a key role to play in treating the faecal sludge as close to the source as possible.

Water Aid and Consortium for DEWATS Dissemination (CDD) Society have installed the faecal sludge treatment plant in Kumhari town, which can handle 6 cum of faecal sludge daily to serve the households not having access to underground drainage in the city. The facility would convert the sludge generated from on-site sanitation systems into safe and reusable products.

The technology involves stabilization and dewatering of sludge in planted drying beds. The percolating water is then treated with DEWATS technology using anaerobic filters and planted gravel filter. The by-products such as bio-solids can be reused in agriculture as a soil conditioner and the treated wastewater can be used for irrigation or safely disposed into the ground through percolation.

Outcome

The well-designed, environmentally sustainable method of treatment requires low power consumption and negligible operator intervention and skills. While the by-products of the treated sludge can be reused, the system presents a case of shared infrastructure between GPs and the peri-urban town, thus reducing costs in terms of shared conveyance systems, co-composting and co-treatment. Households are aware of the system and have the contact numbers of the FSTP handy to call them when their septic tanks need to be emptied.

Case study

79

Rajanakunte's FSM unit becomes operational

Karnataka's first rural faecal sludge management (FSM) unit was inaugurated on 4 July 2022 in Rajanakunte gram panchayat (GP) of Yelahanka taluk in Bangalore Urban district. The plant effectively serves 4,178 households, most of which have single-pit toilets, and a population of 17,305 in North Bangalore taluk.

Rajanakunte FSM unit was constructed and handed over by the Global Technology Firm, which was selected through a tender process, within the stipulated time. The plant is being monitored by the rural water supply (RWS) engineer of the Bangalore Urban Division.

As there was no provision for the purchase of a sucking machine, a similar machine available in the Bangalore South taluk is being used temporarily. The GP intends to purchase a new vehicle and engage private operators to help with the operations.

To enhance awareness about the FSM unit and its operations and to inform people about who to call when their single pits become full, the SBM(G) consultants and panchayat staff launched an IEC campaign and interpersonal communication drive.

Recently, elected representatives and officials from this district and others, along with senior officers of the Rural Development and Panchayat Raj Department, visited the FSM unit and expressed their appreciation for the working of the plant.

Outcome

The success of this plant in treating faecal matter has prompted the district administration to set up 10 other FSM units across the district this year. Land for four plants has been identified and preparation of Detailed Project Reports is in progress.

To read more, scan here

Case study

80

24 villages covered under Daman's FSM plan

The Daman district in the union territory (UT) of Dadra and Nagar Haveli and Daman and Diu covers 24 villages under the State Action Plan for mechanized desludging and safe treatment of faecal matter through urban–rural convergence.

Daman municipality, an urban local body (ULB), has an operational sewage treatment plant (STP) of 4.21 MLD capacity in Moti Daman. The STP facility was commissioned under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) in 2019. All the 24 villages that are being serviced by this plant are situated 10–15 kilometres from the STP. The facility has already been captured and geo-tagged on the Integrated System for Information Management (IMIS) of the DDWS.

The liquid waste management plan for the UT is in adherence to the guidelines issued by DDWS under SBM(G) Phase II.

Currently, faecal sludge is collected from single pits and septic tanks and transported to the existing or operational STP of the Daman municipality for co-treatment. As many as 11 vacuum suction vehicles and gully emptier vehicles are available with gram panchayats that make 10–12 trips to the STP per month, collecting about 3,500 litres of sewerage per trip. The charge for collection and transportation of liquid waste from each household ranges from INR 700–800 per visit.

Operated by the gram panchayat itself, the vehicles are equipped with GPS for tracking. Although no private agency has been hired for collection and transportation of faecal sludge, it might be considered in future if the need arises.

Outcome

The UT has plans to install stand-alone STPs for the gram panchayats in Daman district in future. In this regard, a Detailed Project Report (DPR) of the underground sewerage system for various panchayats of Daman district was prepared. In addition, topography survey work has been done while the identification of government land for a sewerage pumping station and underground sewerage system is under process.

Case study

81

Nilokheri STP in Karnal services 20 villages

The sewage treatment plant (STP) in Nilokheri town of Karnal district in Haryana serves 20 neighbouring villages, and faecal sludge from septic tanks and single-pit toilets of those villages is safely desludged and co-treated at the STP.

Implemented by the Public Health Engineering Department of Haryana, the plant, having a capacity of 6 MLD, has been in operation since 2020. It has 10 drying sludge beds, and the technology used is moving bed biofilm reactor (MBBR) and activated sludge.

The average volume of faecal sludge received from villages each day is 8–12 KLD.

Co-treatment is a process where an STP, in addition to treating the domestic sewage transported through a city, also treats faecal sludge and septage emptied from various on-site sanitation systems present in the city.

Septage and faecal sludge generated at the time of cleaning and emptying of septic tanks has significant organic and pathogenic pollutant load and requires treatment before disposal for a safe and healthy environment. Co-treatment of septage at STP is one of the solutions that can be implemented for the treatment of faecal sludge.

The 20 villages being served in the Nilokheri STP are Arjaheri, Samanabahu, Bakipur, Kalsi, Lathron, Barsalu, Sohlo, Amargarh, Barana Khalsa, Brani, Khalsa, Sidhpur, Barthal, Kamalpur, Anjanthali, Nilokheri Rural, Poojam, Raipur Roran, Sandhir, Sikri and Butana.

Seven tankers are presently used to desludge the septic tanks (one government operator and six private operators). Each household is charged INR 800 for desludging by the tanker operator. All the private operators are registered at the BDPO office in Nilokheri.

IEC activities are being carried out by block and district level teams to mobilize the community and generate awareness regarding FSM. In addition, hoardings, slogans and paintings bearing sanitation messages have been erected.

Significantly, all the workers have been trained in safe de-sludging, transportation and treatment procedures. They have also been provided with safety gear and other accessories such as long size gloves, boots, masks and sanitizers.

Outcome

Across Haryana, the state has identified 74 STPs for co-treatment and mapped 216 private tankers for the transportation of faecal sludge. While as many as 10 districts have initiated co-treatment, 1,426 villages have been covered for co-treatment in the nearby STPs. An agency has been empanelled to construct faecal sludge treatment plants (FSTPs) in two districts.

In 2022–23, the state has plans to commission an additional 106 STPs to cover co-treatment needs of 1,484 villages. Already 22 FSTPs in 22 blocks, covering 2,584 villages, have become operational. To generate awareness on the need and importance of FSM, IEC campaigns will be launched in all those villages.

Capacity Building

Introduction

Capacity strengthening is vital for ensuring the sustenance of open defecation free (ODF) status of villages and for pursuing the ODF Plus agenda. The success of capacity-building initiatives is directly linked to motivated and capacitated district and block officials as well as gram panchayat (GP) level functionaries such as sarpanches, village secretaries and swachhagrahis. It is critical to strengthen the capacities of the village functionaries regarding their role in transforming their villages into model ODF Plus villages and equip them with the relevant subject knowledge and technical know-how to achieve the desired results.

