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Wells for India

Bringing water and dignity
to the poorest people of rural Rajasthan



JAL BHAGIRATHI
FOUNDATION



WATER AND SANITATION FOR ALL

REPLICABLE APPROACH TO
ADDRESS THE CRISIS





The Challenge

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The Prince's Charities

The Prince's Charities is a group of not-for-profit organisations of which The Prince of Wales is President: 18 of the 20 charities were founded personally by The Prince. The group is the largest multi-cause charitable enterprise in the United Kingdom, raising over £100 million annually. The organisations are active across a broad range of areas including opportunity and enterprise, the built environment, responsible business, and education. Additionally, six social enterprises make a significant contribution towards raising money for the charities. The charities reflect The Prince of Wales's long-term and innovative perspective, and seek to address areas of previously unmet need.



The British Asian Trust

The British Asian Trust was founded in July 2007 by a group of British Asian business leaders at the suggestion of HRH The Prince of Wales. The Trust aims to serve as a 'social fund' to support high impact charities within the areas of education, enterprise and health in Bangladesh, India, Pakistan, Sri Lanka and the UK. The British Asian Trust's unique approach aims to encourage and support philanthropy amongst the South Asian Diaspora. The Trust ultimately strives to deliver maximised long-term impact, so grants are awarded to core programmes that ensure that a recipient charity fulfils the Trust's remit and helps monitor the effect that the funds have had on beneficiaries.



Jal Bhagirathi Foundation (JBF)

Jal Bhagirathi Foundation (JBF) was established as a Trust on January 15, 2002. The Organization serves to provide an enabling environment to foster community leadership, facilitate village institutions and create a social capital that can access adequate drinking water for humans and animals by leveraging traditional knowledge and appropriate technology. JBF works with a vision of creating water security, sustained by responsive governance and inclusive growth leading to sustainable development.

The organizational structure is a unique integration of a village-level volunteer pool of 18000 and a professional resource base, both complementing each other's effort in providing safe and sustainable water supply to 300,000 people living in 200 villages covering 10,000 sq kms of the most water distressed region of the world- in the Thar Desert of Western India.

JBF has adopted international management standards of operations and has been awarded an ISO 9001: 2000 certification for its management systems and procedures. It has a Board of Trustees comprising of five members: HH Maharaja Gaj Singh is the Chairman, Shri Rajendra Singh is the Vice Chairman, Shri Prithvi Raj Singh is the Managing Trustee, HH Maharani Hemlata Rajye and Smt. Kanupriya Harish are Trustees.



Wells for India
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Wells for India (WFI)

Wells for India is a UK-registered development organisation founded by Dr. Nicholas Grey and his wife Prof. Mary Grey in 1987 with the aim of providing support to poor and disadvantaged groups in the rural areas of Rajasthan. Since then the organisation has supported over 700 villages spread over 11 districts of Rajasthan through 22 local Non-Government Organisations. It has also played a critical role in responding to regional emergencies, particularly the droughts of 1988 and 2003. Wells for India believes that water provision is an essential foundation for all other forms of development, and therefore focuses its work on rainwater harvesting to bring widespread social and economic benefits to poor communities. Their efforts in Rajasthan for the last 23 years illustrate how the availability of safe potable water frees up women's time and energy, and leads to improvements in poor people's health, education, income generation capacity, and social and cultural well-being. Increased water availability through small-scale water harvesting results in improved yield of crops, fodder and milk. Over a period of time, communities become self-reliant and take responsibility for their own development.





The Challenge



Water and Sanitation Gap

Water is essential for life. It is the key resource for people's good health, well being, socio-economic development and livelihood. The lack of access to adequate water and sanitation primarily impacts the poor. Badly served by the formal sector, the poor are left with no choice but to make their own, often inadequate, arrangements to meet basic survival needs. Women and girls have to walk in search of water to meet minimal household needs or end up paying high prices to water vendors for very small quantities of water.

Water and sanitation is pivotal for human health and well being. Around 6,000 people, usually babies, die daily due to poor sanitation, hygiene and water. It is estimated that 40 percent of the population in the global South lives without 'improved' access to sanitation – that is about 2.6 billion people around the world¹. The Human Development Report (UNDP 2006) says no act of terrorism generates devastation on the scale as the crisis in sanitation and water.

Despite huge investments we still lag behind in bringing universal access to safe water and sanitation. According to the World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) almost 42,000

people die each month from diseases relating to poor quality of drinking water and lack of sanitation. Over 90 percent of them are children under the age of 5. It is even said that "At any one time, half of the world's hospital beds are occupied by patients suffering from water-borne diseases."²

The clear need for basic water and sanitation services for the poor and the marginalized assumes even greater significance when the linkages with other dimensions of poverty are considered. Water and sanitation related sickness puts severe strain on health expenses and keeps children out of school. Human waste poses a tremendous social cost through pollution of water leading to spread of communicable diseases.



