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## Socio-Economic aspects of Total Sanitation campaign (TSC)

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### Abstract:

**Issues:-** The diseases associated with poor sanitation are particularly correlated with poverty and infancy account for about 10% of the global burden of disease. At any given time close to half of the urban populations of Africa, Asia, and Latin America have a disease associated with poor sanitation, hygiene, and water.

**Objectives:-** This study attempts to seek and put checks for the Open Defecation issues by **Central Rural Sanitation Programme** otherwise known as **Total Sanitation Campaign** initiated by Government of India

**Methodology:** - It is a descriptive study. The study period is 1999-2012. A inductive description is given for appraisal of the TSC programme comprising literature reviews and collection of secondary data.

**Statistical Tools:** - An inductive description is given for which, secondary data is used. Some dedicated online monitoring systems which provide quantitative information also taken.

**Results:-** The actions implemented in TSC were divided into six components such as: information, demand-driven, technology, financial-aid, incentives, and monitoring. Findings of this study show that good performance in terms of programme outcomes, as measured by this benchmarking are positively correlated with processes adopted to implement the programme of TSC

**Keywords:** Health, sanitation, poverty, infancy, OD open defecation, infectious diseases, Information, Education, Communication, community –led programme, demand-driven, incentives, CRSP, TSC Swatch barath,

### 1. INTRODUCTION

**Public health** is "the science and art of preventing disease, prolonging life and promoting human health through organized efforts and informed choices of society, organizations, public and private, communities and individuals" Public health aims to improve the quality of life through prevention and treatment of disease, including mental health.

### 2. ECONOMIC SIGNIFICANCE OF SANITATION THROUGH HEALTH

The first attempts for sanitary reform and the establishment of public health institutions were made in the 1840s. Thomas South wood Smith, physician at the London Fever Hospital, highlighted in his writing papers on the importance of public health. He was one of the first physicians brought the evidence before the Poor Law Commission in the 1830s, along with Neil Arnott and James Phillips Kay. Thomas advised the government about the importance of sanitary improvement for controlling the spread of infectious diseases such as cholera and fever. The Public health plays an important role in disease prevention efforts in both the developing world and in developed countries through local health systems and non-governmental organizations. The World Health Organization (WHO) is the international agency that coordinates and acts on global public health issues. Most countries have their own government public health agencies, sometimes known as ministries of health, to respond to domestic health issues. Most governments recognize the importance of public health programs in reducing the incidence of disease therefore, adequate sanitation, together with good hygiene and safe water, are fundamental to good health and to social and economic development. That is why, in 2008, the Prime Minister of India quoted Mahatma Gandhi who said in 1923, "Sanitation is more important than independence". The health budget allocation by the

Government of India is getting smaller every year. This year also it is quite meagre, only about 1% of the Gross Domestic Product. This may put financial constraints on dealing with sanitation linked diseases in near future.

### 3. THE PROBLEMS: OPEN DEFECATION AS SANITATION ISSUES

Lack of sanitation leads to infectious disease, which was first noted scientifically in 1842 in Chadwick's seminal "Report on an inquiry into the sanitary condition of the labouring population of Great Britain" the less scientific but professionally significant indicator of the impact on health of poor sanitation was focused in 2007, when the readers of the BMJ (British Medical Journal) voted the sanitation the most important *medical* milestone since 1840

The diseases associated with poor sanitation are particularly correlated with poverty and infancy and alone account for about 10% of the global burden of disease. At any given time close to half of the urban populations of Africa, Asia, and Latin America have a disease associated with poor sanitation, hygiene, and water. Analyzing the problem of health of a population and threats is on the basis for public health issues and this could be done through the surveillance of cases and health indicators. There are so many components in sanitation initiation and these components may otherwise be called as determinants of sanitation. The Open Defecation is one of the components in sanitation besides Water borne diseases, Vector borne, compounding the problem of disease exposure and malnutrition in children.

### 4. WHAT IS OPEN DEFECATION?

Open defecation is the emptying of bowels in the open without the use of properly designed structures built for handling of human waste such as toilets. Open defecation is particularly associated with rural and poverty stricken regions of the world, especially Sub-Saharan Africa and Asia.

According to Wikipedia, "Open defecation is the human practice of defecating outside in the open. In lieu of toilets, people use fields, bushes, forests, open bodies of water or other open space. The practice is common where sanitation infrastructure is not available. About 892 million people or 12% of the global population, practice open defecation."