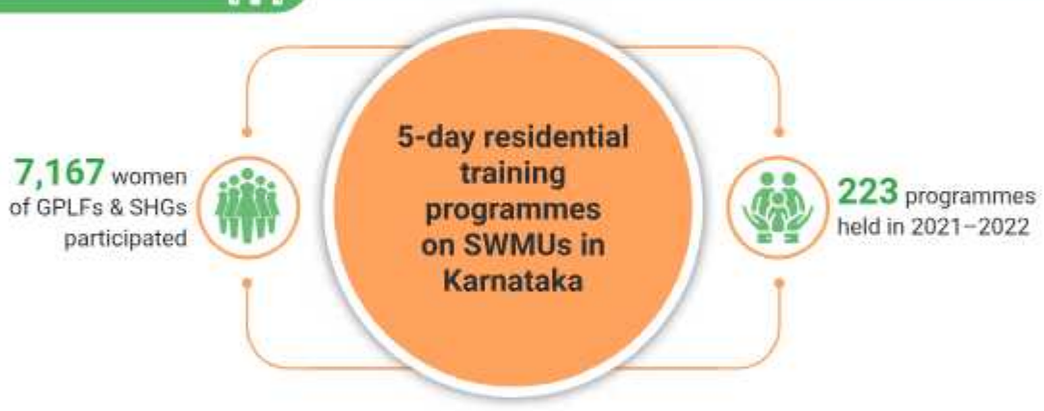
To build the capacities of all GPs in the country in achieving the ODF Plus status, a large pool of field trainers is required. The Department of Drinking Water and Sanitation (DDWS) proposes to create a pool of competent human resources to fulfil the capacity building needs of GPs in a cascading mode. As part of this initiative, four field trainers will be identified from each district to be trained a five-day training of trainers (ToTs) programme. The trained master trainers will in turn train sarpanches, village secretaries and swachhagrahis through three-day training programmes.

Case study

82

Karnataka trains self-help groups (SHGs) on solid waste management

Intervention



As many as 7,167 women members of gram panchayat level federations (GPLF) and self-help groups (SHGs) participated in five-day residential training programmes – both in campus and off campus – in the Bengaluru district of Karnataka on ways to effectively manage solid waste management units.

The training programmes have particularly benefited women, providing them an alternative source of livelihood. Between 2021 and 2022, 223 of these five-day programmes have been completed for women as part of capacity building activities for GPs.

The training on solid waste management was organized by the Mahatma Gandhi Institute of Rural Energy and Development (MGIRED), an institution established in 2000 with the assistance of the Ministry of New and Renewable Energy (MNRE), Government of India, and the Rural Development and Panchayat Raj Department, Government of Karnataka. The Principal Secretary of Rural Development and Panchayat Raj provided direction for the training programme, which was targeted at women of self-help groups and federations to make them aware of solid liquid waste management in gram panchayats.

Among the subjects covered in the training were solid waste management, renewable energy, vermi-composting techniques, segregation of waste, safe disposal of menstrual waste, maintenance of sanitary pad vending machines and incinerators and alternative products.

Outcome

On completion of the course, the women are expected to take responsibility for the solid waste management activities in their villages. The course has offered new livelihood opportunities for women, enabling them to earn and supplement their families' income. By ensuring segregation and collection of solid waste, the trained women would also contribute to visual cleanliness of their villages.

Case study

83

ToTs on SBM(G) II implementation in Bihar

Intervention

To strengthen the capacities of village functionaries for sustaining the gains of ODF and underline the importance of and implementation mechanism for ODF Plus, a training of trainers (ToT) on the implementation of SBM(G) Phase II was organized in the Patna district of Bihar.

The ToT was organized by the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, Lohiya Swachh Bihar Abhiyan (LSBA), Government of Bihar and UNICEF India, and facilitated by PriMove Infrastructure Development Consultants Pvt. Ltd. The training for Batch I was held on 14–18 December 2021, and for Batch II on 20–24 December 2021.

Background

The Government of India has launched Phase II of SBM(G) to sustain the gains of Phase I of the programme, to improve the levels of cleanliness in the rural areas through solid and liquid waste management (SLWM) and elevate the status villages to ODF Plus. The key components of ODF Plus are retrofitting of toilets, biodegradable waste management, plastic waste management, greywater management, faecal sludge management, information, education and communication (IEC) and convergence with other schemes.

SBM(G) Phase II focuses on community-led planning, implementation and operation and maintenance of sanitation infrastructure. The communities are required to lead the programme while external and government agencies would act as facilitators. Needless to say, the success of the programme implementation is linked to motivated and capacitated GP level functionaries. DDWS intends to create a pool of competent human resources to fulfil the capacity building needs of GPs in a cascading mode.

Outcome

The first batch of training of trainers for the implementation of SBM(G) II was held for 39 participants from 35 districts of Bihar and the second batch for 37 participants from 25 districts. These master trainers (MTs) will thereafter train mukhiyas and sarpanches, village secretaries and swachhagrahis through training sessions organized by the panchayati raj institutions (PRIs). The activities will open up livelihood opportunities for women, and the activities on the ground would lead to effective management of solid and liquid waste and visual cleanliness of villages.

To read more scan here

Case study

84

TN trains village panchayat leaders on 'Model Village'

Intervention

To motivate panchayat presidents and secretaries to transform their villages into model villages, the Rural Development and Panchayat Raj Department of the Government of Tamil Nadu organized one-day training programmes from 4 to 12 April 2022.

An ODF Plus village is defined as a village that sustains its Open Defecation Free (ODF) status, ensures solid and liquid waste management and is visually clean.

Earlier, the state government had announced a cash prize of INR 15 lakh each for three model villages at the state level and INR 7.50 lakh for one model village at the district level.

To choose the model villages, a total of 776 village panchayats were selected on the basis of two villages per block from 388 blocks; these villages implemented the solid waste management and greywater management components of SBM(G), making them eligible for the model village selection process. Thereafter, 388 villages (half of the 776 villages) were called for the one-day training programmes held in seven batches at the State Institute of Rural Development and Panchayat Raj (SIRD&PR), Maraimalai Nagar in Chengalpattu district.

Process of selecting model villages

776 village panchayats from 388 blocks selected; SWM and GWM implemented in these villages

388 villages selected for one-day training programmes in seven batches

Outcome

Participants were provided an orientation to a Model Village Panchayat (MVP), which apprised them on the process of achieving an ODF Plus model village status. Thereafter, the components of solid waste management, plastic waste management and liquid waste management were explained in detail. When implemented in villages, solid and liquid waste can be effectively managed through the programme and visual cleanliness can be achieved.

Case study

85

Arunachal Pradesh organizes ToT on ODF Plus

The Public Health Engineering and Water and Sanitation Department (PHE & WS) of Arunachal Pradesh with the support of UNICEF organized a five-day training of trainers (ToT) programme for master trainers to accelerate the implementation of SBM(G) Phase II across the state.

Around 70 participants including engineers, consultants and block coordinators attended the training programme held in Itanagar from 19 to 23 September 2022.

Outcome

The trainees would in turn impart training to create a pool of competent human resources at the gram panchayat, block and district level to strengthen the capacities of village functionaries – to sustain ODF status, put in place systems to manage solid and liquid waste and to bring about visual cleanliness in their villages.

Additionally, the trainees learned about technology options, funding available for roll out of ODF Plus activities, the importance of operation and maintenance for long-term sustainability and the activities that are needed to be performed for achieving the status of model ODF Plus villages.

To read more, scan here

Case study

86

West Bengal strengthens capacities of officials on ODF Plus components

To strengthen the capacities of block and gram panchayat (GP) officials on solid and liquid waste management including biodegradable waste and plastics, greywater management and faecal sludge management, the Government of West Bengal organized a couple of three-day training of trainers (ToT) programmes.

Over 40 participants including GP officials and representatives of other organizations working in Kalimpong district were present at the meeting held from 7 to 9 September 2022.

The training would help create an enabling environment to accelerate the implementation of ODF Plus components, thereby helping villages to achieve the ODF Plus model status.

Yet another training programme was held for community workers and safai karamcharis from the GPs of Bohar-1, Block Memari-II in Purba Bardhaman district from 9 to 11 September 2022. The three-day event focused on the importance of source segregation of dry and wet waste and door-to-door collection of waste.

Outcome

Both the programmes included field visits to the villages for a live demonstration of source segregation and collection of door-to-door solid waste under the supervision of supervisors and trainers. Participants would return to their villages to implement the SBM(G) Phase II components.