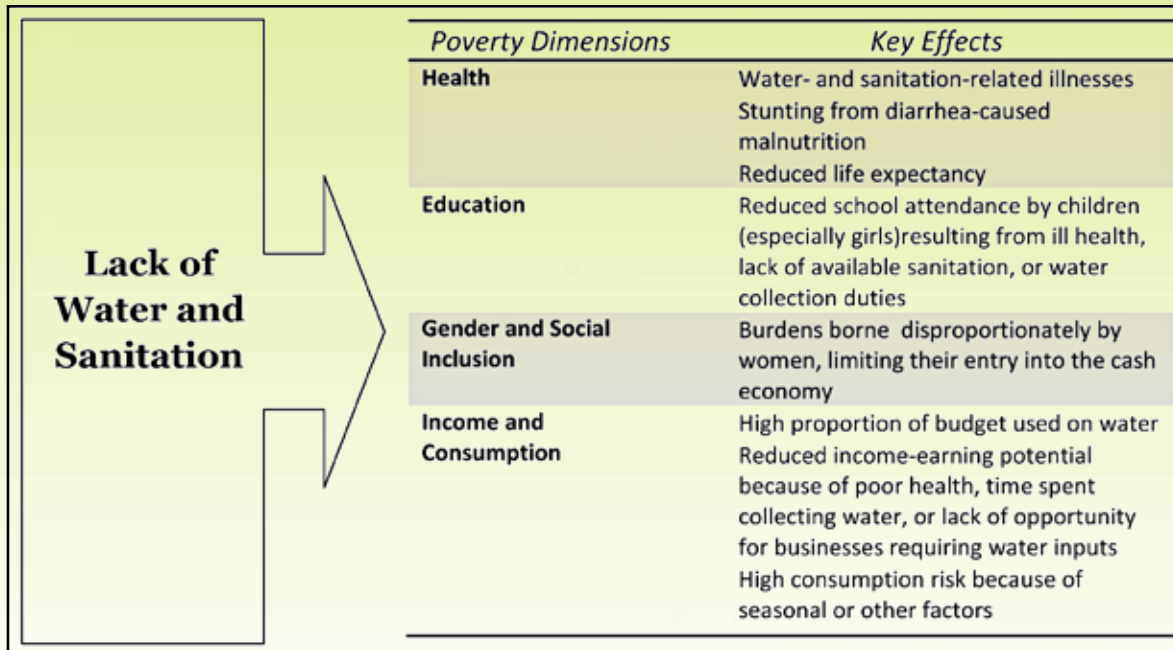
¹ The Joint Monitoring Programme for Water Supply and Sanitation by UNICEF and WHO considers the following as improved sanitation:

- connection to a public sewer
- connection to a septic system
- pour-flush latrine
- simple pit latrine
- ventilated improved pit latrine

Public or shared latrines, open pit latrines and bucket latrines do not qualify as improved.



² <http://www.un.org/waterforlifedecade/factsheet.html>

LINKAGES BETWEEN POVERTY, WATER AND SANITATION*



*Christophe Bosch, Kirsten Hommann, Gloria Rubio, Claudia Sadoff and Lee Travers (2002), *Water, Sanitation and Poverty, Water Supply and Sanitation in PRSP initiatives*, The World Bank.





Water and sanitation remains one of the biggest challenges in developing countries. Improved access to water and sanitation is the key to achieve the Millennium Development Goals (MDGs). It is increasingly realised that bringing universal access to water and sanitation is essential and probably is the first step to achieve the MDGs. Global failure to secure and manage water effectively and provide sanitation undermines efforts to alleviate poverty worldwide and prevents progress towards sustainable development. The role of water security in achieving the goals of health, education, gender equality and environmental sustainability is paramount, particularly in the context of developing countries. The failure to confine excreta safely contributes to the spread of disease and infection due to bacteriological contamination of water sources and the transmission of pathogens through the faecal-

oral route. Without water security and safe sanitation practices, MDGs could be nothing but a mirage: the closer we reach the farther they will be. On the other hand, meeting the water and sanitation targets will help reduce poverty and simultaneously contribute to the achievement of the other Goals as well.

Realising the importance of water and sanitation, the UN general Assembly declared on 28 July 2010 that safe drinking water and sanitation is a human right essential for the full enjoyment of life and all other human rights. The 192-member Assembly also called on United Nations Member States and international organizations to offer funding, technology and other resources to help poorer countries scale up their efforts to provide clean, accessible and affordable drinking water and sanitation for everyone.



WHY IS WATER AND SANITATION IMPORTANT?*

Water and Sanitation is Vital for Health

Consumption of unsafe drinking water can result in various health problems. The transmission of diarrheal disease is because of lack of toilets, unsafe confinement of excreta and unsafe drinking water. Improved water quality can contribute to reduced morbidity and mortality.

