

Review Article

Swachh bharat abhiyan (clean India mission): SWOT analysis

Babita Jangra^{1*}, JP Majra¹, Mahavir Singh²

¹Department of Community Medicine, BPS GMC for Women, Khanpur Kalan Sonapat, Haryana, India

²Department of General Surgery, Pt. B D Sharma PGIMS Rohtak, Haryana, India

Received: 07 October 2016

Accepted: 04 November 2016

*Correspondence:

Dr. Babita Jangra,

E-mail: drbabitajangra@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Sanitation is a basic necessity that affects everyone's life. To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Abhiyan (SBA) on 2nd October, 2014. SBA aims to achieve Swachh Bharat by 2019, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi. SWOT is a basic, analytical framework that assesses what an organization can and cannot do, as well as its potential opportunities and threats and what obstacles must be overcome or minimized to achieve desired results. So the situational analysis was done by reviewing the available literature on subject. Its main strengths were funding provisions, technological innovations and flexibility to states in implementation of program. The main weaknesses were toilet construction without demand generation, caste system, the political system, voluntary nature of campaign instead of compulsory and less focus on other aspects of sanitation. There are some opportunities in the form of waste management through biogas/Domestic biogas plants and providing scientific and visual proof of disease transmission. Changes in administration, recycling solid waste, sustainability of interest and finally to change the mindsets of the people are the potential threats.

Keywords: Abhiyan, Swachh, Sanitation, SWOT

INTRODUCTION

“Civilization is the distance that man has placed between himself and his own excreta.” — Brian W. Aldiss

Sanitation is a basic necessity that affects everyone's life. Sanitation and hygiene is critical to health, survival, and development. Throughout the world, an estimated 2.5 billion people lack basic sanitation (more than 35% of the world's population). Many countries are challenged in providing adequate sanitation for their entire populations, leaving people at risk for water, sanitation, and hygiene (WASH)-related diseases.^{1,2} The pathetic state of sanitation index in India has put the country behind Pakistan, China, Bangladesh, and Nigeria. According to

Water, Sanitation, and Hygiene (WASH) Performance Index 2015 developed by the Water Institute at the University of North Carolina, India was a bottom performer and was ranked 93. Despite the assumption that countries with higher GDP will perform better in improving access to water and sanitation, GDP was not significantly correlated with performance.^{3,4} India has been putting efforts for improving sanitation for a long time (Table 1).

Swachh Bharat Abhiyan (SBA)

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Abhiyan

on 2nd October, 2014. SBA aims to achieve Swachh Bharat by 2019, as a fitting tribute to the 150th Birth Anniversary of Mahatma Gandhi.⁵

SITUATIONAL ANALYSIS

SBA is one of the most highlighted programme run by the present Government of India. SWOT is a basic, analytical framework that assesses what an organization

can and cannot do, as well as its potential opportunities and threats, determines what assists the firm in accomplishing its objectives, and what obstacles must be overcome or minimized to achieve desired results. So, the situational analysis was done by reviewing the available literature on subject. Strong points as well as weaknesses were identified regarding SBA, then some suggestions were given, which may work like an opportunity regarding improvement of sanitation in India.

Table 1: Efforts in India for improving sanitation with time.^{4,6}

Sr No.	Timeline	Efforts for sanitation
1	5000 years ago	Ingenious solutions to facilitate waste water conveyance through underground drainage systems. Sanitary engineering, was at a developed stage. (Indus Valley Civilization and Harappa). Such visions on improved sanitary practices continued across the reign of various dynasties – like the Mauryas, Guptas.
2	Pre independent period	Marginal concern, when rampant outbreaks of cholera and plague were affecting the health of the British Army personnel, then first Bombay Improvement Trust in 1898. ⁴
3	1954	First Five Year Plan of the Government of India Included ‘The National Water Supply and Sanitation Program’ introduced in the health sector.
4	1972	Accelerated Rural Water Supply Program (ARWSP), Designed to provide funds for “problem villages” (tribal peoples, Scheduled Caste and backward classes)
5	1977	ARWSP reintroduced
6	1981	Beginning of the International Drinking Water and Sanitation Decade, Creation of the International Drinking Water Supply & Sanitation Program, Government of India made its first sanitation target.
7	1986	Central Rural Sanitation Program (CRSP) launched The focus of the CRSP was on supply (providing toilets) and subsidy driven.
8	1991	National Technology Mission renamed the Rajiv Gandhi National Drinking Water Mission (RGNDWM).
9	1996-97	Knowledge, Attitude and Practices Survey (KAPs) administered by the RGNDW – Highlighted the convenience and privacy as main motivational factors, rather than subsidies, for toilet construction
10	1999	CRSP restructured, and TSC launched.
11	2003	Nirmal Gram Puraskar (NGP) launched, Incentive scheme to encourage Panchayati Raj Institutions to become open defecation free
12	2005	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
13	2007	MGNREGA was converged with the NBA.
14	2012	TSC is renamed Nirmal Bharat Abhiyan (NBA) Target set for 100% coverage of sanitation in rural areas by 2020.
15	2014	Swachh Bharat Abhiyan (SBA) replaced NBA, New target to make India 100% clean by 2019.