IEC: Community Participation

Introduction

India's Swachh Bharat Mission (SBM) has been recognized as the largest behaviour change programme in the world. Innovative strategies were employed at multiple levels to foster an enabling environment for an effective and informed community engagement to achieve *swachhata*. One of the key strategies to achieving the goals of SBM was nudging behaviour change in people towards toilet construction and its regular use through a participatory, community-led approach. The Community Approaches to Sanitation (CAS) focused on interpersonal communication (IPC), community mobilization, awareness generation and triggering collective behaviour change, in addition to demand generation for safe sanitation facilities. The long-term objective of SBM programme was to change the social norms around open defecation. To prioritize the planning and implementation of information, education and communication (IEC) activities for SBM, the states were allowed flexibility to plan, design and implement IEC strategies taking due account of the local culture, practices and sensibilities.

The aim of IEC interventions is to increase awareness, change attitudes and bring about a change in specific behaviours among people towards swachhata. To achieve this objective, the Department of Drinking Water and Sanitation (DDWS) has provided detailed guidelines for engagement, capacity building and incentivization of sanitation motivators to kick-start IEC activities at the grassroot level.

States can avail 2 per cent of the total funding for SBM components for IEC activities.

Case study

87

Assam recognizes women champions on International Women's Day 2022

In keeping with the theme of International Women's Day 2022 – Break the Bias – the Public Health Engineering (Sanitation) Department (PHED), which is responsible for the implementation of SBM(G) programme in Assam, celebrated women's contribution in the journey from ODF to ODF Plus on 8 March 2022.

The virtual meeting was chaired by Mr Syedain Abbasi, Additional Chief Secretary, PHED Assam and attended by Shri Akash Deep, Commissioner and Secretary, PHED; Chief Engineer, PHED (Sanitation); state- and district-level officials, district coordinators (IEC, HRD, SLWM); and members of the civil society. About 100 individuals participated in the event.

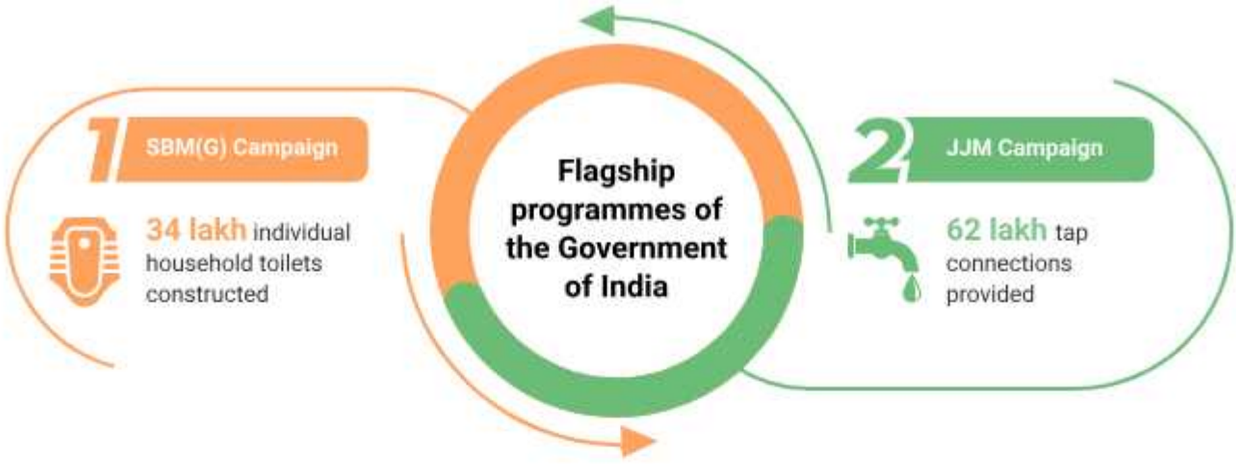
In his inaugural address, Mr Abbasi said that the country had made enormous progress in achieving ODF status and it is now targeting the achievement of ODF Plus status, which involves effective solid and liquid waste management (SLWM) and also providing piped water supply to 50 lakh households under the Jal Jeevan Mission (JJM).

The success of the programme to a large extent can be attributed to the support provided by women. Also, SBM(G) has made a difference to their life, given that lack of access to toilets and shortage in water supply hit women the hardest.

In fact, both the flagship programmes of the Government of India – SBM(G) and JJM – benefit women the most and has also empowered them by emphasizing on their health and hygiene. In Assam, 34 lakh individual household toilets have been built during the SBM(G) campaign and 62 lakh tap connections have been provided under the JJM. "Although a lot of work was done, it needs to continue as much more needs to be completed," he added.

He appealed to the women to continue their support in Phase II of SBM(G), which includes ODF-S and visual cleanliness with SLWM, which includes appropriate disposal of menstrual waste, all of which will contribute to better health of the communities.

A bilingual brochure and booklet prepared by the Assam government was released on the occasion.



Outcome

Many women who had done exceptional work for SBM(G) were honoured on the occasion of International Women's Day 2022 (8 March). This recognition is sure to motivate them to continue their good work in swachhata, which would enhance the health and well-being of their communities. The women realized that both the flagship programmes empowered them. The importance of menstrual hygiene management that would promote good health was emphasized.

Case study

88

IEC to beat plastic pollution in Namchi

Keen on putting an end to single-use plastic (SUP) products, which have adverse environmental, social, economic and health consequences, the Block Administrative Centre (BAC) of Namchi in Sikkim carried out various IEC activities to raise awareness of the issue among the general public.

The campaign adhered to the guidelines of SBM(G) Phase II, which aims to achieve a Swachh and Swasth Bharat by 2024–25.

On 17 March 2022, the BAC of Namchi, together with the Namchi Municipal Council (NMC), organized an awareness campaign on SUP pollution stressing on the potentially harmful effects that plastics have on animals, plants and on the environment. The event featured rallies with people displaying placards and raising slogans on the need to curb the use of plastics while pledging to avoid their use. The rallies made their way from the NMC to the Namchi Central Park via the South District Administrative Centre.

At the Namchi Central Park, an awareness programme was held during which the Block Development Officer (Namchi), Mr Tenzing Bhutia, addressed the gathering emphasizing the hazards of using SUPs continuously, the need to refuse and gradually reduce the use of SUPs, the need to use alternatives and the importance of contributing to conserving the environment and beating plastic pollution.

Mr Bhutia encouraged the participants and the public to say no to plastics from that very day. He stressed the need to look for alternatives that are safe for the environment. He asked people to refrain from burning plastics, which pollutes the air and contributes to global warming and ozone layer depletion and can also result in skin cancer.

Outcome

People understood the hazards of plastic waste on health, the environment and water bodies. They were inspired to say no to plastics and to look for alternatives. For the movement to be successful, every individual would need to curb the use of single-use plastics.

To read more, scan here

Case study

89

Uttarakhand honours Swachhata Doots

On 27 September 2022, the Chief Minister of Uttarakhand presented awards to 51 gram pradhans and sarpanches from 12 districts, recognizing them as Swachhata Doots and commending them for their services in improving sanitation with the effective operation and maintenance of sanitation facilities in their respective gram panchayats (GPs).

This felicitation of the sarpanches and gram pradhans took place during the Swachhata Gaurav Samman Samaroh, which was a part of 'United India for Swachhata' event held at Dehradun. The awardees represented the districts of Almora, Bageshwar, Champawat, Chamoli, Dehradun, Nainital, Pauri, Pithoragarh, Tehri, Rudraprayag, Udham Singh Nagar and Uttarkashi. Haridwar district was not involved in the felicitation because of an election in the district.

'United India for Swachhata' is being observed nationwide from 26 September to 1 October, in the week leading up to Gandhi Jayanthi on 2 October 2022, which is also celebrated as Swachh Bharat Diwas. The week-long programme is a part of Azadi ka Amrit Mahotsav, an initiative of the Government of India to celebrate and commemorate 75 years of independence.

'United India for Swachhata' celebrates the sanitation journey during the past eight years towards Sampoorna Swachhata in villages and cities, attributing the success of the campaign to community participation.

Also awarded at the programme were 50 urban local bodies as Swachhata Doots and 50 children who were beneficiaries of the 'PM SVANidhi Yojana' at the Mukhya Sevak Sadan, the Chief Minister's residence.