Contributes to Social Development

With availability of water, the girl child does not have to help their mothers in fetching water, forgoing education. With presence of sanitation facilities and hygienic behavior, the rates of illness drop, malnutrition in children is reduced and women's safety and dignity is improved. It promotes gender equality and empowers women.

Is an Economic Opportunity

On an average a woman walks 6 kms daily to collect water. The benefit of water near home translates into reduced fatigue and opportunity for livelihood activity. Improved sanitation has positive economic benefits. Livelihoods and employment opportunities are enhanced, and the opportunity costs lost to the community is reduced.

Helps the Environment

Improved disposal of human waste promotes environmental cleanliness and protects streams, rivers, lakes and underground aquifers from pollution. Safely composted, excreta can be used as fertilizer.



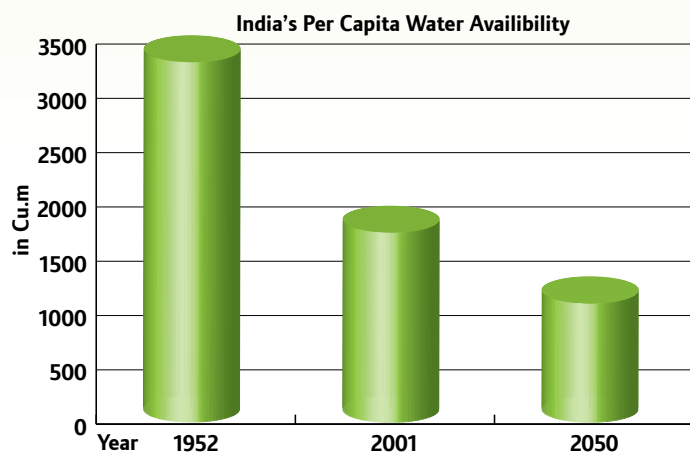
*Adapted from "Tackling a global crisis: International Year of Sanitation 2008", UN-Water

Water and Sanitation in India

The water situation in India is alarmingly grim. Water availability per person is projected to fall by half by 2050 and over 25% of India's agricultural production will be at risk from groundwater depletion. A recent report in Tribune (June 2010), highlighted that per capita water availability in India was 3450 cubic metre in 1952, which was reduced to 1820 cubic metre in year 2001. It is predicted that it will decline to as low as 1140 cubic metre by 2050³. Moreover, the percentage of overexploited watersheds will rise from 15% to 60% and the availability of cultivable land per capita will be cut by half current levels⁴. According to the 2001 Census, more than 30 per cent of households in the country do not have access to drinking water. The State of Environment- India (2009) reports that the per capita drinking water availability in the country

has fallen by about 15-20 per cent over the past two decades. Experts say, as of now, 50 per cent of the villages have no source of protected drinking water. Out of the 35 states in India, only 7 have full availability of drinking water for rural inhabitants⁵.

In the country, open defecation by majority of people is a serious environmental threat in addition to having adverse impacts on public health. The WHO/ UNICEF Joint Monitoring Programme data shows that in India alone 665 million⁶ people practise open defecation. As per a UN University think tank in April 2010, India has 545 million working cell phones in comparison to only 366 million people who have access to a toilet. For India the road of improvement for access to sanitation is still a long way.



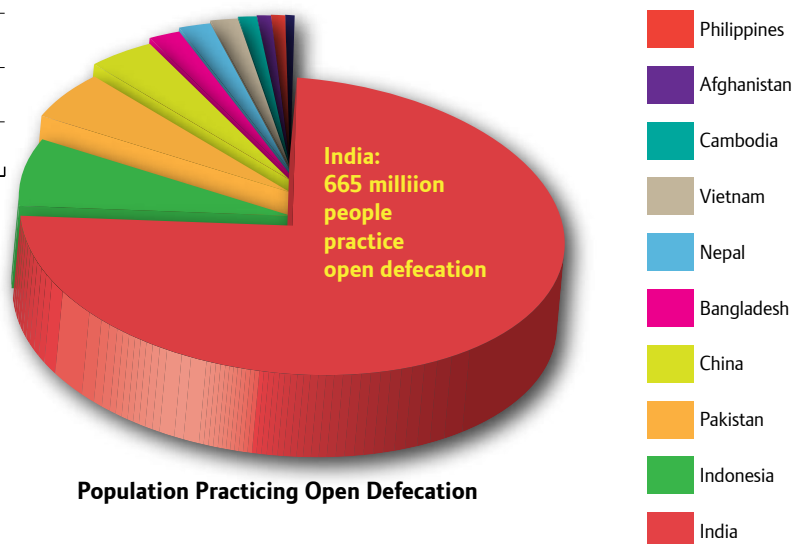
³Gupta and Deashpande (2004), *Water for India in 2050: first-order assessment of available options*, Current Science, Vol. 86, No. 9, 10 May 2004