STRENGTHS

Funding provisions

- In the new SBM Programme, funding has been delinked from the livelihood Programme, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), since that was leading to inefficiencies and delays in implementation.
- Fund is also provided for SLWM (solid and liquid waste management), subject to a ceiling of Rs. 7/12/15/20 lakh to be applicable for Gram Panchayats having upto 150/300/500/ more than 500

households. A fund of Rs. 2 lakh is available for community toilets.

- 0.5% Swachh Cess on services has been imposed w.e.f. 15.11.2015 to supplement the budgetary source for Swachh Bharat Mission.
- Besides this, Swachh Bharat Kosh has been established in November, 2014 under Ministry of Finance to attract CSR funds for sanitation. Funding from Overseas Indians is also being tapped. *Donations to the “Swachh Bharat Kosh”, other than the sums spent for “Corporate Social Responsibility” under sub-section (5) of Section 135 of the Companies Act, 2013 are eligible for 100% deduction under section 80G of the Income-tax Act, 1961.* Other sources of fund such as 14th finance

commission grants, states own sources, CSR etc. are also available.⁵

washing with soap on diarrhea found a 45% reduction.^{7,8}

Flexibility to states in implementation of program

- There is immense socio-economic-geographic cultural-language diversity in India. The States are best placed to decide what kind of strategy, approach and technology suits them the most, in order to reach the desirable outcomes.
- Closer coordination with the States than before is being brought about by measures such as holding workshops in the States, exposing the key state/district officials to the approach of community processes for reinforcing the message, cross sharing of best practices across states by holding regional/national workshops, visits to states, reviews and video conferencing.⁵

State level workshops

The concept of workshops at the State level, involving the State officials/District Collectors/CEOs, Zilla Panchayats, Zilla Panchayat Presidents and other key stakeholders was rolled out in 2015-16. The workshops proved very effective in providing a platform from National to District level, to deliberate upon key issues pertaining to sanitation. Champion Collectors from other States/Districts, where these approaches had been successfully practiced were called as resource persons to share their experiences.⁵

Technological innovations

- With the launch of SBA, there is a spurt of research and development (R&D) activities in technology of both toilets and SLWM.
- The Ministry of drinking water and sanitation promotes such R & D activities by financing various projects. An Expert Committee has been constituted to examine the Innovative Technologies. This committee meets regularly and has enlisted various innovative technologies and a compendium consisting of such technologies has been published and uploaded in the website of the Ministry for benefits of various stakeholders. Locally relevant, safe and sustainable technology is promoted. Local innovations are encouraged.⁵

WEAKNESSES

- Behavioral change is the critical component required to improve sanitation. It is when people use a latrine, rather than when one is constructed, that the wider benefits are realized.
- Similarly, it applies for practicing other aspects of cleanliness like hand washing, drinking water and eating food. A systematic review estimated that the safe disposal of excreta alone can reduce diarrheal disease by 36% and a separate review of hand