Awardees at the 'United India for Swachhata'

Outcome

Men, women and children who contributed to the sanitation programme were honoured, inspiring them to continue working for the cause of swachhata. The event inspired others to similarly participate to make their villages Model ODF Plus.

Case study

90

A Swachh Amarnath Yatra in 2022

In 2022, the Government of the Union Territory of Jammu and Kashmir (J&K) asked the Department of Rural Sanitation (Department of Rural Development and Panchayat Raj, J&K) to make the unique Shri Amarnath Ji Yatra pilgrimage a sustainable and zero landfill event. As many as 4.2 lakh pilgrims participated in the yatra this year.

In keeping with this directive, the Director Rural Sanitation, J&K, Mr Charandeep Singh, under the leadership of Commissioner and Secretary to Government, Department of Rural Development and Panchayati Raj, J&K, Ms Mandeep Kaur, adopted a practical and innovative approach towards the making of a Swachh Yatra. Solid waste management start-up Swaaha, a pioneer in zero landfill events, was roped in to be part of the mega event.

The detailed sanitation plan

Facilities and manpower

To provide access to clean toilets, more than 6,500 toilets with 24-hour water supply were installed out of which 1,660 were pre-fabricated. For human resource support, 3,500 Safai Mitras were hired and appointed over a three-shift system to clean the track, toilets and langars.

Solid waste management

At all the camps located along Pahalgam and Baltal Axes, solid waste management facilities with latest technologies were established to convert organic waste to compost. Waste was collected from langars, army camps and other bulk waste generators like shops and canteens. Further, organic waste shredders were used for volume reduction and cure the food waste before converting it into organic compost. The produced compost was distributed as souvenirs to the pilgrims who were delighted with the gift.

Non-biodegradable waste management

Plastic and dry waste was collected, segregated into 12 categories, baled and recycled.

Event anthem

Composed by Padma Shri Kailash Kher, the anthem was a big hit with millions of views on YouTube.

Further, jingles were created and broadcast on a public address (PA) system to raise awareness about the zero landfill campaign in basecamps, langars and the trek route.

Achievements of Swachh Amarnath Yatra in 2022

Over **3.5 lakh** pilgrims and around **50,000** service providers educated on:

i) **Waste segregation and sustainability**

ii) **Non-littering and non-use** of single-use polythene, disposables and plastics

480 tons of waste collected and processed

Outcome

More than 3.5 lakh pilgrims and around 50,000 service providers were educated on the importance of waste segregation and sustainability, as well as the need to refrain from littering and using of single-use polythene, disposables and plastics. A total of 480 tons of waste was collected and processed, making the pilgrimage a sustainable and zero landfill event.

To read more, scan here

Case study

91

All 108 GPs of Puducherry participate in events of World Toilet Day

Demonstrating the importance of hygiene and sanitation, all the 108 gram panchayats (GPs) of the Union Territory of Puducherry enthusiastically participated in the World Toilet Day events including the Swachhata Run in their respective villages on 19 November 2022.

Rural Development Minister, Shri A. K. Sai J. Saravanan Kumar, also participated in the run that was followed by various entertainment activities.

The Speaker, various ministers and members of the legislative assembly (MLAs), high-level police officials, block development officers and local elected representatives flagged off the run at the various GPs, according to Mr N. Sankaran, coordinator – SBM(G).

The day's events included awareness programmes on the importance of safe sanitation practices and administration of the Swachhata Pledge in the regional language. The highlight of the day was the Swachhata Run. Considerable focus was placed on to the need to use toilets and maintain them. The importance of hygiene and keeping surroundings of the toilets clean was also emphasized.

It was indeed encouraging to see the participation of some differently abled children. At the conclusion of the event, certificates were awarded to all the participants.

Activities of the World Toilet Day event

Swachhata Run (marathon)

Awareness on the importance of safe sanitation practices

Administration of the Swachhata Pledge

Outcome

People were reminded of the need to always use toilets, by all members of the family, and to maintain them and keep their surroundings clean. Differently abled children were encouraged to participate in the programme and certificates were awarded to all the participants, encouraging them to support the sanitation programme.

ODF Sustainability, Retrofitting, Community Sanitary Complexes

Introduction

To continue the gains made in Phase I of SBM(G) and to ensure that the ODF status remains sustainable, continued engagement and support of panchayati raj institutions (PRIs), especially the gram panchayats and other grassroot workers such as swachhagrahis, assume paramount importance.

ODF sustainability can be ensured through the regular use of toilets and community sanitary complexes by all people including visitors and through the maintenance of toilets with regular cleaning and retrofitting when necessary.

Incentive for the construction of individual household latrines (IHHLs) to all new below poverty line (BPL) and new eligible above poverty line (APL) households who do not have toilets in their homes and who have not been provided incentive under any government programme is INR 12,000. INR 3 lakh is allocated for community sanitary complexes (CSCs) (70 per cent from SBM(G) and 30 per cent under 15th Finance Commission funds).

Case study

92

CSC in Punjab's Kallah village caters to the floating population

To improve hygiene and sanitation across the village and ensure ODF sustainability, the district administration of Tarn Taran in Punjab has constructed a brand-new community sanitary complex (CSC) in village Kallah for use by passers-by and the floating population.

The new CSC constructed, under the SBM(G) campaign and made possible through effective leadership and active participation of the community, was completed in November 2021. It caters to all sections of the community.

More than 120 users, including bus stop passengers and patients visiting the dispensary located nearby, avail of the facility.

Background

The village located in Khadoor Sahib block is home to a population of about 6,500 individuals from 1,100 households. It was declared ODF in March 2018 after the construction of 41 toilets. Over the past two years, various campaigns and information, education and communication (IEC) activities were held to encourage the community to sustain the ODF status of the village. It was to serve the floating population, which was dynamic in nature, that a CSC which provided adequate sanitation facilities was needed.

The construction of the CSC began in September 2021 after the village secured funding – INR 2.10 lakh from SBM(G), INR 90,000 from the 15th Finance Commission funds and an additional INR 15,000 from non-resident Indian (NRI) donations.

Sources of funding for CSC construction

- **INR 2.10 lakh** from SBM(G)
- **INR 90,000** from 15th Finance Commission funds
- **INR 15,000** from non-resident Indian (NRI) donations

Outcome

More than 120 users, including bus stop passengers and patients visiting the dispensary located nearby, avail of the facility. Given that the CSC, which is operated and maintained by a committee, is situated near the dispensary of the village, it provides sanitation access to visitors too. Key sanitation messages, gender signs and slogans are painted on its walls to keep people aware of the need to keep the facility clean and tidy.

Case study

93

Temple devotees of Punjab's Majri village now have access to sanitation

About 250 devotees who visit the temple in Majri village of SAS Nagar district in Punjab to perform various rituals now have access to a brand-new community sanitary complex (CSC). It is particularly useful for the women who visit the area in the morning and evening to pay their respects to the deity.

Constructed right in front of temple and the panchayat ghar, the CSC has urinals, handwashing facility and bathing areas – separate for men, women and the physically challenged. The unit that also serves the floating population is a step towards ensuring ODF sustainability.

The village, situated in Majri block, has a population of about 6,000 individuals from 750 households. The 700-year-old temple, which is also known as Baba Dayanath Mandir, is significant and vital to the village community.

Heading towards ODF Plus

Soon after the village was declared ODF in May 2018 after the construction of 41 individual household toilets, the community and key stakeholders of the village have actively taken up various measures such as awareness campaigns, sanitation rallies and focused group discussions to sustain the ODF status and put their village on the road to ODF Plus.

Following the guidelines stipulated by the Department of Drinking Water and Sanitation, Ministry of Jal Shakti, the GP members took up the construction of CSC and made it functional by May 2021. Along with the CSC, renovation of the village pond and solid waste management have been their prime concern.

Outcome

The community toilet was urgently required to cater to the sanitation needs of people visiting the area. People are happy with the dedicated toilet facility serving a good number of people daily, especially the women who visit temple on a daily basis.

