

# Status of Swachh Bharat Abhiyan in India with Possible Challenges

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## ABSTRACT

*An initiative of Swachh Bharat Abhiyan taken on 2014 by Prime Minister Narendra Modi is a path breaking step towards the development of Indian economy. It is India's largest cleanliness drive ever in the history of this country. The objectives of Swachh Bharat are to eliminate or 0% open defecation through construction of individual, cluster and community toilets and this aim has been fulfilled till 48% ODF area. Under this mission, nearly 10 crores toilets are to be constructed by 2019. The present study is an initiative to find out the present status of this mission from its launched date. It also represents some possible challenges of this mission such as improper execution of plans, less expenditure on Information, Education and Communication (IEC), fewer co-operations from society and so on. The study finds out that there is a huge increment in the number of household toilets construction at present and 11 states have become completely open defecation free under this scheme. The study also provides some policy actions and suggestions which can make this mission more fruitful.*

**Keywords:** *Abhiyan, Cleanliness, Construction, Defecation*

## 1.INTRODUCTION

“Swachhta” that is cleanliness is the conceptual state of being clean and the habit of achieving and maintaining that state. Cleanliness may involve a moral quality, as indicated by the aphorism "cleanliness is next to godliness", and may be regarded as contributing to other ideals such as health and beauty. Jacob Burckhardt observed that “cleanliness is essential to our modern notion of social perfection”. Cleanliness is consider as an important asset in Hinduism and the Bhagavad Gita describes it as one of the divine qualities which everyone must follow.[1]

According to Mahatma Gandhi “Sanitation is more important than independence”. In Gandhian way of living cleanliness and sanitation an important part. His dream was sanitation for all. He use to put emphasis on cleanliness is most important not only for physical comfort but also for healthy environment. In the light of the above, on 2nd October, 2014, Prime Minister of India launched a countrywide cleanliness campaign called Swachh Bharat Mission. It is India's largest ever cleanliness drive. The main objectives of Swachh Bharat are to reduce, eliminate or make 0% open defecation through construction of household, cluster and community toilets and this aim has been fulfilled by covering 48% ODF area. Sanitation facility is fulfill by providing toilets facility, solid and liquid waste management, village cleanliness and safe. Under this mission, nearly 10 crore toilets will be constructed by 2019. Since the launch of SBA, nearly 2 crore toilets (nearly 20% of the target)

have been built or covered by 2016 and currently this data has been reached to more than 3 crore (3,88,49,539) since October 2014. Report of UNICEF reveals that latest estimates show that 3 out of 10 people worldwide, or 2.1 billion, lack access to safe, available water at home readily, and 6 out of 10, or 4.5 billion, lack of safely managed sanitation<sup>1</sup>. In India Sanitation and drinking water is always been the central issue. As a part of First Five Year Plan of Government of India, the rural sanitation programme in India was introduced in 1954. The 1981 census revealed that rural sanitation coverage was only 1%. In 2015, 40% population has access to improved sanitation, 63% in urban and 29% in rural area. Swachhata Status Report, 2016 has released by India's Ministry of Statistics and Program Implementation (MOSPI). It states that the usage of toilets is 95.6 per cent in rural India and 98.8 per cent in urban areas. In this report, in the major states of India a survey has been conducted and the it says that an estimated 52.1 per cent of people in rural areas practice open defecation. Among the states surveyed, Jharkhand fares the worst(79 %), with Bihar, Madhya Pradesh, Uttar Pradesh and Odisha showing a high rate of open defecation. In urban India, the percentage of persons practicing open defecation was much lower at 7.5 per cent.<sup>2</sup>

38 per cent sanitation coverage has currently increased to 60.53 per cent under the Swachh Bharat Mission (As per the report in 2012).<sup>3</sup>From 41.93% to 63.98% in 2014 to 2017 household toilet availability has improved, and Sikkim, Himachal Pradesh, and Kerala declared as 100% open defecation-free states, (data from the Ministry of Drinking Water and Sanitation as of May 22, 2017).

According to the report of The Ministry of Drinking Water and Sanitation, Sanitation coverage in the country became almost double in 2017 since the launch of Prime Minister Narendra Modi's signature Swachh Bharat mission three years ago even though behavior change remains the primary focus and fundamental tool for an open defecation free nation. According to the ministry, Information, Education and Communication (IEC)activities like door-to-door IPC (interpersonal communication), Swachhataraths, rallies, marathons, felicitation of champions, quiz and painting competitions for awareness generation and mass mobilization of communities across the rural hinterland are carried out for triggering behavior change. Since the day Swachh Bharat Abhiyan was launched, from 42.02% to 57.56% total Sanitation Coverage throughout India has risen (As of November 30, 2016.In rural India, Sanitation coverage increased substantially from 39% in 2014 to 76% in January 2018 (According to the latest economic survey report).With over 3 million government employees, school and college students involvement, Swachh Bharat mission has been termed as the biggest cleanliness drive in India.<sup>4</sup> Promoting cleanliness, hygiene and eliminating open defecation and to accelerate sanitation coverage in rural areas helps to bring about an improvement in the general quality of life in the rural areas, and also helps to achieve the vision of Swachh Bharat by 2<sup>nd</sup> October 2019 are the core objectives of the Swachh Bharat Mission (SBM). In this context the present study aims to find out the impact of Swachh Bharat Abhiyan