Open defecation statistics in this world have shown a statistical relationship between the regions that have the highest percentage of those that do not use toilets or other human waste facilities and low education or poverty. The World Bank Statistics suggest that regions with high rates of open defecation experiences infectious problem in terms of sanitation and proper waste management. In 2013, World Toilet Day was celebrated as an official UN day for the first time. The term "open defecation" was used in high-level speech, which helped to draw global attention to this issue. The speech "call to action" on sanitation spoken by the Deputy Secretary-General of the United Nations in March 2013 India has the most number of people practicing open defecation in the world, around 600 million and is followed by Indonesia, Pakistan, Nigeria and Ethiopia. Still these countries come nowhere close to the staggering number contributed by India.

Most of it occurs in villages with a prevalence of 65%. In urban settings the prevalence is close to 16%. The problem has thick deep roots with a multi-factorial origin. Unavailability of proper toilets or toilets with dimly lit, broken or clogged latrines is common. However, the biggest problem is the mindset of people in both rural and urban settings. Children grow watching parents and grandparents practice open defecation. Most farmers believe that waking up early and defecating in the field, not only adds natural fertilizer to the soil, but also rejuvenates the bowel and the mind.

People practicing open defecation by country, in percentage and absolute values - in alphabetical order (use up and down arrows to order by numbers)

Country	Population (thousands)	Numbers affected	More recent estimates (not JMP data)
Chad	14,037	68% or 10 million	
China	1,376,049	2% or 28 million	
Eritrea	5,228	76% or 4 million	

**People practicing open defecation by country, in percentage and absolute values - in alphabetical order (use up and down arrows to order by numbers)**

Country	Population (thousands)	Numbers affected	More recent estimates (not JMP data)
Ethiopia	99,391	27% or 27 million	
India	1,311,051	14% or 270 million	1.4% or 19 million in January 2019 according to government data
Indonesia	257,564	12% or 31 million	
Niger	19,899	71% or 14 million	
Nigeria	182,202	26% or 47 million	
Pakistan	188,925	12% or 23 million	
South Sudan	12,340	61% or 8 million	
Sudan	40,235	27% or 11 million	

## 5. ECONOMIC ISSUES IN OPEN DEFECATION

The reasons that have been given for people who are not affording the toilets have been either poverty or lack of government support. Poverty that makes it a challenge to build latrines whereas, the lack of the government supports is in providing such facilities. In cases where the toilets are available but people still end up preferring opened defecation, the reasons can extend to cultural issues related with sharing of toilets among family members. Thus poverty, finance and cultural plays on Open Defecation.

## 6. PSYCHOLOGICAL REASONS FOR OPEN DEFECATION

An example is in a case where, it is forbidden for a man to share the same toilet with his daughter in law. In some other cases, people end up preferring open air defecation due to the freedom it gives them as opposed to using a small dark structure or the displeasure in using toilets that are filthy or not clean.

According to the World Health Organisation (WHO), India accounts for 59 per cent of the 1.1 billion people in the world who practice open defecation leading to some serious negative effects on both their own health and the environment. Let's look at the how open defecation affects human health and the environment

## 7. EFFECTS OF OPEN DEFECATION ON HUMAN HEALTH AND ENVIRONMENT

### Water borne diseases

Diarrhoea and other problems associated with the ingesting and exposure to human waste affect children under the age of 5 years the most since they are very susceptible to diseases. This exposure is because most of open defecation happens next to water ways and rivers. In urban areas, this can include the drainage systems that are usually meant to traffic rain water away from urban areas into natural water ways.

Such areas are often preferred because open defecators have a belief that the water washes away their waste. What they seem to forget is that most of such areas are not properly empowered to treat the water to remove human waste and the microbes that move with it. Such a practice is contrary to proper sewage channels that treats waste black water and channel it into water systems free of any disease causing germs afterwards. Therefore, the result of open defecation near water ways is that it is carried into the water system minus treatment. As a consequence, the contaminated water ends up in the main water source. When people in these regions use the water as it for drinking and cooking (since the water is not boiled most of the time because of poverty and lack of education) it results in water borne diseases such as cholera, typhoid, and trachoma.

### Vector borne diseases

Apart from water borne diseases, when the human waste collects into heaps, it attracts flies and other insects. These flies then travel around the surrounding areas, carrying defecate matter and disease causing microbes, where

they then land on food and drink that people go ahead and ingest unknowingly. In such cases, the flies act as direct transmitters of diseases such as cholera.