Toilet construction without demand generation

- One of the most critical components of any public health program is to generate the demand among the community.
- Demand of toilets cannot be conceptualized in the exact same structure as other goods and services, which typically display diminishing marginal productivity: the first units generally have a significantly greater impact than the last few units.
- In contrast, in a community where the vast majority of individuals defecate publicly, an individual who constructs and uses a toilet will not experience a drastic increase in his/her health. Because public defecation impacts health via water, the individual that constructs and uses a toilet in the high-density public defecation community will still experience poor health through contaminated water, or by flies that transmit fecal matter to food and drinking water sources via his/her neighbor's public defecation practices.
- Theoretically, there must be some threshold level at which the percentage of community members using toilets has a substantial effect on health. Once this threshold is reached and bypassed, all individuals—whether or not one owns and uses a toilet—will experience health improvements, with improvements continuously increasing in the number of adopters.⁹

Latrines are socially unacceptable

In certain subpopulations of India due to religious reasons: latrines close to the home are considered ritually polluting. Individuals are reluctant to empty the pit (and its contents), and thus require unreasonably large (and expensive) pit sizes.¹⁰

Caste system

The SBA, must address the working conditions of those at the lowest class of society—the ones who have occupations as manual scavengers—as well as the historical “culture of social hierarchy” that subjugates individuals permanently to certain social classes and stigmas. Caste and gender discrimination are linked to cleaning jobs. No takers for cleaning jobs as cleaning linked to caste based occupation taken by the lowest on the caste system ladder and women of all castes in the household.

Consequently, this deep-seeded stereotype prevents a sense of ownership among those historically not responsible for cleaning the country: “It reinforces the notion that someone else will do it for you”, or that ““Dirty jobs are to be done by dirty people”.¹¹

The current strategy of “Swachh Bharat Abhiyan” might be unable to break down these historical social class hierarchies and stigmas.

The political system

- The political system, working within the confines of a particular social and cultural framework, controls which individuals voices are heard, and consequently which programs achieve more funding.
- Hueso and Bell assert that the failure of India’s Total Sanitation Campaign (TSC) might be in part due to the uneven representation of individuals in the government. Poor sanitation facilities, in comparison to other issues, predominately affect the lower class, a group that receives little sway politically. Many government officials and engineers in charge of TSC projects are consequently more likely to “neglect sanitation in favour of more stimulating and costly water projects”. Because their reelection depends on the quantifiable success of their actions, governmental officials will choose programs that are most popular among the groups that have the greatest political influence.¹²
- Moreover, the persistent neglect of certain segments of the population can create distrust between the government and its civilians, leaving the population resistant even in the presence of governmental support.

Maintenance

The focus on short-term solutions also disregards efforts formaintenance. Even in municipal schools that have toilets, lack of funding from public institutions for maintenance leaves toilets broken and unusable. If the toilet stops working they just lock the door and no one does anything, so basically things fail because of lack of municipal support.

Campaign is voluntary not compulsory

Swachh Bharat Abhiyan is voluntary one but not the compulsory, so everyone need not understand and implement recommendations. It should be compulsory to use toilet and open defecation should be made a punishable act.

Less focus on other aspects of sanitation

The campaign mainly focuses on achieving ODF (Open Defecation Free) status wherein every individual in the village uses sanitary latrines leading to abolition of open field defecation, but at the same village there is huge amount of animal excreta and other waste polluting and spreading infection in the environment despite achieving goal of open defecation free.

No focus on excreta disposal in railway department

In the campaign approach, currently there is no scope for disposal of excreta in railway department, which pollutes the environment by use of latrines by passengers during journey on the railway track. There are micro particles moving in the air polluting the environment.

OPPORTUNITIES

Waste management through biogas/gobar gas plant/Domestic biogas plants

- While the present government is planning to build millions of toilets, there doesn’t seem to be any concrete plan or allocation for laying down sewerage networks or treatment plants. One golden opportunity is waste management through domestic biogas plants.
- Biogas typically refers to a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste. Biogas is a renewable energy source and in many cases exerts a very small carbon footprint.
- In developing nations – Domestic biogas plants convert livestock manure and night soil into biogas and slurry, the fermented manure. This manure has to be collectable to mix it with water and feed it into the plant. Toilets can be connected (Figure 1).¹³

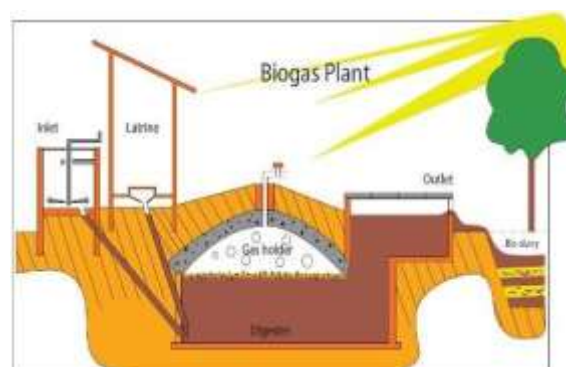


Figure 1: Simple sketch of household biogas plant).