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<sup>1</sup> UNICEF (july, 2017) Progress on Drinking Water, Sanitation and Hygiene

<sup>2</sup>Sushmitasengupta(April, 2016)Usage of toilets in India is over 95 per cent, reveals new NSSO survey

<sup>3</sup>Gopi Karelia (Sep, 6, 2017) More Than 3 Crore Toilets Built So Far Under Swachh India Campaign.

<sup>4</sup> The Times of india(18, feb, 2018), Swachh Bharat Sbhiyan

that is one of the most important and budget allocated policy over the last three years of the present Government.

The study is organized as follows: first it reviews the existing literature relevant to the theme. Second section present the impact of SBA with the reference of some cleanliness key indicator such as toilets construction and their usage, sanitation facilities, drainage facility and water resource management etc. . Third section deals with some possible challenges and necessary policy actions for the better impact of this mission in India. Finally study is concluded.

## II.REVIEW OF LITERATURE

Numerous literatures have been produced to deal the Swachh Bharat Mission starting from the goals and requirement of SBA, its impact in our nation and bottlenecks of this mission at ground level, etc. This section reviews the recent prominent literatures considering the SBAs from length and width in global context. **Chaudhary (2015)** in his study tried to find out the brief about Swachh Bharat Mission, objectives, related health concerns and its role in environmental protection, it is a national level campaign, recently launched by the Government of India is a major step towards the protection of degrading environment. The objectives of the campaign include elimination of open defecation, conversion of insanitary toilets to pour flush toilets, eradication of manual scavenging and above all to bring about a behavioral change in people regarding healthy sanitation practices and to ensure public participation in achieving these objectives. Globally, India continues to be the country with highest number of people practicing open defecation. He observed that if Swachh Bharat Mission (SBM) is implemented properly with all its stakeholders taking their respective responsibilities, there is no wonder that one day India will become an open defecation free country. [2]

**Jangra&Majra (2016)** in their paper accelerate the efforts of Swachh Bharat Mission to put focus on sanitation. It is a SWOT analysis which is basic , analytical framework that assesses what an organization can or cannot do, in the same time it also focus to find out its opportunities and threats and what obstacle must be overcome or minimize to achieve desired results. The present paper's analysis is based on literature review of the subject. The findings of the study is that main weakness are toilet construction without demand generation,opportunities the political system, caste system and less focus on other aspects of sanitation. Some alsoobserved from the study such as waste management through biogas plants and providing scientific and visual proof of disease transmission. Along these, there are some threats are also found by the study like change in administration, t of the people solid waste, sustainability of interest and finally to change in mindset of people.[3] **Badra(2015)** in his present study attempts to find out the impact of the managerial push by the government. It tries to find whether the impact is at many levels. The method which used is a structured questionnaire administered to a set of 108 management students with random technique in Maharashtra. According to author Cleanliness is the stark reality which the nation cannot ignore any further. Clean initiatives are often seen as a Western way of life. It is therefore important to peep into ancient Indian tradition to find that it was considered next to Godliness. The findings are in consonance with Maharashtra Government plans to