### **Compounding the problem of disease exposure**

The saddest fact about disease transmission caused by open defecation is the cyclic nature of problems that then begin to manifest. The most common diseases caused by this unsanitary act are increased cases of diarrhoea, regular stomach upsets and poor overall health. With diarrhoea, for instance, it means that people cannot make their way to distant places due to the urgency of their calls of nature, so they pass waste close to where they have their bowel attacks.

It simply ends up creating more of the same problems that started the disease in the first place and in turn, leads to more people catching diseases and less people using the facilities. The result of this is more sick people and more opportunities for the disease to spread.

### **Malnutrition in children**

Malnutrition in children is another health problem associated with open defecation. Once a child is a victim of one of the diseases passed on due to the improper sanitation and the hygiene, they begin to lose a lot of fluids and lack of appetite for food. As a result, it gives rise to many cases of malnutrition in children. Also, the situation is worsened by intestinal worm attacks passed through the human refuse. Altogether, these problems lead to stunted growth and weakened immune system that makes the child more susceptible to other diseases such as pneumonia and tuberculosis.

### **Contamination via microbes**

The environment also suffers as a result of open defecation because it introduces toxins and bacteria into the ecosystem in amounts that it cannot handle or break down at a time. This leads to build up of filth. Also, the load of microbes can become so great that in the end, they end up in aquatic systems thereby causing harm to aquatic life. At the same time, it can contribute to eutrophication or the formation of algal blooms that form disgusting scum on the surface of the water ways which disturb aquatic life underneath the water by preventing oxygen and light diffusion into the water.

### **Visual and olfactory pollution**

Heaps of human or just the sight of it cause eyesore and nauseate anyone who is close. The stink emanating from the refuse is also highly unappealing and pollutes the surrounding air. Such places attract large swarms also such makes the area completely unattractive for the eye. For all those unfortunate to see the regions affected, it creates a sorry sight and reduces the dignity of all those living in the squalor of those regions. The smells augment the problem by disgusting those who live within the affected regions making life awful.

## **8. SOLUTIONS FOR OPEN DEFECATION**

To solve this issue, it takes the action of individuals and even the intervention of the government to address the cultural, economic and social challenges in tandem.

### **1. Constructions of Toilets**

First, there is a need to ensure that there are enough toilets. Since these regions are usually very poor, it will take the efforts of the government as well as the good will of local organisations such as CBOs and NGOs to help fix the problem. Construction of pit latrines and other toilet options such as compost toilets is necessary to help deal with the problem of lacking sewer systems. Governments should also try to establish incentives for people to build their own toilets by providing subsidies and putting up public toilets in strategic locations.

### **2 Good Civil Education**

Another platform that needs to be addressed is the negative cultural association that people have with toilets. The people should be informed and given civic education to enable them break away from their cultural beliefs on issues

such as the fact that toilets are not supposed to be shared. In other words, cultural norms and beliefs must be changed over time through education and awareness creation. With time, people can become informed and drop the beliefs or at least adjust and make concessions about the ones that are most destructive.

### **3. Incentivise public hygiene participation**

By creating government programs that encourage sanitation and personal hygiene, individuals must be involved and forced to take up the responsibility of enhancing their hygiene as well as overall health. Through such programs, people can get to learn the importance of their environments and work towards ensuring that they do not harm themselves by partaking in open defecation. It eventually reduces healthcare burdens on the government and lessens the number of those who practice open defecation as it will be seen as a terrible activity.

## **9. OBJECTIVES OF THIS STUDY**

This study attempts to seek and put checks for the Open Defecation issues. The above three components are highly essential for ratification of Open Defecation but the problem split in to too much of co-factors/initiations such as community-led approach, Focus on Information, Education and Communication, capital incentives or poor, and the demand-driven strategy at the community level. To perform these correlated factors, this research seeks those formidable programmes in the part of government both state and central out of which the **Central Rural Sanitation Programme** is one among others such as non-governmental organisations (NGOs) such as Water-Aid, TARU and Arghyam.

### **Central Rural Sanitation Programme (Total Sanitation Campaign)**

The Central Rural Sanitation Programme (CRSP) was launched in 1986 with the objectives of quality life of rural people, privacy, and the dignity of women. It was moved towards a 'demand-driven approach. It revised its Programme named as 'Total Sanitation Campaign (TSC)' in 1999 which emphasizes more on Information, Education and Communication thereby to develop Human Resource Development, and the Capacity Development of people to increase awareness and the demand generation for sanitary facilities. In response to this challenge, the Government of India launched this Total Sanitation Campaign

## **10. ACTIVITIES OF TSC**

### **1. Creation of Propaganda**

The start-up activities include initial publicity, motivational campaign, conducting of preliminary survey to assess the demand with the aim to prepare the District TSC project proposals for seeking Government of India assistance.