- Depending on size and location, a typical brick made fixed dome biogas plant can be installed at the yard of a rural household with the investment between US\$300 to \$500 in Asian countries.¹⁴ A high quality biogas plant needs minimum maintenance costs and can produce gas for at least 15–20 years without major problems and re-investments.¹³
- Domestic biogas technology is a proven and established technology in many parts of the world, especially Asia. In India, Nepal, Pakistan and Bangladesh biogas produced from the anaerobic

digestion of manure in small-scale digestion facilities is called gobar gas; it is estimated that such facilities exist in over 2 million households in India, 50,000 in Bangladesh and thousands in Pakistan, particularly North Punjab, due to the thriving population of livestock.¹⁵

- The Netherlands Development Organisation, SNV (Stichting Nederlandse Vrijwilligers), supports national programmes on domestic biogas that aim to establish commercial-viable domestic biogas sectors in which local companies market, install and service biogas plants for households
- In South Africa a prebuilt Biogas system is manufactured and sold. One key feature is that installation requires less skill and is quicker to install as the digester tank is premade plastic.¹⁶
- Biogas especially domestic biogas plant appears to be the best option for management of almost all types of waste material including night soil. If domestic biogas plant is not a feasible due to space constraints, then biogas plant may be manufactured for group of inhabitants/ mohalla in a village. For the user, biogas provides clean cooking energy, reduces indoor air pollution, and reduces the time needed for traditional biomass collection, especially for women and children. The slurry is a clean organic fertilizer that potentially increases agricultural productivity.

Options for alternative types of sewerage and treatment systems

New sanitation concepts are now built in several countries as pilot projects. One example is a vacuum-biogas system for around 400 inhabitants that have been built in Lübeck, Germany. It does perform recovery of resources and energy in an urban area. This type of sanitation can serve around up to 10,000 people and can be arranged in independent modules for larger settlements. Another pilot project based on urine-sorting flush toilets (no-mix-toilets) has been built in the rural water-mill museum, Germany. Urine or yellow water is collected with low dilution and can be used as fertilizer.¹⁷

Future sanitation reforms must utilize other unique mechanisms

- Toilet usage could be linked to cell phone usage: in order to receive a certain amount of cell phone minutes or data, an individual would have to construct and use a toilet, or would receive additional data every time the household empties the latrine's pit. Or, because human excreta is organic matter, which produces greenhouse gases, once decomposed, proper and safe disposal of human excreta could be linked to carbon credits.¹⁸
- In order to encourage demand for toilet usage among the male population—the ones who typically lack demand, but have the financial and social capabilities to construct toilets—educational information could be oriented to show the link between public

defecation and contamination of water sources, and its effect on agricultural production and income.

Providing scientific and visual proof

An examination of past health reforms can help to illuminate the challenges of improving public health, assess various methods employed to ameliorate health crises for both the short- and long-term e.g. The Rockefeller Foundation's creation of the Rockefeller Sanitary Commission (RSC) for Eradication of Hookworm Disease highlights the role of awareness, care, and education in eliminating the disease which elicited community participation motivating behavioral change.¹⁹

THREATS

Sustainability of interest and priority

There is scope for expansion and increasing the coverage of the campaign. Sustaining the interest and priority accorded to the program at all levels of administration and in the community will be a challenge in the future.

Changes in administration and leadership

It is important to sustain the momentum and continue with the campaign irrespective of routine transfers of officers and staff and change in local leadership.

Recycling solid waste is a big problem

According to Central Pollution Control Board (CPCB), Urban India generates about 100000 metric tonnes (MT) of solid waste every year. It is also reported that more than 75 percent of sewage or wastewater disposal is not treated in India. These issues need to be addressed now, so that a major crisis can be prevented in the future.²⁰ SBA's goal of 111crore more toilets will generate how much waste and how it will be disposed of is a big concern.