Case study

94

Rajasthan's Kheruna village inaugurates CSC

The ODF Plus village in Ramnagar gram panchayat of Bundi district in Rajasthan has transformed into a beautiful village that is visually clean, having systems in place to manage solid and liquid waste. The latest addition is a community sanitary complex (CSC), which ensures access to sanitation to all visitors and passers-by.

The new CSC, built in a circular shape surrounded by a park, has four toilets, four urinals and two bathrooms with separate sections for men and women with adequate water (from a borewell) and electricity supply.

The gram panchayat spent INR 3 lakh (INR 2.10 lakh from SBM funds and INR 90,000 from 15th Finance Commission grant) for the construction of the CSC, which will be maintained by the GP. No charges are levied for its use.

Meanwhile, over the last six months, the district administration has made all possible efforts to clean up the village and has constructed soak pits for the treatment of greywater. The IEC activities have shown results and people are able to segregate waste at the household level.

Waste is collected by collectors appointed by the GP. While wet waste is converted into compost, the dry waste is sold to recyclers.

Outcome

The community has taken ownership of the facility that provides for the sanitation needs of visitors and passers-by. It has put an end to open defecation as a result of which the village is clean. With other IEC activities being conducted in the village, systems are being put in place to manage solid and liquid waste.

Case study

95

Uttar Pradesh establishes an effective system for the operation and maintenance of CSCs

While the construction of community sanitary complexes (CSCs) in public spaces for use by visitors and the floating population is an essential need, their operation and maintenance (O&M) is equally important to ensure usage and sustainability. Uttar Pradesh has evolved some good practices in the O&M of CSCs that can be replicated in other areas.

Intervention

In the belief that ODF Plus villages must have at least one CSC per village to cater to the sanitation needs of passers-by, all gram panchayats of the state were instructed to identify a suitable location for the construction of a CSC that would be easily accessible to all with adequate water supply and where long-term O&M was ensured.

Normally, all CSCs are built in land belonging to the GP, close to public spaces, to meet the sanitation requirements of communities. Further, as per SBM(G) Phase II guidelines, priority should be given to locations with predominant SC/ST habitations and the poorest of the poor, and in those areas visited by migrant labourers and the floating population. In Uttar Pradesh, the construction of CSCs commenced on a mission mode under the guidance of Department of Drinking Water and Sanitation (DDWS) and the state government.

Features of a CSC

As per stipulations, a CSC should have separate facilities for men and women and consist of an appropriate number of toilet seats, bathing cubicles, handwashing platforms and wash basins. It should be designed in a divyang-friendly manner. Further, all CSCs were to be equipped with submersible pumps and overhead tanks to provide sufficient water 24×7 for both usage and maintenance.

Outcome

CSCs facilitate the development of healthy sanitation practices in the community, a sure way to reduce open defecation. The construction of CSC during COVID generated employment for technical and non-technical daily wagers while creating opportunities for masons, plumbers and electricians. It contributed to behaviour change as it encouraged people to use toilets when in need, thereby ensuring visual cleanliness and sanitation.

Case study

96

Chhindwara in Madhya Pradesh constructs 252 CSCs

To ensure ODF sustainability and provide access to sanitation to all people, be it the floating population, migrant labourers or tourists, the district administration of Chhindwara in Madhya Pradesh has constructed 252 community sanitary complexes (CSCs) until January 2022.

According to the District Project Coordinator, Mr Sudhir Krishak, the CSCs have been constructed through the convergence of funds between SBM(G), 15th Finance Commission and MGNREGA.

The CSCs that cost INR 3.44 lakh each have separate sections for men, women and the differently abled, with adequate water and electricity supply.

The unique feature of the CSCs is that each of them will soon have a Swachhata Mart attached to the CSC or in the close vicinity of one. These small convenience stores, which are being built at a cost of INR 24,000, will be rented out to shopkeepers who will hire either a swachhagrahi or an SHG group to ensure its operation and maintenance. Thus far, 20 such marts are functional.

Majority of the CSCs are constructed in public spaces, tourist spots or near the state or national highway that are frequented by people.

Outcome

Chhindwara currently has 24 Model ODF Plus villages out of a total of 1,839 villages. All the ODF Plus villages have systems in place for solid and liquid waste management and are visually clean. While community bins are used for segregated waste, compost pits have been constructed to treat wet waste and cow dung. Behaviour change communication (BCC) and interpersonal communication (IPC) have been used to impress upon the community to curb the use of plastics and avoid single-use plastic for the health and well-being of the community and protecting the environment.

Features of 24 Model ODF Plus villages in Chhindwara district

- Solid and liquid waste management system
- Segregation of waste using community bins
- Construction of compost pits to treat wet waste and cow dung
- BCC and IPC to curb plastic use and single-use plastic

Innovation

Introduction

Innovation is the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services. Innovation is equally important in sanitation. Throughout the Swachh Bharat Mission (Grameen) campaign, village, district and state teams have come up with innovative ideas in the implementation of the programme. Their use of creativity and experimentation has led to either positive behaviour change, increased demand for a sanitation facility or service, or a novel process, technology or product that has achieved positive results or impact.

Case study

97

Toilet clinic – an innovation for ODF sustainability

To upgrade toilet functionality and aid in retrofitting, Lohiya Swachh Bharat Abhiyan (LSBA) and UNICEF field office have come up with an innovative initiative – toilet clinics. These clinics would provide advisory services along with various materials and masons required for retrofitting of toilets in rural households.

The initiative is timely and necessary, given that several toilets constructed in rural Bihar were either the single-leach pit or septic tank variety, which need support services to remain functional.

Toilet clinics

According to Dr Prabhakar Sinha, UNICEF WASH Specialist, toilet clinics, which are proposed to be established at the block level, will function like information kiosks at the block offices, from where all materials required for retrofitting such as cement, sand, pans, pipes, bricks and doors can be purchased by the households. Further, contacts of trained masons and sanitation janitors, available locally to perform the retrofitting of toilets, would also be available at toilet clinics.

Additionally, these clinics will provide safe sanitation and retrofitting-related advisory services to the households so that the latter can be cleared of various misconceptions on retrofitting like costs and material availability. A booklet on various retrofitting needs and solutions, providing information related to the cost and time required for completing retrofitting work in an effective manner, will also be available at these clinics.

Functions of toilet clinics

- Required retrofitting materials (cement, sand, pans, pipes, bricks and doors) can be purchased
- Contacts of trained masons and sanitation janitors will be available
- Safe sanitation and retrofitting-related advisory services will be provided
- Information booklet on various retrofitting needs and solutions will be available

Outcome

Given that functionality of toilets, timely repairs and cleanliness are important to ensure ODF sustainability, the village communities learned how toilets can be repaired and retrofitted. The toilet clinic fulfils all the needs to keep the toilet functional and also connects with masons who could help the households when they need support.

To read more, scan here

Case study

98

Mobile septage treatment unit unveiled

Addressing several barriers to achieving safely managed septic waste, the WASH Institute has designed and developed a mobile septage treatment unit, which was demonstrated to a gathering of sanitation professionals at the national capital on 16 September 2022.

The unit on wheels takes care of emptying, transportation and treatment of faecal sludge, which are essential steps in the sanitation value chain.

Among those who witnessed the working of the mobile treatment unit (MTU) were Secretary – DDWS, Smt. Vini Mahajan; WASH Chief – UNICEF, Ms Marije Broekhuijsen; WASH specialist – UNICEF, Shri Sujoy Mojumdar; Executive Director – WASH Institute, Shri Arumugam Kalimuthu; sanitation specialists and others from the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti.

Designed to treat the contents of a septic tank at household site itself, the unit on wheels that is mounted on a small medium truck first separates solid and liquids and treats the liquid on the spot, allowing for the thickened sludge to be carried for secondary treatment. The operational capacity of the unit is 6,000 litres per hour.