### **2. Creation of awareness by communication**

Information, Education and Communication (IEC) are the important components of the Programme. These intend to create the demand for sanitary facilities in the rural areas for households, schools, Anganwadi, Balwadies and women. The activities carried out under this component should be area-specific and should also involve all sections of rural population in a manner, where willingness of the people to construct latrines is generated.

### **3. Rural Sanitary Marts and Production Centres:**

The Rural Sanitary Mart (RSM) is, an outlet dealing with the materials required for the construction of not only sanitary latrines but also other sanitary facilities required for individuals, families and the environment in the rural areas. The RSM should have those items, which are required as a part of sanitation package. It is a commercial enterprise with a social objective.

The main aim of having a RSM is to provide materials and guidance needed for constructing different types of latrines and other sanitary facilities, which are technologically and financially suitable to the rural areas. Production centres are the means to improve production of cost effective affordable sanitary materials.

### **4. Construction of Individual Household Latrines:**

A duly completed household sanitary latrine shall comprise a basic low cost unit (without the super structure). In the first phase, the programme is aimed at covering all the families subsisting below the poverty line. Subsidy

disbursement shall be subject to close supervision and monitoring, and linked with the construction activity so as to ensure sincere participation and full involvement of the community.

### 5. Women and Sanitary

Village Sanitary Complex for Women is an important component of the TSC. These complexes can be set up in a place in the village acceptable to and accessible to women. The maintenance of such complexes is very essential for which Gram Panchayat should own the responsibility or make alternative arrangements at the village level.

### 6. School Sanitation:

Children are more receptive to new ideas and school is an appropriate institution for changing their behaviour, mindset and habits of open defecation to the use of lavatory through motivation and education. The experience gained by children through use of toilets in school and sanitation education imparted by teachers would reach home and influence parents to adopt good sanitary habits. School sanitation, therefore, forms an integral part of every TSC project. Toilets should be constructed in all types of government schools, i.e., primary, upper primary, secondary and higher secondary.



### Conventional Approach: Central Rural Sanitation Programme (1986-98)

In 1986, the Rural Development Department initiated India's first national programme on rural sanitation, the Central Rural Sanitation Programme (CRSP). The CRSP interpreted sanitation as construction of household toilets, and focused on the promotion of a single technology model (double pit pour-flush toilets) through hardware subsidies to generate demand. The key issue of motivating behaviour change to end open defecation and use toilets was not addressed, contributing to the programme's failure. Although more than Rs. 660 crore<sup>2</sup> was invested and over 90 lakh<sup>3</sup> latrines constructed, rural sanitation grew at just 1 percent annually throughout the 1990s and the Census of 2001 found that only 22 percent of rural households had access to toilets.

### 11. TOTAL SANITATION CAMPAIGN (1999-2012)

In light of the relatively poor performance of the CRSP, the Government of India restructured the programme, leading to the launch of the TSC in 1999. A key learning that informed TSC design was that toilet construction does not automatically translate into toilet usage, and people must be motivated to end open defecation if rural sanitation outcomes are to be achieved. A second key learning was the recognition of the 'public good' dimensions of safe sanitation and the realisation that health outcomes will not be achieved unless the entire community adopts safe sanitation. Accordingly, the TSC introduced the concept of a "demand-driven, community-led approach to total sanitation" (DDWS 1999). This was further strengthened with the introduction of the NGP in 2003, which incentivised the achievement of collective outcomes in terms of 100 percent achievement of total sanitation by a GP. Key features of the TSC include:

- A community-led approach with focus on collective achievement of total sanitation
- Focus on Information, Education and Communication (IEC) to mobilise and motivate communities towards safe sanitation;
- Minimum capital incentives only for Below Poverty Line (BPL) households, post construction and usage;
- Flexible menu of technology options
- Development of a supply chain to meet the demand stimulated at the community level; and
- Fiscal incentive in the form of a cash prize – NGP

The TSC was launched with the objective of achieving universal rural sanitation coverage by 2012. This meant the construction of about 12 crore<sup>4</sup> toilets at the beginning of the campaign (1999) The TSC uses the resources of

central and state governments and contributions from beneficiaries to promote access to sanitation facilities TSC envisaged financial support to the poorer households, defined by the BPL survey of the Government of India. In 1999, according to the TSC baseline survey, 47 percent of all households in India were classified as BPL

Under the TSC, the total commitment to date is approximately Rs. 17,866 crore (US\$ 3,888 million), of which BPL households have committed Rs. 2,016 crore (US\$ 438 million or 11.4 percent) (Figure 3.3). The allocation and expenditure is divided between the national government, state government and beneficiaries (BPL families). This is in addition to the additional expenditure by the BPL families<sup>5</sup> and expenditure by the APL families, both of which are not captured by the online monitoring system of the TSC.