Change the mindsets of the people

When will our countrymen learn not to spit or throw garbage on the roads? Or when will our people learn to keep themselves and their localities clean?

The value of SWOT analysis cannot be overemphasized. It is rightly said "winners recognize their limitations but focus on their strengths; losers recognize their strength but focus on their limitations." Positive thinking is strength whereas negative thinking is a weakness. Although clean India is very tough job, still nothing is impossible with efforts on this future swachh planet.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

- World Health Organization and UNICEF. Progress on Drinking Water and Sanitation: 2015. Update. United States: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation; 2012.
- U.S. Census Bureau. International Programs Center: Population Clocks
- The Water Institute, Chapel Hill. [Last accessed on 2016 Jul 15]. Available from: <http://waterinstitute.unc.edu/wash-performance-index-report/>
- Bhaumik S, Y Kumar AY. India's sanitation story. Pragati 2014 August 16, 2014.
- Government of India ministry of drinking water & sanitation annual report 2015-16. Available on www.mdws.gov.in
- Rural Water Supply And Sanitation Programme. Ministry of Rural Development Government of India, Annual report 2003-4. <http://pib.nic.in/archieve/others/2005/nedocuments2005dec/ruraldevdec2005/Chapter26.pdf>
- Esrey S, Potash J, Roberts L, Shiff C. Effects of improved water supply and sanitation on ascariasis, diarrhea, dracunculiasis, hookworm infection, schistosomiasis and trachoma. *Bull World Health Organ*. 1991;69:609-21.
- Curtis V, Cairncross S. Effect of washing hands with soap on diarrhea risk in the community: A systematic review. *Lancet Infect Dis*. 2003;3:275-81.
- Pattanayak SK, Blitstein JL, Yang JC, Dickinson KL, Patil SR, Poulos C, Wendland KM. Promoting latrine use and improving child health: Design and baseline findings from a randomized evaluation of a community mobilization campaign in Bhadrak, Orissa'. RTI Working Paper 06 05, Research Triangle Institute, NC.
- Coffey, Diane. "Culture, Religion and Open Defecation in Rural North India." *Ideas for India*, August 14, 2014. http://www.ideasforindia.in/article.aspx?article_id=329.
- Kartikay M. Old Caste Taboos Hinder Modi's Efforts to 'Clean India'. *Bloomberg Business*, December 23, 2014. <http://www.bloomberg.com/news/articles/2014-12-22/maids-deemed-too-pure-to-touch-toilets-hinder-clean-india-push>.
- Andres H, Bell B. An untold story of policy failure: the Total Sanitation Campaign in India. *Water Policy*. 2013;15(6):1001-17.
- Hynek R; Jana M, Jan B, Vladimír V. "Addressing problems at small-scale biogas plants: a case study from central Vietnam". *J Cleaner Production*. 2016;112:2784-92.
- Prakash GC. (2013-01-01). "SNV supported domestic biogas programmes in Asia and Africa". *Renewable Energy*. Selected papers from World Renewable Energy Congress. 2013;49:90-4.
- Biogas plants provide cooking and fertiliser. *Ashden Awards*, sustainable and renewable energy in the UK and developing world. Retrieved 15 May 2015.
- Renewable Energy Solutions - Living Lightly". *Renewable Energy Solutions*. Retrieved 15 May 2015.
- Otterpohl R. Options for alternative types of sewerage and treatment systems directed to improvement of the overall performance. *Water Sci Technol*. 2002;45(3):149-58.
- Alok K. *Squatting with Dignity: Lessons from India*. Los Angeles: Sage Publications. 2010.
- 100 Years The Rockefeller Foundation. "Eradicating Hookworm." Last modified October 14, 2014. <http://rockefeller100.org/exhibits/show/health/eradicating-hookworm>.
- Central Pollution Control Board (CPCB), Ministry of Environment & Forests, Government of India. Available on www.cpcb.nic.in

Cite this article as: Jangra B, Majra JP, Singh M. Swachh Bharat Abhiyan (Clean India Mission): SWOT analysis. *Int J Community Med Public Health* 2016;3:3285-90.