Key features of mobile septage treatment unit

- Ensures emptying, transportation and treatment of faecal sludge
- Designed to treat the contents of a septic tank at household site itself
- Separates solid and liquids and treats the liquid on the spot
- Operational capacity of the unit – 6,000 litres per hour

Process

The process involves the separation of solids and liquids, sludge thickening through centrifuge and liquid treatment by way of membrane filtration. While the thickened solid is taken for secondary treatment, the treated effluent is safe for disposal on-site itself and can be used for secondary purposes such as gardening.

Outcome

Given that most of the villages and small towns do not have treatment facilities such as faecal sludge treatment plants (FSTPs) or sewage treatment plants (STPs), the unit mounted on wheels can be an appropriate option for emptying and treatment of septage. Further, with low operational costs, the treated effluents, which meet the national and international norms, can be used for secondary purposes such as gardening. The system keeps the environment clean owing to the elimination of indiscriminate disposal and dumping of septage. Also, the high flow rate of the MTU allows for the emptying and treatment of more septic tanks in a day.

To read more, scan here

Case study

99

Suchitwa Mission tackles chicken waste

Forty chicken waste rendering plants have become functional in 10 districts of Kerala over the past two years. More of these plants are to come up shortly in the remaining four districts of the state thanks to the efforts of Suchitwa Mission, the technical support group in the waste management sector under the Local Self-Government Department of the Government of Kerala.

The move is vital as the inefficient handling of poultry waste for years has led to the pollution of water bodies and an increase in the stray dog population within the state.

The chicken waste rendering plants have been set up under the public–private partnership model.

Previously, poultry waste was handed over to pig farms. While this provided a solution of sorts, it was not effective in the long run as the waste collection process was not effective and some of the waste continued to be dumped in public spaces or water bodies. Further, chicken feathers could not be processed in biogas plants.

To address the problem comprehensively, Suchitwa Mission hit upon the idea of rendering plants, which could process all kinds of chicken waste and produce useful raw materials.

Outcome

This first of its kind unit effectively manages chicken waste. Other states can replicate this method as an effective way to manage solid waste.

Case study

100

A mobile app to accelerate SBM(G) implementation in Madhya Pradesh

To boost the implementation of SBM(G) Phase II, a mobile application called 'Swachh MP ODF Plus', a web-based system to address the challenges under the programme, was launched in Madhya Pradesh on 8 August 2022. The system, which intends to serve as a one-stop centre for the user, will be used by over 750 decision-makers and departmental functionaries at the state, district and block level, and by about 30,000 sanitation foot soldiers, who represent a vital cog in the programme.

The application platform, designed by the National Informatics Centre (NIC) with technical assistance from UNICEF, went through multiple field testing sessions. Moreover, all district and block level functionaries were oriented virtually on the features and usage of the app.

Objectives

- The app provides a platform to analyse trends in strategy formulation and refinement with policymakers.
- It generates inputs for evidence-based planning and implementation blueprint with the functionaries, village-level implementers (panchayat raj institutions, Village Water and Sanitation Committee (VWSC) members) and swachhagrahis.
- It tracks the progress of planned inputs and the desired results.
- It provides easier access to capacity building, materials related to social behaviour change communication (SBCC) and information, education and communication (IEC) and knowledge products.
- It helps streamline the disbursal of honorarium to sanitation foot soldiers through the e-payment system.

Key features

- Users of the mobile application will have bilingual access as the content has been developed both in Hindi and English.
- It has a simple interface that ensures easier navigation and access to the content.
- Access to mobile application is possible in both offline and online modes, bearing in mind the areas with poor network connection.
- The mobile app also comes with face support and push notification features.
- The app is designed in a contextualized access mode, based on user profiles to entertain different types of stakeholders (district/block functionaries and swachhagrahis).
- Multiple themes and colours of the user interface selection facility with the supervisor to demarcate stages of work progress.
- Enhanced security with password protection features for each user.

The framework for Swachh MP ODF Plus mobile application is based on the pillars of key thematic areas as outlined in the ODF Plus guidelines issued by the DDWS. These thematic components are integrated with all the solution components (capacity building, social behaviour change communication (SBCC) and IEC, monitoring and evaluation) contextualized to the user base such as planning approach for the key stakeholders (functionaries, PRIs and VWSC), operation and maintenance by the service provider groups, cleaning procedures for sanitary workers, construction techniques for the masons and communication delivery by the swachhagrahis.

Outcome

The mobile app served to monitor activities under the SBM(G) Phase II implementation. It is being used by GP, block and district level functionaries to address the challenges during programme implementation and share learning.

To read more, scan here

Case study

101

Engineering students create an instant fertilizer machine

As it is critically important to reduce and eliminate the adverse impact of waste materials on human health and the environment, engineering students from Coimbatore have come up with a prototype to instantly convert food waste into a fertilizer.

The students of Avinashilingam Institute of Home Science and Higher Education for Women, School of Engineering, Coimbatore, came up with the prototype in the Smart India Hackathon 2022 (SIH 2022), a nationwide initiative that provides students with a platform to solve some of the pressing problems we face in our daily lives and thus inculcate a culture of product innovation and a mindset of problem-solving.

The team that designed the prototype comprised K. Harini Sree, A. Nivetha, G. Chinthana, R.P. Harshini and S. Ganishka, led by D. Varna and mentored by K. Pooja. Calling themselves Smart Whizz, they participated under the topic Waste Management System, for innovation under the SBM(G), Department of Drinking Water and Sanitation, Ministry of Jal Shakti. Team Smart Whizz won the first prize.

The innovation underlines the need for upcycling, sustainable production and sustainable consumption, which would eventually lead to economic development and better quality of life.

The idea stemmed from the food waste that the team members had seen in their own hostel and the large volumes of waste generated in restaurants. The students then came up with a technology for solid and liquid waste management that requires the least operation and maintenance and is suitable for various terrains.

The instant fertilizer machine (IFM) is a simple and compact machine that can be used for treating solid food waste and converting it into a rich fertilizer. It takes less than 16 hours for food waste such as vegetable and fruit peels to be converted into an organic fertilizer. Economically feasible, the machine is compact and easily transportable.

Process

Food waste, which is fed into the input container, is first shred into tiny particles and ground before it goes into the Peltier module – a thermal control module that has both warming and cooling effects. The food then passes into the fermenter – a vessel used for growing microbes on an industrial scale – after which the moisture content is filtered. The excess wastewater and fertilizer generated are finally collected.

Outcome

The IFM, which is cost-effective and compatible, eliminates the need for chemical fertilizers. Easy to use and transport, it is effective for the treatment of solid as well as liquid food waste in both rural and urban areas and is suitable for households as well as for large-scale use. This instant fertilizer, generated in less time, has high nutritional value.


water
RED BOND
RED BOND

National Events

Introduction

The Department of Drinking Water and Sanitation (DDWS) has been organizing various events and campaigns to keep the momentum going, enhance community participation and accelerate the implementation of SBM(G) Phase II. Other than IEC activities, it has held landmark campaigns to promote all the verticals of SBM(G).

Sujlam 1 and 2 were launched to manage greywater through soak pits, leach pits and magic pits to ensure minimal stagnation of wastewater and check its discharge into the village ponds. The Retrofit to Twin Pit Abhiyan was initiated to promote simple on-site technologies through retrofitting the existing single-pit toilets into twin-pit toilets and connecting septic tank toilets to air vents and soak pits. The campaign also aimed to generate awareness on the safe disposal of faecal sludge in rural households.

Massive surveys such as Swachh Survekshan Grameen ranked states and districts on the basis of their performance on key quantitative and qualitative SBM(G) parameters.

Case study

102

DDWS and DoSEL issue joint advisory on MHM

To provide a safe and enabling environment to adolescent girls and women, particularly in the rural parts of the country, the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, and the Department of School Education and Literacy (DoSEL), Ministry of Education, have issued a joint advisory on menstrual hygiene management (MHM) on 8 March 2022 – International Women's Day.

The signatories to the joint advisory, which was sent to Chief Secretaries, Administrators and Advisors to Lt. Governors of all states and union territories, were Smt. Vini Mahajan, Secretary, DDWS and Smt. Anita Karwal, Secretary, DoSEL.