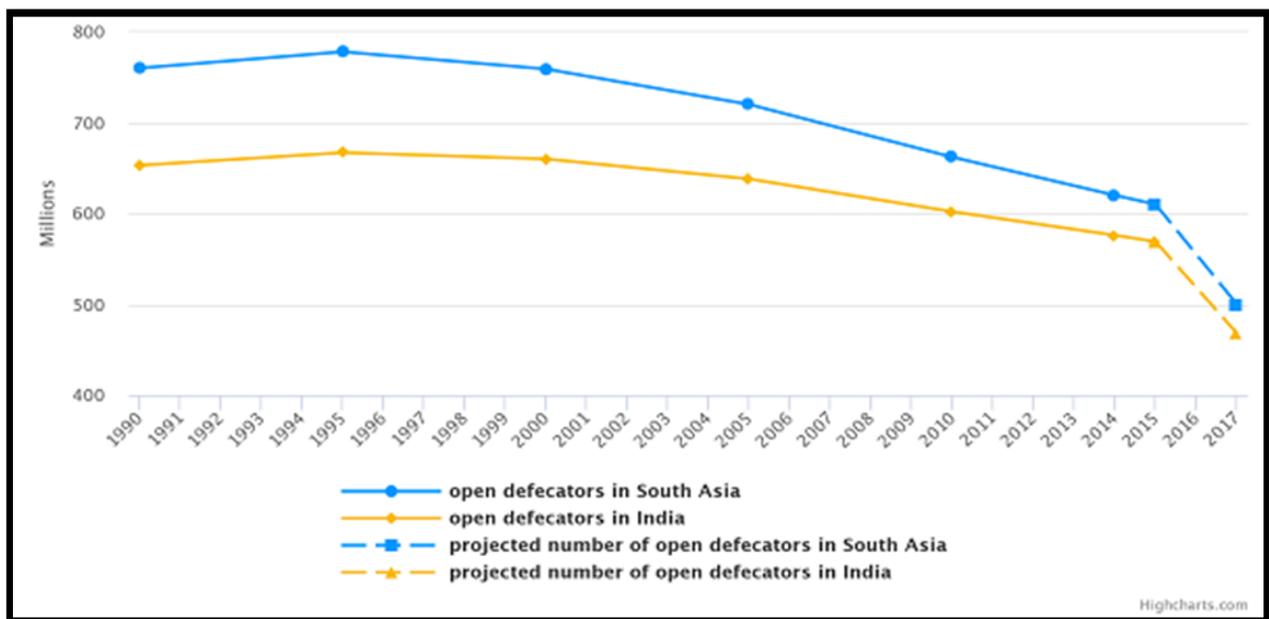
inculcate feelings of patriotism through adoption of one village by every college affiliated to 18 Universities of the state. The idea mooted to devote 100 hours per person per year on cleanliness is an extension of the same premise. Initiatives from campus to corporate are a welcome step. Management trainees today are future corporate leaders. It is important to sensitize them during their two year management course.[4].**Swain (2016)** focuses on urban slums and rural segments of India as these areas are mostly deprived of these essential amenities. Swachh Bharat Abhiyan came into existence to ensure that each and every citizen of India should get the access to these basic necessities. This study therefore highlights the key issues which may act as a hindrance to the progress of this Abhiyan in rural and urban parts of India. For every human being potable drinking water, sanitation and healthy hygiene practices are important to sustain healthy life. As a Methodology a total sample of 190 households was selected from district Ghaziabad, Uttar Pradesh and district Jabalpur, Madhya Pradesh. One adult respondent was selected from each household randomly for the study. The statistical data was analyzed and represented by graphs and tables. Finding of study shows that 76% of total respondent were not aware about the “Swachh Bharat Abhiyan” and 56% were not aware about the significance of keeping good sanitary conditions. It was also observed that among the total respondents only 54% were defecating in the toilet and 8% of respondents don't wash their hands after defecation and 11% of the respondents never wash their hands before meals. As observed, only 33% of female respondents were using sanitary pads during their menstruation [5].**Tiwari(2016)** Study was aimed at evaluating the impact of implementation of KayakalpYojna across all the District Hospitals of the state of Chhattisgarh by assessing the improvement of facilities in six thematic areas. It was an analytical census study assessing all 27 District hospitals covered under this scheme during year 2015-16, source of data being public access reports available on the official website of the Department of health & family welfare Chhattisgarh. Kayakalpyojna (Award to public health care facilities) ,an incentivized approach was launched as a component on Swachh BharatAbhiyan by the prime minister of India on 2nd October 2014, aimed at improving the Public health care facilities under six thematic areas including Hospital/ Facility Upkeep, Sanitation & hygiene, Waste Management, Infection Control, Supportive services &Hygiene promotion. The results of study is that post implementation of Kayakalp Scheme there was an average improvement of 18.26% in the total scores of the hospital out of which Ten District hospitals showed gross improvement of more than 25% over their initial score. Eight District Hospitals qualified for external assessment scoring above 70% on the parameters of kayakalp Guideline [6]. **Singh (2016)**tried to keep an overview of the Swachh Bharat Abhiyan. He observed that sanitation and this mission is a big requirement for the nation which in rural areas shall mean improving the levels of cleanliness in rural areathrough Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF), clean and sanitized. It is India's biggest ever cleanliness drive and 3 million government employees and school and college students of India participated in this event. The core objectives of the Swachh Bharat Abhiyan (SBA) are to bring about an improvement in the general quality of life in the rural areas, by promoting cleanliness, hygiene and eliminating open defecation and to accelerate sanitation coverage in rural areas to achieve the vision of Swachh Bharat by 2<sup>nd</sup>October 2019[7].

### III. PRESENT STATUS OF SWACHH BHARAT ABHIYAN IN INDIA

#### 3.1 India’s status of Open defecation among South Asia Countries

The majority of the world’s open defecators (64%) live in South Asia. The proportion of people who practice open defecation has dropped by 32 percentage points, from 68 percent in 1990 to 36 percent in 2015, a faster rate of reduction than in any other region. India accounts for about 93 percent of the open defecators in South Asia. Afghanistan, Bangladesh, Nepal and Pakistan have much smaller numbers of people without toilets. Open defecation is mostly a rural practice. In India, Nepal and Pakistan, few of the poorest rural households have a toilet. The region will not meet the 2017 regional target or the global 2030 target if the current trend continues. On current trend, South Asia will reduce the number of open defecators by 50 million over the period 2014-2017, which means that progress must more than double to achieve a reduction of 120 million over the same period.