⁴World Economic Forum Water Initiative (2009), *Managing Our Future Water Needs for Agriculture, Industry, Human Health and the Environment*

⁵India: *Water Supply and Sanitation – UNICEF Study (2002)*, 31

⁶The drinking water and sanitation situation in Asia and Pacific, *Joint Monitoring Programme for Water Supply and Sanitation, UNICEF and WHO, 2006*


1.7 billion people in Asia and the Pacific do not have access to improved sanitation - more than half (880 million) practiced open defecation



Water and Sanitation Scenario in The Marwar - Land of Death

Facts

- Rajasthan covers 34.22 million hectares, i.e., 10.5 percent of the country's geographical area, but sharing only 1.15 percent of its water resources.
- The estimated annual, per capita water availability in the State during 2001 was 840 m³ and it is expected to be 439 m³ by the year 2050, against the national average of 1,140 m³ by 2050.
- As per the National Habitation Survey 2003, about 51% of the total rural habitations in the Marwar are not covered by the government's water supply system, 16% partially covered whereas only 33% habitations are fully covered with optimum water supply.
- The Marwar region receives an annual rainfall of 200mm, has saline ground water with total dissolved salts in the range of 10,000ppm
- In Marwar, it is estimated that 42.45% of population depend on pond water, 34.68% population depend on underground rain water harvesting tanks, 15.04% of population depend on wells and 7.83 % population depend on other sources like government supply (Narain et al).
- During 1901-2003, Marwar region experienced 20 moderate droughts and 10 severe droughts (Narain et al). The year 2009 was a severe drought year.



The Marwar region lies in western Rajasthan covering 39% of the total geographical area of the State. This region is primarily characterised as arid and semi-arid with low and erratic rainfall. While the average rainfall is as low as 200 mm, the evaporation and evapo-transpiration together could reduce 2000 mm of surface water in a year resulting in a negative water balance and acute water deficit⁷. However, it is the most densely populated tract amongst the world's arid zones, due to the traditional ways of coping with the harsh environment.

Recent years have seen increased challenges for human settlements in the region, with recurrent drought years. The fragile desert eco-system is currently subjected to increasing human and livestock pressure, non-sustainable use of natural resources and neglect of traditional wisdom.

Water scarcity has resulted in chronic poverty and vulnerability for the population, especially as livelihood in the region is dependent on rain fed agriculture and livestock rearing. Scarcity forces people to compromise on quality and consume contaminated water having long term impacts on health. Drinking water scarcity is an economic strain on communities as they have to buy water, transported through tankers from large distances.

Government water supply schemes have failed to provide adequate drinking water on a sustainable basis, despite huge investments. The major pipeline schemes in the region are dependent on inter-State water sharing agreements, with huge operation and maintenance costs. Due to the scattered habitation pattern and desert topography, government water schemes are unable to reach a large population.

Absence of participatory approaches and location specific strategies, has resulted in communities neglecting traditional water harvesting and conservation systems which had been developed over centuries and helped desert communities to survive. Centralized planning has pushed this traditional knowledge to the margins of development processes, with the region now facing water shortages.



⁷Narain, P.; Khan, M. A.; Singh, G. 2005. *Potential for water conservation and harvesting against drought in Rajasthan, India. Working Paper 104 (Drought Series: Paper 7). Colombo, Sri Lanka: International Water Management Institute (IWMI).*

The sanitation and hygiene coverage in rural areas stands at a dismal 14% as per the census of 2001, resulting in poor health of the people. Open defecation in the region is not an exception but widespread. This is particularly difficult for women as they are obliged by customary modesty to get up before dawn or wait for it to be dark when they will not be seen. This also results in contamination of surface water bodies and other drinking water sources causing a range of water borne diseases including diarrhoea, cholera, typhoid and a number of other enteric diseases.

These challenges necessitate an improvement of water and sanitation facilities to reduce vulnerability thereby ensuring development of the poor in the region. According to IPCC, vulnerability is not only a function of sensitivity or exposure, but also of adaptive capacity. Increasing water and sanitation facilities would considerably improve the adaptive capacity as it improves health, livelihood and living standard.

In Marwar, the effects of water insecurity and inadequacy are felt in all aspects of life, including health, finance, personal and social well being. As the inadequacy rises, the consumption of unsafe drinking water rises, resulting in widespread water borne diseases and in turn greater expenditure on health. To obtain water for minimal daily needs, families including children endure physical hardship by carrying water over great distances. This results in haphazard education that perpetuates illiteracy and complicates efforts for resolving these issues in the longer run. Moreover, emergency purchase of water at higher prices causes loss of investment and strains the family budget.