The joint advisory on MHM was issued along with a brochure on MHM.

Adolescent girls and women face needless embarrassment and shame because of the natural biological process of menstruation. Lack of awareness and means to manage the process not only influences their health and lifestyle but also leads to absenteeism and dropout from schools, the joint advisory said.

In this regard, necessary steps need to be taken to provide a safe and enabling environment to such girls, which offers protection and guidance to ensure their basic health, well-being and education, it added.

Focus areas of SBM(G) Phase II initiative

- Creating awareness on MHM and ensuring proper management of menstrual waste
- Improving the overall sanitation coverage in rural areas of India
- Promoting the dignity of women and children to maintain sustainable health and hygiene
- Installing incinerators

Outcome

The initiative renews DDWS' commitment to support the creation of awareness on MHM and ensure proper management of menstrual waste. SBM(G) Phase II, in addition to improving the overall sanitation coverage in rural areas of India, aims at promoting the dignity of women and children to maintain sustainable health and hygiene. SBM(G) Phase II has been contributing to the agenda of MHM through its IEC interventions and supporting the installation of incinerators as part of the programme. Campaigns are to be conducted to make adolescent girls and women aware of ways to reduce menstrual waste through the use of products like menstrual cups and reusable sanitary pads. Moreover, the initiative will not only help the girls to be more confident in attending school during menstruation but will also have a positive impact on the overall quality of their life, while checking absenteeism and dropouts.

Case study

103

Lighthouse Initiative – to inspire GPs to achieve ODF Plus

Lighthouses are beacons of light that provide guidance for safe passage to sailors, symbolizing hope and security. As the name suggests, the Lighthouse Initiative will develop 75 model ODF Plus blocks that have covered all the components of ODF Plus and will serve as a learning lab, providing guidance and inspiration to other villages to enable them to achieve ODF Plus status at speed and scale.

The unique initiative – a part of the Azadi Ka Amrit Mahotsav initiative of the Government of India to celebrate and commemorate 75 years of independence – was launched in the national capital on 29 July 2022 by the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti, Government of India, in collaboration with India Sanitation Coalition (ISC) at the Federation of Indian Chamber Commerce and Industry (FICCI).

In her keynote address, Smt. Vini Mahajan, Secretary DDWS, said, "We are standing at the cusp of transformative change and what a huge opportunity we have before us. It's not always that you believe that you can transform rural India. But we believe that today and we believe it for a very good reason."

She added that the government has been working for around two years on SBM(G) Phase II, which has the target of sustaining the ODF status and ensuring that arrangements are in place for solid and liquid waste management in all the villages of the country. The project, she added, is backed by adequate funds, knowledge and the right set

of partners. "It is the gram panchayats, block panchayats and the zila panchayats who have to take the lead in not just understanding and planning for it but also to assist in creating the required assets which are economically viable and technologically feasible."

Urging corporates to come forward to assist the sector, Smt. Mahajan highlighted that there are immense opportunities for the private sector. "We are looking at quick deliverables and very ambitious timelines. We are not looking at corporates for funding the assets, but we are seeking their energy, time and commitment. With these, we can bring about transformative change," she added.

Outcome

The initiative, which underlines the need for swachhata to remain everybody's business, will encourage corporates to support villages and bring about positive change with regard to solid and liquid waste management leading to visual cleanliness. It will help in creating the required assets that are economically viable and technologically feasible.

Case study

104

Innovations galore at the Startup Grand Challenge

Many unique and innovative solutions to manage solid and liquid waste in rural areas were showcased during the final round of the Startup Grand challenge, organized by the Department of Drinking Water and Sanitation (DDWS) in the national capital from 19 to 21 July 2022.

The event was organized under SBM(G) to scout for technologies that can offer sustainable, affordable, scalable and responsive solutions to the solid and liquid waste management (SLWM) challenges in rural areas.

More than 300 entries were received initially, of which 62 were shortlisted and 43 were invited for the final round. Entries to the Startup Grand Challenge came in all the categories – mechanized desludging, faecal sludge management, GOBARdhan, greywater management, plastic waste management, menstrual waste management, organic waste management – all of which are integral components of ODF Plus under SBM(G) Phase II.

To evaluate these shortlisted applicants in the final round, an External Evaluation Committee (EEC) was constituted by DDWS, headed by Dr Preeti Banzal, Adviser/Scientist 'G' representing the office of the Principal Scientific Adviser, who was appointed Chairman of the Committee.

Outcome

The event served to recognize and honour women leaders, motivating them to continue their good work. Seeing their dedication, other women are joining the swachhata movement, which has given them a sense of responsibility towards their communities and, in some cases, offered them an additional source of livelihood.

To read more, scan here

Case study

105

RWPF renews commitment to support states in the implementation of SBM(G) and JJM

The Rural WASH Partners' Forum (RWPF), which met on 22 August 2022, reiterated its commitment to support states in the implementation of both the flagship programmes of the Government of India – Swachh Bharat Mission Grameen (SBM(G)) and Jal Jeevan Mission (JJM).

RWPF aims to supplement the efforts of the Department of Drinking Water and Sanitation (DDWS) in the implementation of SBM(G) and JJM through innovation, knowledge products, financing and capacity building, leading to impact-driven outcomes.

During the meeting, the potential avenues for collaborative assistance and the thematic areas in which RWPF could leverage their expertise, knowledge as well as innovative approaches to support the DDWS in achieving the desired outcomes were discussed.

In her address, Smt. Vini Mahajan, Secretary, DDWS, Ministry of Jal Shakti, explained the achievements so far in both SBM(G) and JJM and outlined the opportunities for collaboration with RWPF. She called for the institutionalization of partnerships, taking ownership of assets to fast track and upscale all efforts to move forward in the WASH sector.

"Whatever infrastructure we have to create, it has to be done now, given that there is adequate funding. One must not miss this once in a lifetime opportunity to transform rural India," Smt. Mahajan said.

Commitments made by rural WASH partners

In his remarks, Shri Arun Baroka, Special Secretary – DDWS, spoke of the priorities in the WASH sector towards ensuring the development of Swachh and Sujal Gaons. He acknowledged that several partner organizations contributed to the implementation of SBM(G) in various ways and their efforts had contributed to the achievements of the programme.

"Partnership was the hallmark of SBM(G) Phase I and that same spirit should be extended to this forum," he said, adding that it was important to create harmony between various actors.

"We are one WASH sector and we should not lose vision of this and we are pleased to have committed and ambitious partners as we strive to attain our goals," the Special Secretary further said, pointing to the substantial funding available in the budget, 15th Finance Commission funds and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) funds. He called for the development of Lighthouse Villages that can act as demonstrative projects for other villages to follow.

Further, the Special Secretary added, "Our sanitation workforce is very big. They are our heroes and natural leaders who are willing to work and execute our strategies. Hence, let's take care of our workforce and motivate them to lead India towards becoming Sampoorn Swachh."

Outcome

The meeting led to rural WASH partners taking up responsibility for various tasks to bring about hygiene and sanitation to rural India. The partners made commitments to contribute towards innovation, knowledge products, financing and capacity building, leading to impact-driven outcomes.

Case study

106

SSG 2022 generates unprecedented enthusiasm in stepping up sanitation status

Swachh Gram Swachh Zila
Swachh Survekshan Grameen 2022

As part of Swachh Survekshan Grameen (SSG) 2022, around 1,75,521 households were interviewed for their feedback on SBM(G)-related issues while visits were undertaken to 85,872 public places such as schools, anganwadis, public health centres, haats, bazaars and religious places in as many as 17,559 villages from December 2021 to March 2022.

Held for the third time, SSG in 2022 covered 17,559 villages of 709 districts in 33 states and union territories (excluding the three union territories of Chandigarh, Delhi and Lakshadweep) across India. Additionally, more than five crore individuals provided their feedback through a mobile app.