Fig.1



Source: UNICEF, 2016 Progress Report

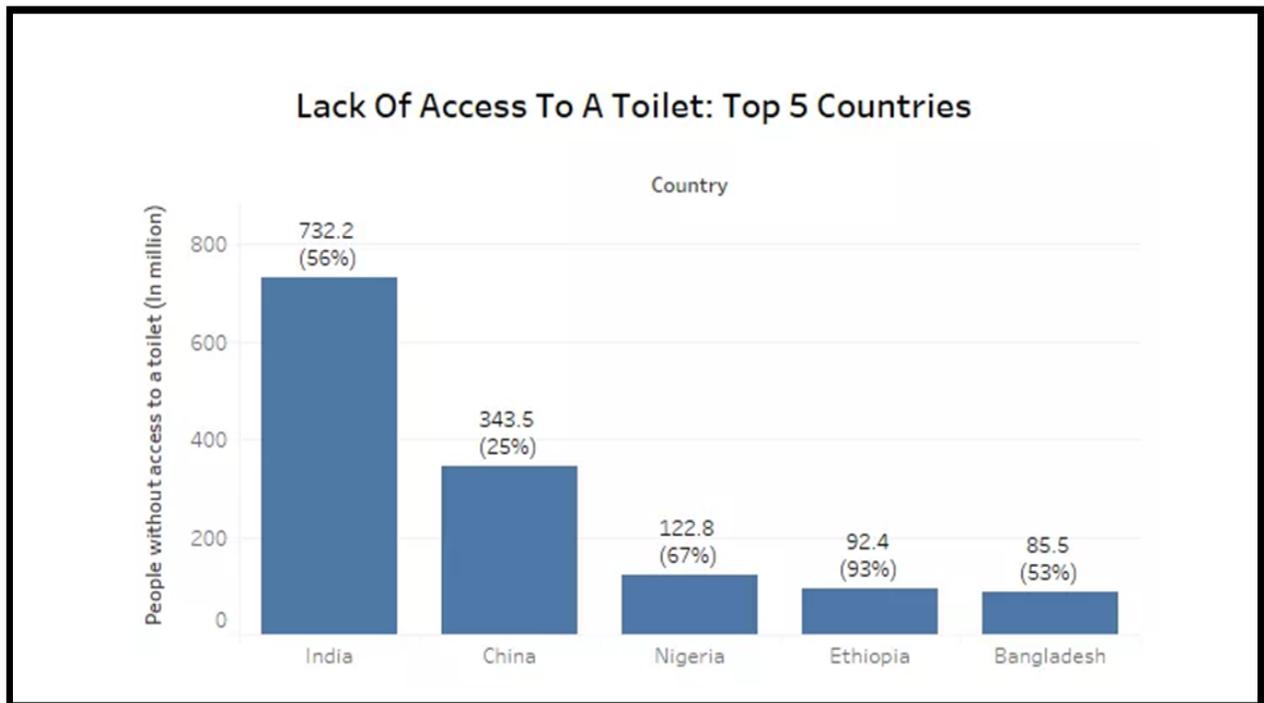
open defecation in India (1990-2017)

#### 3.2 India’s status of lack of access of toilets among top five countries

This figure depicts the present picture of India with the reference of lack of access to a toilet among top 5 countries. India’s low ranking on the sanitation index is despite the changes brought by the government’s Swachh Bharat (Clean India) Mission, launched in October 2014; from 39% to 65% it increased the country’s sanitation coverage by November 2017. 52 million household toilets were built in rural India In this period. The cleanliness campaign has reduced the proportion of people defecating in the open by 40% which means more than 100 million people now use toilets, according to the Water Aid report. India also ranks sixth among the top

ten nations working to reduce open defecation and improving access to basic sanitation. The percentage of population without access to at least basic sanitation fell from 78.3% in 2000 to 56% in 2015.<sup>5</sup>