Empowering People to Address Water and Sanitation Crisis

The three noteworthy objectives that set the project strategy for creating replicable model to reduce vulnerability of the desert communities are given below:

1. To develop replicable models that feed into the MDGs to ensure environment sustainability reaching out to marginalised communities without access to safe drinking water and improved sanitation.
2. To enable people in the project villages to adapt with climate variability and to provide drought relief to a region extremely distressed region with focus on community driven solutions.

3. To create an enabling environment where communities come together to solve their drinking water and sanitation problems with focus on revival of traditional water management systems.

The two year project 'titled Replicable Models of Participatory Development-reducing vulnerability by improving water and sanitation facility' was launched in July 2009 and the multi pronged project strategy stands on the pillars of community mobilisation and capacity building of the village level institutions leading to bottom-up participatory sustainable development.



Village Shivragni and Village Godawas Khurd

Shivragni is a small village spread over 14 hamlets with a total of 194 households in the Barmer District.

Godawas Khurd is a village in Barmer district, with the main habitation at the centre and remaining population spread over 9 hamlets with a total of 158 households.

Both villages being dispersed and located at the border of the district (they are located on the border of Jodhpur and Barmer districts) suffer from lack of development and people face acute water shortage with irregular supply of water. The only source of drinking water in the village for the communities is their water harvesting structures which are dependent on rainfall. In months of non-availability of water, people either depend on saline ground water or purchase water incurring huge financial cost.

The villages are marred by poor sanitation infrastructure and open defecation is a deep seated. It becomes a difficult option as they have to walk long distances in search of a land and safe place to defecate.




The Target

BASELINE-GODAWAS KHURD

- Women walk up to 5 kms spending 2 hours for collection.
- The average yearly income of a household is Rs. 30,000/-.
- 95 percent of the population is dependent on rain fed agriculture and animal husbandry for their main source of income.
- The main source of water in the village is Gawai Talab (Pond) which is at a distance of 1.75 kms from the village. The pond is able to provide water for 3-4 months only.
- The other source of water in the village is a Ground Level Reservoir which receives irregular water supply and an open well with saline water.
- Yearly average expenditure by a household on water is Rs. 3500/-.
- The sanitation coverage in the village was negligible at 1 percent.

BASELINE-SHIVNAGRI

- Women walk up to 4 - 5 kms a day spending 2 hours for water collection.
- The average yearly income of a household is Rs. 20,000/-.
- 100 percent of the population is dependent on rain fed agriculture and animal husbandry for their main source of income.
- The main source of water in the village is Jokha Nada (pond) which is at a distance of 2.50 kms and Gawai Talab (pond) which is at a distance of 0.75 kms from the village. These ponds together are able to harvest water for a period of 3 months and 6-7 months respectively.
- The other source of water in the village is Ground Level Reservoir which receives irregular water supply.
- Yearly average expenditure by a household on water is Rs. 3000/-.
- The sanitation coverage in the village was negligible at 1 percent.



With identification of villages, the foundation of the project was set by conducting a Participatory Rural Appraisal (PRA) of the village primarily focusing on social and resource mapping. After familiarisation with the village, a detailed structured Household Baseline Survey was conducted which assessed the water situation, available sanitation facilities and people's perspective on the issue of health and hygiene.

The PRA and the baseline survey put forward the immense water distress faced by the people and also the opportunity cost involved for the communities especially the women. The women on an average walk 5 kms daily to bring home water for the family and livestock. The village of Godawas has an open well which is the life line of many of the families but the water from this well is highly saline with a TDS of 6500 ppm^a.

The baseline exposed the poor condition of sanitation in the village with just three households out of 194 with toilets in Shivrangri and in Godawas Khurd only two out of 158 households had toilets.

The management of the domestic waste water too was ignored in both the villages and there was no proper disposal of liquid and solid waste. Along with poor sanitation in the villages there was also pollution of the surface water with water from the catchment areas bringing human and animal excreta to the pond water with the rains.

This initial study highlighted the importance of sanitation intervention in both the villages as there was low awareness about the importance of sanitation. Water borne diseases were prevalent in the villages, with communities spending a lot of money on treatment, but none understood that the diseases were transmitted by contaminated water. It also showed that securing water security was high on the priority of communities as it directly impacts the livelihood of the people and is the basic necessity of life.



^aParts per Million

Change in Approach

The project has followed a bottom up empowering approach focussing on revival of traditional wisdom. It has been proved that sustainable water security can be achieved by reviving traditional water harvesting methods with community taking ownership to maintain and manage the structures. This decentralised approach will ensure each village becomes self reliant in terms of water availability.

Also, sanitation programs traditionally have focused on creating infrastructure, usually on a subsidized basis, rather than on motivating for its usage. Evidence now overwhelmingly points to the fact that providing subsidized toilets does not necessarily lead to enhanced usage or ensure behaviour change.