SSG 2022 generated unprecedented enthusiasm across the nation and millions of people participated in the SSG-related activities. In fact, states, districts and gram panchayats joined in eagerly to step up the sanitation status in villages and public places of rural India.

SSG 2022 was commissioned by the Department of Drinking Water and Sanitation (DDWS) through an independent survey agency. The main aim of the survey was to rank states and districts on the basis of their performance on key quantitative and qualitative SBM(G) parameters.

Outcome

The rural community was engaged in improving their sanitation status through intensive and holistic IEC campaigns. The survey, which created a healthy competition, also engaged with select gram panchayats and citizens in every district to solicit their feedback and recommendations for improving the implementation of the SBM(G) campaign.

To read more scan here

Case study

107

Prime Minister inaugurates Dr Syama Prasad Mookerjee National Institute of Water and Sanitation in Kolkata

The Prime Minister Shri Narendra Modi inaugurated the Dr. Syama Prasad Mookerjee National Institute of Water and Sanitation (SPM-NIWAS) at Joka in Kolkata, West Bengal, via video conferencing on 30 December 2022. Set up at a cost of around INR 100 crore, SPM-NIWAS is spread across 8.72 acres of land on Diamond Harbour Road.

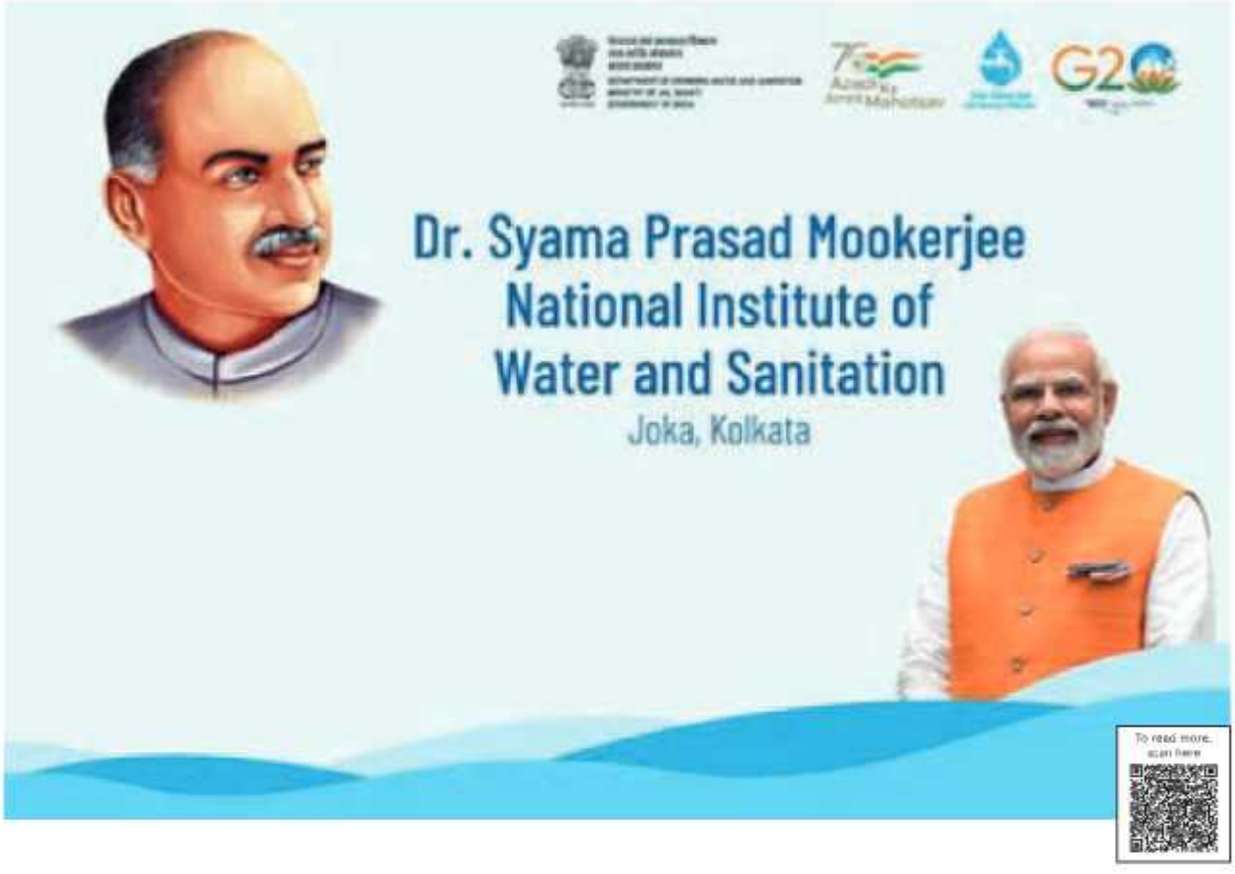
Through this apex institute on water and sanitation, the Department of Drinking Water and Sanitation (DDWS) aims to bridge the knowledge and capacity-building gap in the field of public health engineering, sanitation and hygiene through short-, medium- and long-term courses that are not just related to engineering but also cover aspects of management, health, accounting, law and public policies.

The inauguration of SPM-NIWAS was followed by a day-long national conference on 'Drinking Water Quality – Issues and Challenges' organized by DDWS and supported by UNICEF, INREM Foundation and WaterAid.

The concluding session of the conference was chaired by the Union Minister for Jal Shakti, Shri Gajendra Singh Shekhawat. Speaking on the occasion, the Union Minister reiterated the Prime Minister's vision of cooperative federalism and stated that under Swachh Bharat Mission, Namami Gange and Jal Jeevan Mission, the combined efforts are being recognized around the globe.

Outcome

The national institute would support capacity building initiatives pertaining to water and sanitation. Apart from creating models of all assets for solid and liquid waste management, the institution with experts would meet the need for theoretical and practical learning and demonstration.



Case study

108

Nine ministries and departments to promote 'Green and Clean Village'

A joint letter and advisory has been signed by nine Secretaries to the Government of India on the localization of Sustainable Development Goals (SDGs) through panchayati raj institutions (PRIs) based on Theme 5: Clean and Green Village.

The letter dated 31 March 2022 indicates the willingness of the ministries and departments, which are signatories to the joint letter, to provide full support under their ongoing schemes to this effort at the gram panchayat and village level. The Department of Drinking Water and Sanitation (DDWS) is the nodal ministry for this theme.

The nine signatories of the letter addressed to Chief Secretaries of all states and union territories are: Smt. Vini Mahajan, Secretary, Department of Drinking Water and Sanitation, Ministry of Jal Shakti; Shri Sanjay Agarwal, Secretary, Department of Agriculture and Farmers Welfare; Shri Atul Chaturvedi, Secretary, Department of Animal Husbandry and Dairying; Smt. Leena Nandan, Secretary, Ministry of Environment, Forests and Climate change; Shri Indu Shekhar Chaturvedi, Secretary, Ministry of New and Renewable Energy; Shri Nagendra Nath Sinha, Secretary, Department of Rural Development; Shri Ajay Tirkey, Secretary, Department of Land Resources; Shri Jatindra Nath Swain, Secretary, Department of Fisheries; and Shri Sunil Kumar, Secretary, Ministry of Panchayati Raj.

Objectives

'Green' refers to a world in which natural resources, including oceans, land and forests, are sustainably managed and conserved to improve livelihoods and ensure food security and most importantly protect the environment for future generations. 'Clean' refers to access to safe and adequate drinking water and sanitation services, low-pollution, low-emission world in which cleaner air, water and oceans enable people to lead healthy and productive lives. Thus, a gram panchayat that chooses to focus on becoming a Clean and Green Village would need to have clarity regarding the preservation and maintenance of the components that cover water resources, and its link to rivers and streams, and land resources and soil health.

Outcome

The initiative led to a convergence among various government departments to promote the concept of a Green and Clean Village. Activities to protect the environment, provide access to clean water and preservation of water bodies are part of the initiative.

To read more, scan here