Fig.2



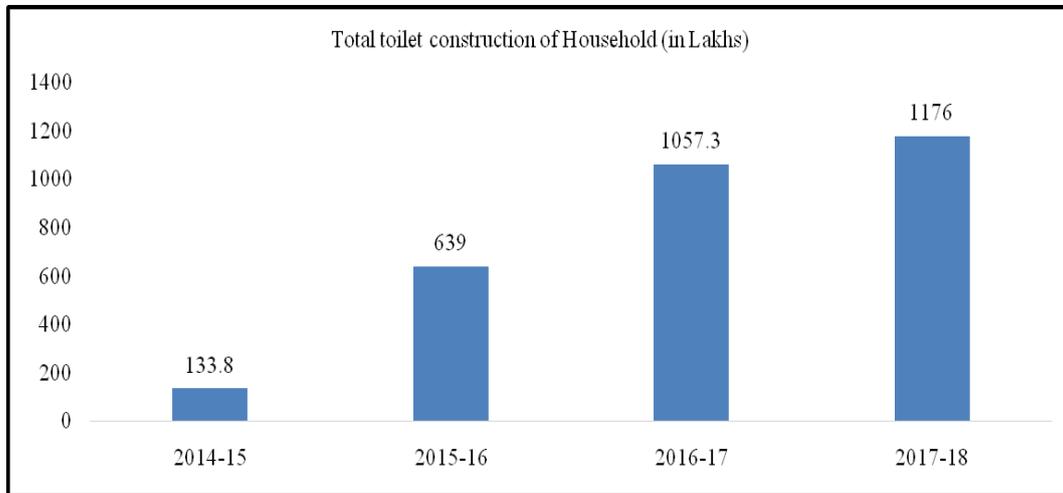
Source: Ministry of Drinking Water and Sanitation, Government of India

### 3.3 Total toilet built construction of household in India

The present figure clearly reveals that approximately 133.8 lakhs toilet are constructed which is more than the target of construction of 50 lakhs in the financial year 2014-15. It was a much appreciated work done by Government of India. In 2015-16, 639 lakhs toilet are constructed under this scheme and this is a sharp growth in the construction of toilets. 377.57% increment has been observed in comparison to the previous year. In this sequence 1057.3 lakhs toilet are constructed in the financial year 2016-17 and 65.46% increment have been observed with the previous one. In the financial year 2017-18 total 1176 lakhs toilets are constructed, this figure seems very high but change from the previous year is not so much. Only 11.26% progress is done in this year. But no doubt from 2014-15 (when this Scheme has been launched) to 2017-18, a high progress has been observed approx. 778.92% change in the mission of toilet construction which is a big achievement. The credit is goes not only to the government but also to the aim of this mission

<sup>5</sup> 2017, Out Of Order: The State of the World's Toilets 2017, Water Aid

Fig. 3

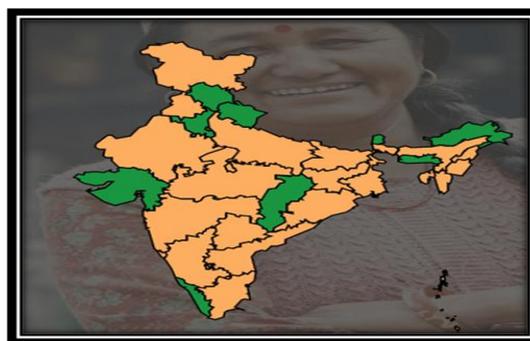


Source: Ministry of Drinking Water and Sanitation, Government of India

### 3.4 Open Defecation Free states in 2018

This figure depicts 11 open defecation states of the country which are represented in green color, among these 11 states Sikkim is the first ODF state followed by Himachal Pradesh and Kerala. Under the Swachh Bharat Mission Gramin (SBM-G), rural Uttarakhand and rural Haryana have declared themselves as the 4th and 5th Open Defecation Free (ODF) States of India. According to the latest economic survey report, Sanitation coverage in rural India increased substantially from 39% in 2014 to 76% in January 2018.<sup>6</sup> Till January, five more states and UTs also included in this group which are Chhattisgarh, Arunachal Pradesh, Gujarat, Daman & Diu and Chandigarh. By following the same pattern the latest state which is declared as Open Defecation free is Meghalaya.

Fig. 4



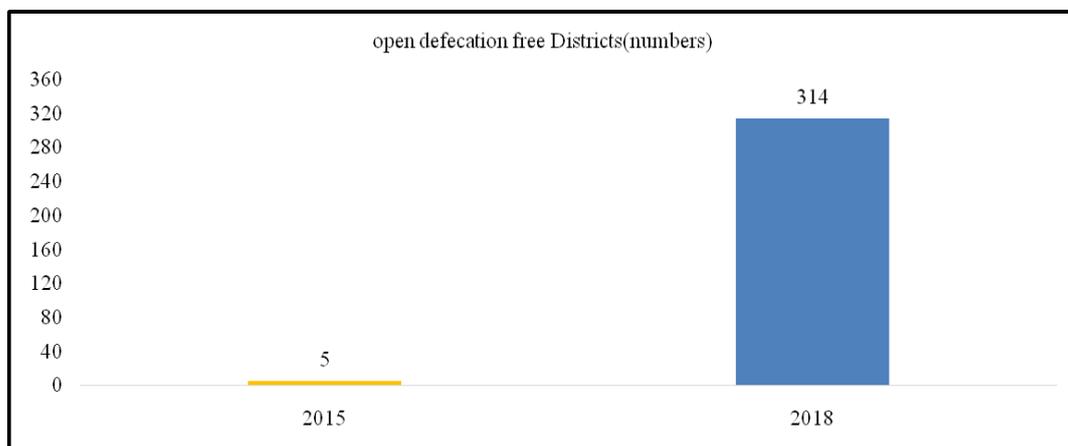
Source: Ministry of Drinking Water and Sanitation, Government of India

<sup>6</sup> Vinay santosh(2018) Kerala, Gujarat, Uttarakhand, Himachal, Chandigarh among 8 states, 2 UTs declared Open Defecation Free: Economic Survey 2018, Hindustan Times.