Public health outcomes can be achieved only when the entire community adopts improved sanitation

behaviour, the area is free from open defecation, and excreta is safely and hygienically confined. This is possible only when the collective is made aware of the negative effects of poor sanitation, sensitized about the fecal-oral transmission route, understands the link between sanitation and health, and every member of the community has access to, and uses a, sanitary toilet ensuring safe disposal of faecal matter.

In order to negate the adverse consequences of poor sanitation and to secure the benefits envisaged from improved sanitation, it is imperative to ensure community action is motivated primarily by the need to change behaviour. This change can only be sustained if the action is the result of self-realization by the community as a result of continued training and mobilisation.



Ways and Means

The primary strategy of the project was to strengthen social capital in the project villages by establishing and capacitating community based institutions. These institutions were then mobilised and supported to undertake micro projects to address water and sanitation issues.

To bring water security, the project relied on reviving traditional technologies for harvesting and conserving rain water. Micro projects on rainwater harvesting aim on enhancing efficiency and storage capacity, resulting in water availability for longer periods during the year. For sanitation, the strategy was to induce behaviour

change in individual households with the idea that these efforts would gradually include the entire community. The attempt is to promote toilet usage by highlighting its advantages such as convenience, privacy and dignity.

Once, the communities are sensitized of the consequences of poor sanitation and the impact on health, an enabling environment is created by encouraging collective action for adoption of improved practices for personal hygiene, safe handling of water along with confinement and disposal of excreta and waste.



Overcoming Barriers

Changing deep seated behaviour such as open defecation is extremely difficult, and requires innovative strategies, systemic changes and awareness creation. The project has adopted a number of strategies to achieve this:

Institutional Transformation

To bring the required transformation and strengthen the relationship with communities, a decentralised institutional approach has been adopted whereby community institutions or Jal Sabhas (village level water user's association) comprising of the direct beneficiaries have been formed. The members then elect office bearers at least one of which is a woman. This group helps in devising plans and proposals for development of the village's water resources and sanitation and hygiene infrastructure. They also decide how the work will be executed and mobilize all the necessary economic, human and physical resources to complete the work for water security in the village.

Name of Jal Sabhas	Name of the village
Bhomiaji Jal Sabha	Godawas Khurd
Jambashwer Jal Sabha	Godawas Khurd
RamDev Jal Sabha	Shivnagri
Balaji Jal Sabha	Shivnagri



As a result of extensive community mobilization activities undertaken in the project villages, four Jal Sabhas were formed: two in Shivnagri and two in Godawas Khurd.


The Jal Sabhas play an important role in the implementation of the project especially for the implementation of water harvesting structures as well as the sanitation infrastructure.

They hold meetings to discuss and plan the work required as well as inform communities about sanitation and hygiene practices, encouraging community members to build toilets.

Toilet Construction through Peer Pressure

The sanitation activity in the village was facilitated as a group activity to harness community peer pressure for construction of sanitation infrastructure. The families who wish to construct a toilet approach the Jal Sabha as a group. Following a decentralised transparent approach, the proposal is then submitted to Jal Parishad (organisational level community institution) for approval. After the approval, the households undertake the construction of toilets.

To ensure the quality and affordability of construction, the project facilitated practical trainings to masons for the construction of the toilets (a total of 14 masons have been trained). It also capacitated the Jal Sabhas to monitor the work and to ensure social accountability. To further motivate the people, village maps have been painted on the walls depicting households with toilets.



The program implementation was planned in a campaign mode with strong emphasis on information, education and communication activities. Exposure visits to better performing households and handholding workshops were organised to help in dissemination of knowledge and sharing of experiences. The process builds upon the peer pressure among families within the project villages.

Focus on Household Behaviour and Community Action to Prioritise Sanitation and Hygiene

The project has ensured that various stakeholder's capacities are enhanced to achieve the envisaged results. A range of training programs have been facilitated for the stakeholders.

Various training tools like the flip charts, training films have been developed for the communities. Flip charts have been designed as a tool for training communities and individuals. These flip charts promote the importance of sanitation and hygiene and also rain water harvesting. This process has been helpful in building greater coherence to the project and the people involved.

To enhance the mobilization and increase awareness among people in the villages, there are participatory exercises, awareness campaigns, film shows and trainings that are conducted in the project villages. Films are found to be effective tools in mobilising communities. Film shows are organised in the villages where the films of the Jal Chitran, the Community Video Unit of the Foundation⁹ are screened to the village communities. These films address issues faced by the people in the villages of Marwar and end with a "call to action".

Also, participatory testing of water samples¹⁰ taken from village sources is organised, it includes microscopic examination to show the presence pathogens in the drinking water. This helps to change people's perception of water quality which is traditionally revolved around appearance, taste and smell. It is an effective visual tool to educate communities on the importance of proper sanitation and hygiene.