## **12. RESULT**

The outputs of the TSC in terms of toilets constructed in households, schools and pre-schools, and progress in terms of the number of Rural Sanitary Marts(RSM) set up and Solid and Liquid Waste Management(SLWM) works undertaken is presented here. Under TSC, more than 6.43 crore toilets have been constructed out of it 3.48 crore in BPL toilets, and 2.95 crore in APL toilets. More than 5.5 crore household toilets still need to be constructed of which, 3.1 crore in APL and 2.4 crore in BPL. Currently, India, on an average, constructs 29,247 toilets per day. However, India needs to construct more than 76,498 household toilets per day in the next two years to achieve 100 percent coverage which means doubling its efforts. There has been 54 percent progress against the target for household sanitation – 59 percent among BPL households and 48 percent among APL households

In just over half of the districts visited, it was found that demand creation is underpinned by efforts to mobilise the community to switch from open defecation to using safe and hygienic toilets. Different districts have followed different approaches to community mobilisation. For instance, in some cases, districts have partnered with NGOs to facilitate this process at the village level; in others, the programme is implemented by Panchayat Raj Institutions (PRI/block) representatives and facilitated through motivators. Across the sample districts, various behaviour change communication techniques include folk theatre, public meetings, documentary films, television spots, radio jingles and house-to-house visits. In some districts, social mobilisation has been undertaken using Participatory Rural Appraisal (PRA) methods based on the Community Led Total Sanitation (CLTS) approach through trained facilitators. Different messages have been used – health, dignity, convenience, privacy, pride, etc.

## **13. TECHNICAL GUIDELINES OF TSC**

The TSC guidelines advocate informed technology choice and setting up of alternate supply channels such as RSMs. At the implementation level, technology promotion includes not just separate toilet components (for example, sanitary pans, pipes, traps, etc.) but also existing latrine technology options (for example, septic tank, ventilated double pit toilet, eco-sanitation). It also includes provision of masonry services for installation, and sanitary services for operation, maintenance and final disposal.

*For example: In Bardhaman district of West Bengal, RSMs are the cornerstone of the district strategy to promote rural sanitation. The operation of RSMs is undertaken by NGOs and the RSM network combines supply of sanitation products with extensive social marketing. Fundamental to the success of the RSM is the support network of motivators. They campaign door to door to create awareness about sanitation and generate demand, manifest in the beneficiary contribution for construction of a toilet as per the TSC cost norms. Once a household has agreed to have a toilet, all the hardware items are delivered to the household and a trained mason installs the toilet including digging of the pit. In terms of performance, Bardhaman district report 100 percent household latrine coverage and 137 out of 277 GPs have won the NGP to date.*

## **14. CONCLUSION**

As mentioned at the outset, to achieve the vision of a *Nirmalbharat* within the TSC timeframe, there is need for a clear understanding of the present achievements, the processes that underpin scaling up, replication and sustainability of best practices implemented by districts. Although there has been an undeniable upward trend in scaling up rural sanitation coverage over the last decade of the TSC, national performance aggregates conceal significant disparities among states and districts when it comes to the achievement of TSC goals. Therefore, to

assess the present status, the progress towards full coverage and the processes that contribute to differential achievement of the performance outcomes at state and district levels. National coverage has significantly scaled up to about 60 percent till March 2010. However, there have been significant differences in the coverage between the states. While one state, Sikkim, has declared itself ODF (Open Defecates Free), some others have a coverage of less than 30 percent. In absolute terms, approximately five crore toilets need to be constructed. At the present rate, significant acceleration was required in some states to meet the goal of ODF India by 2012. At the present rate of coverage, it is expected that ODF India will be reached only by 2020 at the national level, but will take another half a century in states that are lagging behind.

Thus, the processes by which TSC is implemented were divided into six components such as: Information Education, Communication, community led-awareness/programme, demand-driven, technical support, incentives, and financial-aid. This Study findings show that good performance in terms of programme outcomes, as measured by this benchmarking are positively correlated with processes adopted to implement the programme. This means that districts that adopt the right processes are more likely to perform better on the programme.

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