### 3.5 Open Defecation Free districts and Villages: a comparison

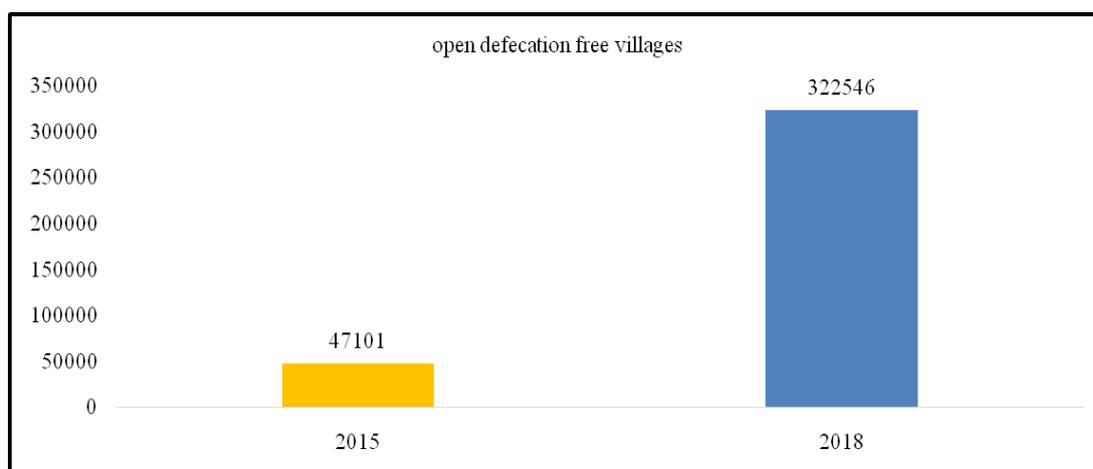
Ministry of Drinking water and sanitation took initiative to provide the toilets to each and every person of the nation. Under this mission our Government is trying to make all the districts and villages open defecation free, so to achieve this goal, many efforts has been done and now 322546 villages are open defecation free in comparison of 2015, the number of villages were only 47101. 584.79% progress has been observed in the making of villages open defecation free. With the development of all villages of a district, many districts are also become open defecation free so overall in this mission 314 district are free from open defecation that was only 5 in 2015. With covering of all district of a state , total 11 states have become ODF, that is really a esteemed progress of this mission. 6180% progress in making the districts open defecation free from the 2015; it is a great success of this mission.