Information Education and Communication Tools

- ◆ Group meetings
- ◆ Pamphlet distribution
- ◆ Awareness rallies
- ◆ Interaction with community leaders
- ◆ Painting of village map on the wall
- ◆ Peer pressure
- ◆ Training through interactive flip charts
- ◆ Film screenings
- ◆ Drawing Competitions
- ◆ Exposure Visits

⁹ JBF has set up a Water Resource Centre (WRC) in Jodhpur for training and capacity building of community members, community based organization and other stakeholders in integrated water management. The Centre has a Community Video Unit which trains community members to make films on issues of local concern. All films end with a "call to action" mobilizing communities to take collective action for development.

¹⁰ The WRC has a Water Testing Laboratory, where communities are trained on issues of water quality. They are encouraged to test their own water sources in the laboratory and through communication material educated on safe water.

Critical Elements of the Strategy and Sustainability

With this bottom-up community led approach to water and sanitation, the critical elements that add value and facilitate community mobilisation and create demand for sanitation are:

Community Water Management

Strengthening and supporting community institutions to revive traditional water management system is of prime importance. It also focuses on developing community norms and collecting user charges for managing the water sources on a sustainable basis. Such user charges and community contributions deposited in a development fund called Jal Kosh ensure not only financial sustainability but also greater accountability of community institutions. To ensure ownership of the water infrastructure communities are encouraged to contribute at least 30 percent of the cost for construction/revival of water projects.



Creating Demand for Sanitation

One of the most frequently cited reason for failure of sanitation projects has been low level of expressed demand. To overcome this, the approach to sanitation has been to reduce the gap between the desire and need for sanitation. The thrust has been on creating awareness and mobilising communities to create sanitation as a priority, leading to individuals taking effective action. To ensure interest and ownership of toilets, households have to contribute 50 percent of the cost of construction. More importantly communities have been educated on the need for liquid waste management, and they are constructing household soakpits without any financial support.

Awareness
and
Mobilisation

Create
Sanitation as
Priority

People's
Demand for
Sanitation Created

Construction
of Sanitation
Infrastructures

Supporting collective action towards behaviour change

The approach heavily relies on the community triggering the individual action for sanitation. The peer pressure approach and painting of village maps highlighting households with toilets also adds to the collective coming together. This helps in creation of a receptive environment for the adoption of improved practices in personal hygiene, safe handling of water as well as safe confinement and disposal of excreta and waste.

Ensuring greater acceptance of sanitation infrastructure

This community led approach requires the participation of every household in the village. Implicit is the recognition of the community needs to deal with issues of affordability and design for construction of

toilets and other sanitation infrastructure. Information is provided on low cost technology options and their application on how these can be implemented creating an opportunity for all socio-economic groups to construct a toilet.

Meeting both affordability and quality is a major hurdle when the project is trying to promote safe household toilets for the poor. A low cost affordable design of toilet has been adopted, which also allows local variation and adaptation thus enhancing its acceptance (in many cases households have adapted the design and added a bathing room as a further step to improved sanitation behaviour). In order to help the masons to construct cost effective structures, without compromising the design standards, technical trainings are organized. The training includes theoretical and practical demonstrative sessions on specifications of the toilets and practical measures for reducing unwanted expenditure.



Ensuring sustained behaviour change

Peer facilitation and monitoring at the local level has been effective in ensuring that everyone comes forward to construct toilets and make their village free from open defecation. A sense of pride and recognition is created within the community when people from the other villages visit to see the impact and the benefits. Self realization, peer pressure, and recognition come together to play an important role in sustaining behaviour change.

Regular trainings and interaction with the communities has had a considerable impact in sensitising communities towards the need for water conservation and environmental protection.

In water and sanitation process, sustainability should be viewed with coming together of three dimensions i.e societal sustainability (social justice, equity), environmental sustainability (human and ecosystem health, natural resource protection and restoration) and economic sustainability (productivity, employment, growth etc.)¹¹. Sustainability could also be directly linked to the level of local participation. There is growing evidence that when intense community mobilisation allows local people to play a key role in design and execution, sustainability is enhanced and there is an incentive to make the system more resilient.



Community members as agents of change

The key challenge to ensure better sanitation is to enhance the understanding especially of women folk and empower them to voice their sanitation demands as they suffer the most. To break the ice over such personal issues, 'women change agents' have been trained from the community. Familiar women as public faces of the sanitation campaign have helped to create a friendly environment for the women to participate in meetings and training sessions. It has enabled women to discuss their concerns around sanitation and discuss with each other proper hygiene practices in household activities like cooking, cleaning and bathing.

Consequently, it has also enhanced the leadership capacity of the change agents and has contributed to empowerment of women and enhancing their role in community activities.

After attending meetings conducted by change agents, the women are able to communicate the need to have toilets in their household and how it adds to the ease of the women in daily routine as well as during the menstrual cycle or other health ailments.

¹¹ Mihelcic, J. R. et al. (2003) 'Sustainability Science and Engineering: Emergence of a New Metadiscipline' *Environmental Science & Technology*, 37(23), 5314-5324, 2003.



Impact

The project started in July 2009 and within a span of one year the communities have come forward to practice safe sanitation. The continued mobilisation activity resulted in communities achieving sanitation coverage of 45 percent in village Shivrigr and 43 percent of coverage in village Godawas Khurd, 87 households have toilets in Shivrigr while 68 in Godawas.

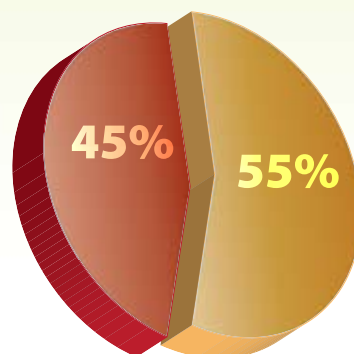
In Shivrigr, the village Jal Sabha enhanced the capacity of their village pond called the Jokha Nada. Before the intervention the pond harvested water for just 3 months but now it is able to harvest water for 7-8 months. This has not only contributed to prolonged water availability but has also translated into reduced drudgery for women and reduced expenditure on purchase of water.

Moreover, there has been a change in people's way of living and general hygiene practices. Continuous awareness programs have resulted in people keeping their drinking water pots at an elevated position, washing hands with soap and using a ladle to take out water from pots.

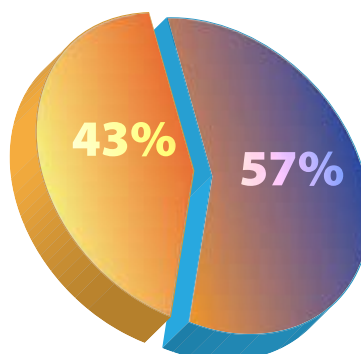
With continued awareness drive, more and more people are coming forward to adopt sanitation and hygiene practices. With an increasing momentum, the communities of both project villages are in the course of attaining full sanitation coverage by next year, transforming their villages into model villages.



Sanitation Coverage in Shivrigr



Sanitation Coverage in Godawas



Case Study

Where There Is A Will, There Is A Way

Life in the desert is a struggle but being disabled makes life even tougher. So is the case for Ghamanda Ram who lives with his wife, Suwa Devi and grandson, Duta Ram. Their house is close to the village school and is surrounded by fields of bajra (pearl millet). The high growing crops add beauty to the picturesque setting of their house.

On looking at this family, one realises the struggle and hardships that they have been succumbed to over the years. Ghamanda Ram and his grandson are gazing at the blooming crops of bajra while Suwa Devi, is looking after the newborn calf. Amidst this view, one cannot fail to notice a household toilet – the success of their latest struggle. Ghamanda Ram says that “the path of successfully completing the construction of a toilet was tough, but we were able to accomplish it”.

However, before getting a toilet in their house, the sanitation situation for them and for the rest of Godawas village, in Barmer district was no different from many other villages of Marwar. Open defecation was a common practice, having health, privacy and safety implications for all. The elderly were at maximum risk, since they had to venture out in the dark either all by themselves or they had to depend on someone for help, staking their dignity. The growing population in the village was making open defecation more and more inconvenient. People had to cover longer distances in search of a safe and private place to defecate.

Things were worse for Ghamanda Ram and Suwa Devi since they are both severely disabled which restricted them to walk for long distances in search of privacy.

Ghamanda Ram when young had his leg amputated because of cancer, and Suwa Devi was disabled due to a paralytic arm. Their only son had passed away ten years ago in a road accident and their daughter-in-law had opted for a second marriage, leaving them with a grandson. Their grandson is 10 years old and helps them around with everything. Their aging and poor physical state made them look for easier and safe options for sanitation.

The project supported by Princes Charities and Wells For India was gaining popularity in Godawas village. More and more villagers were coming forward to construct sanitation infrastructure through the WASH campaign. Ghamanda Ram also learned about the possibility of having a household toilet and found it to be a boon for himself and his wife since they had been struggling for meeting their basic needs.

Ghamanda Ram was convinced of the benefits of having a toilet in his house and thus he began to collect money for its construction. Due to his disability he sought support of labour that could help him in construction of the toilet. His strong determination and will power provided him the strength to have the toilet constructed and improve his and his wife's well being. By the end of May 2010, the family became the proud owner of a toilet in the rear of their house. Now the little family lives peacefully. Ghamanda Ram's example shows that despite physical disability he was able to construct a toilet, showing that “Where there is a will, there is a way”.





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