Fig. 5



Source: Ministry of Drinking Water and Sanitation, Government of India

Fig. 6

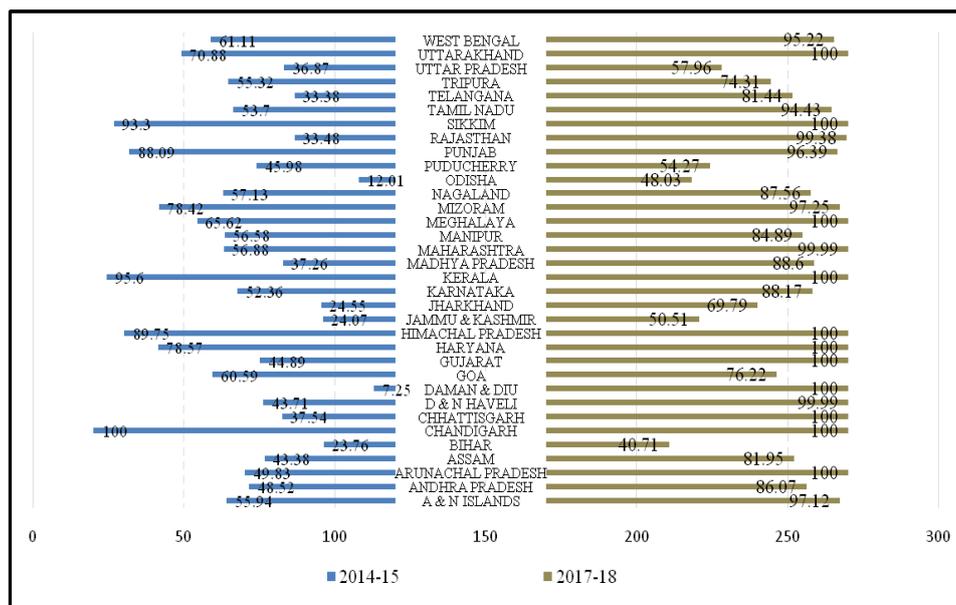


Source: Ministry of Drinking Water and Sanitation, Government of India

### 3.7 State-wise comparison of household toilet coverage (2014 & 2018)

The figure represents the state-wise comparison of household toilet construction from years 2014-15 to years 2017-18. Government had put their best efforts to make all the states and UTs free from open defecation but till the present year only 9 states and 2 UTs are open defecation free. Still there is a need to put lots of hard work because govt. has targeted to make the country free from open defecation before 2<sup>nd</sup> October 2019. On that day, India not only wants to celebrate the 150<sup>th</sup> birthday of Mahatma Gandhi but also wants to make India clean, hygienic and free from open defecation. The performance of govt. had done a commendable job regarding this matter but more efforts are required to achieve the target by 2019. Financial and Technical assistance to the states are provided by the Ministry of Drinking water and Sanitation as it helps to achieve the vision of Swachh Bharat. In 2014-15, only Chandigarh came under the list of 100% open defecation free but now, as already mentioned, 11 states and UTs register themselves in the list. These states and UTs are Uttarakhand, Sikkim, Meghalaya, Kerala, Himachal Pradesh, Haryana, Gujarat, Daman and Diu, and Chhattisgarh. Others states and UTs are progressing rapidly. Bihar is the only state which is far behind the others and more efforts are required in this state. This mission is not only to clean the country and one way to do is to construct toilets, but also with the improvement of solid and liquid waste management. Bihar is considered to be at the lowest in open defecation Free State as it covers 40.71% of its total area only. There is no doubt about the fact that Bihar is the 3<sup>rd</sup> most popular state in the country but out of 100 million people, 36 million people are poor and many people are illiterate so they are not aware of this scheme. There is only 71.33% progress in the last 3 year resulting in lots of work to be done to make this state open defecation free.

Fig. 7



Source: Ministry of Drinking Water and Sanitation, Government of India

## IV. POSSIBLE CHALLENGES FOR SWACHH BHARAT ABHIYAN IN INDIA

According to the data on Swachh Bharat Abhiyan, it is observed that there is a tremendous change in the achievement of cleanliness from the launch of SBA in terms of sanitation, waste management, toilet construction and open defecation free area. Also, there is a huge support from Popular Culture, as the film makers are now addressing issues like sanitation, personal hygiene and menstrual hygiene. This new movement is seen as a spearhead of a new genre of Indian movies that attempts to tackle issues more subtly. Different kind of movies, web series and short movies have taken initiative to change the mindset of people at ground level because when it comes to learning through entertainment, movies become the most reliable source. On weekends, many people all around the country pack theatres to watch the latest movies based on such topics. It has the power to educate us, change our perception and bring about the change in the society. Movies like Padman, Toilet- ek Prem Katha and Phullu turns out are ideal catalyst for the change. But still these efforts are not as much as effective as it can be due to various reasons like fewer co-operations from society and people, unorganized or improper execution of plans, corruption and so on. According to the Economic Survey 2018, lack of sanitation is responsible for the death of more than 1, 00,000 children in India annually and the lack of sanitation facilities costs India over 6% of GDP. It has been also observed by the survey report that the non-ODF districts have lower percentage of population with secondary education and reflect higher levels of Diarrhea and stunting. There has been a clear cut evidence of behavioral shift of the individuals in ODF areas due to larger presence and proactive work undertaken by village health and sanitation committees. There are some critical aspects of SBA which represents why this mission is not so successful. First is related to improper execution. On one hand, our government is putting efforts to remove the unhygienic conditions from the society and on the other hand there is a 12% GST on sanitary napkins, initially it was under the slab of 18%. The question arises here that if sanitary napkins help women to keep themselves clean and hygienic during their menstrual period, then it should be tax free. Due to its high cost, poor women cannot afford it and use other unhealthy methods which lead to various serious diseases. Almost 23% of adolescent girls in our country drop out of school when they reach puberty due to lack of toilets during their menstrual period. If we have to solve this we must promote sensitivity, no secrecy towards adolescent girls' sanitation and hygiene needs.<sup>7</sup> According to the National Family Health Survey 2015-16, only 58% women used hygienic form of menstrual protection in which 48percent belonged to the rural area and 78 percent belonged to urban area<sup>8</sup>. Second point is related to the incomplete facility provided by the government, from the starting SBA's main focus is on toilet construction, but with its construction some other facilities are also required such as waste disposal, water connection in washrooms, tap facilities and so on and they are partially implemented. Access to toilets with running clean water is a big issue to tackle. Generally toilets are built and no focus is given to water supply in them so, they are just waste of taxpayer money. Poor quality, inadequate numbers, poor maintenance of toilets and lack of

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<sup>7</sup> June, 2016. How poor sanitation is affecting India's women, Safe city

<sup>8</sup> 24, January, 2018. 62 pc young Indian women use cloth during period, pads remain heavily taxed, The News Minute.

water supply in public toilets has made the condition of most of our public toilets such that users prefer to defecate in the open. In other words, blame for open defecation due to poor infrastructure must rest squarely at the government's door. Third is related to Behavioral issues and mentality of people. The most important cause is the attitude of the people towards sanitation. Most of the research done on the use of washrooms has come up to the same conclusion that the people who have toilets constructed under government's scheme in their houses do not use them on the regular basis. Even when people have access to private toilets, they perceive few health benefits of using them. Many myths are there such as open defecation is healthy, having toilets inside the houses are impure, toilets are filthy. So this behavior and mentality of people is difficult to change. Studies show that in 20-49% of households which have toilets within the house; at least one member defecates in the open. Fourth is the fact that it has become a publicity stunt used by various officials. For instance, every other day, we come across such photographs in the newspaper where various government officials pose with broom and bucket on the roads. But in reality, they don't fulfill the agenda of cleanliness or we can also say that they do that to come in the good books of the people. Fifth is about less spending on IEC (Information Education and Communication). The focus of Swachh Bharat Mission-Gramin is on behaviour change of people. The guidelines require that 8% of the funds be allocated for the activities based on information, education and communication. During the 2016-17 financial years, 1% of the total expenditure had been expended on information, education and communication up to January, according to Accountability Initiative's budget brief. In contrast, 98% of the funds had been spent on construction of toilets in individual households.<sup>9</sup>

## V.CONCLUSIONS AND POLICY IMPLICATIONS

The study concludes that Swachh Bharat Abhiyan is an intelligent initiative step taken by the Government of India. As India's contribution of Open defecation among South Asia Countries is around 93% and it comes under those top five countries which have the highest percentage of people who do not have access of toilets. So it is becoming worst situation for our country. According to the Economic Survey 2018, lack of sanitation is responsible for the death of more than 1, 00,000 children in India annually. According to data this mission is doing work in its right direction, but on real ground actual situation is different. To fill the gap between the actual and promises agenda of SBA, present study consider worth key suggestions, such as sanitary napkin must be free from tax and low prices, so that it can be reach to each and every women of our country. There is also a need to pay attention toward the others side of sanitation facilities regarding water disposal, and drainage facilities. The centralized approach of subsidy-focused and construction driven approach should be changed to grassroots level planning, Community Led Sanitation approach, and encouraging people to build their own toilets for their own benefits. Toilet building and making people to actually use them are two different things. In rural areas, open defecation is a norm and is embedded in the cultural practice of people. It was envisaged that

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<sup>9</sup>SwagataYadavar(May, 2017) Three years of BJP rule: Claims of progress under Swachh Bharat Abhiyan remain unverified, India spend

the CBOs/NGOs have to be associated in the implementation of the mission in the rural area to accelerate the pace of work and aspect of behavioral change.

## REFERENCES

- [1] Aarogya Foundation India Jharkhand Chapter. *Impact Assessment of Swachh Bharat Abhiyan Project Implemented by Aarogya Foundation India in Blocks of Jharkhand State*, ADRI research Report
  - [2] Choudhary, D. M. (2015). Swachh Bharat Mission: A Step towards Environmental Protection. *National Seminar on Recent Advancements in Protection of Environment and its Management Issues*
  - [3] Jangra, B. (2016). Swachh Bharat Abhiyan (clean India mission): SWOT analysis. *International Journal of Community Medicine and Public Health*, 3 (12), 3285-3290.
  - [4] Badra, D. S. & Sharma, V. (2015). MANAGEMENT LESSONS FROM SWACHH BHARAT MISSION. *International Journal of Advance Research In Science And Engineering*, 4 (1).
  - [5] Swain, P. & Patela, S. (2016). Status of sanitation and hygiene practices in the context of "Swachh Bharat Abhiyan" in two districts of India. *International Journal of Community Medicine and Public Health*, 3 (11), 3140-3146.
  - [6] Tiwari, A. & Tiwari, A. (2016). Kayakalp: Impact of Swachh Bharat Abhiyan on cleanliness, infection control & hygiene promotion practices in District Hospitals of Chhattisgarh, India. *IOSR Journal of Environmental Science, Toxicology and Food Technology*, 10 (9), 55-58.
  - [7] De, L. S. (2016). SWACHH BHARAT ABHIYAN-AN OVERVIEW. *International Journal of Information Research and Review*, 3 (11), 3066-3073.
- Economic survey 2017-18 report  
National Family Health survey 2016-17 report  
World Health Organization and UNICEF. Progress on drinking water, sanitation and hygiene: 2017, The Joint Monitoring Programme (JMP) report.