

Bottleneck Analysis of Water and Sanitation in Raipur, Sarguja and Dantewada districts of Chhattisgarh, India- A Systematic and Community Perspective Data Analysis and interpretation

Mr. R. K. Mallick

Water And Sanitation, PDCS, Raipur

Abstract: India has the second largest number of people in the world, with the majority of them living in rural areas. Rural sanitation in India is one of humankind's greatest and gravest problems. In recent years the percentage of open defecation (OD) in the world to be found in India has risen from 55 to 60 per cent. Being a newly created State in 2000, Chhattisgarh launched Total Sanitation Campaign (TSC) in 2002-03 starting from 5 districts. Till date 817 panchayats out of 9795 Gram Panchayats have been awarded the Nirmal Gram Puraskar (NGP) after becoming free from open defecation. The number of household latrines has gone up from 892 in 2003-04 to 37179 in 2011 (as per the Ministry of Drinking Water and Sanitation, Government of India). The study objective is to find out bottleneck analysis of water and sanitation programs in Chhattisgarh.

The methodology to adopt the study was to conduct focused group discussion and key informant interviews for ascertaining the bottlenecks at community level for WASH programs. To conduct key informant interviews with Government officials in the 3 districts of Dantewada, Sarguja and Raipur for understanding the bottlenecks in WASH Program. In each district fifty Gram panchayat sarpancha were surveyed through structured questionnaire. The development of sanitary practices in village have affirmative effects not only in terms of health outcomes of children, but also important to educate them in order to generate awareness and cognitive supports for the necessity of the improved sanitation in general. The major findings from the study are subsidy, frequent change in Government policy, Monitoring mechanism, and organization structure.

Key word: WASH, ODF, SHACS and Bottleneck

1. INTRODUCTION

This is all the more appalling that more than half of the world's open defecation is attributed to India. Even countries in sub-Saharan Africa and much poorer neighbourhood in India have much better access to sanitation. Even after so much effort by various govt. and other UN agencies, INGOs and NGOs to make universal access of water and

sanitation, we have fallen way behind the MGD/sustainable Development on sanitation and not likely to meet it by the stipulated time. India has the second largest number of people in the world, with the majority of them living in rural areas. Rural sanitation in India is one of humankind's greatest and gravest problems. In recent years the percentage of open defecation (OD) in the world to be found in India has risen from 55 to 60 per cent. The under nutrition of children (one third of those in the world who are stunted) is closely linked, as is much deprivation for women. Open Defecation in India has proved resiliently intransigent, with the cards heavily stacked against its reduction. It is a matter of great regret that even after more than five decades of Indian Independence more than 60% of the rural India does not have access to sanitation and are forced to defecate in the open. The state of Chhattisgarh is no way exceptional from this.

2. STUDY OBJECTIVES

The study objective is to find out bottleneck on water and sanitation programs in State. The key objectives are as follows:

- To study Enabling Environment, supply, demand, and quality on water and sanitation in the study area
- To study Social Norms, supportive of the expectations, sector-wise management, /coordination for drinking-water and sanitation
- To study availability and accessibility of essential commodities/inputs for safe drinking-water and sanitation
- To study Social, cultural, beliefs and quality assurance mechanism supporting safe drinking-water and sanitation

3. STUDY AREA

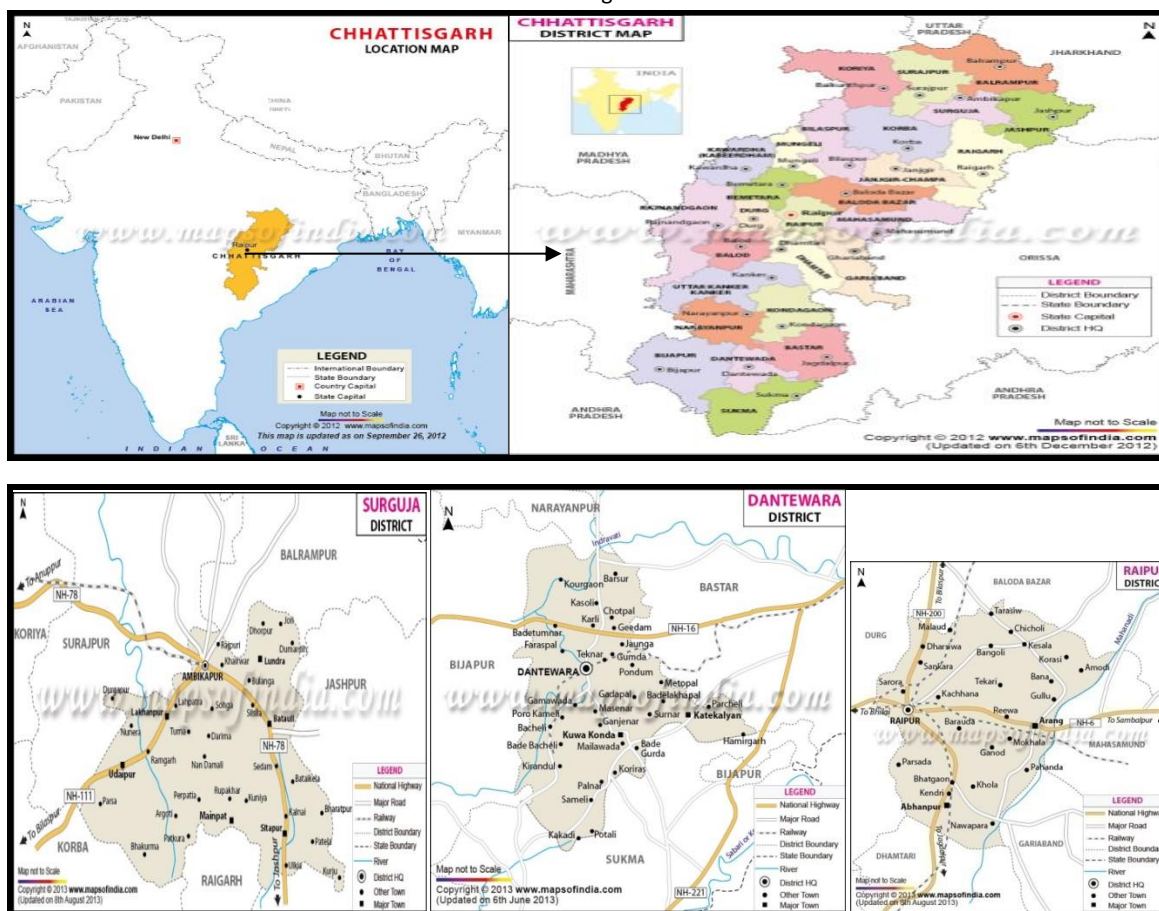
Chhattisgarh came into existence as a state on 1 November 2000 by partitioning 16 south-eastern

districts of undivided Madhya Pradesh. It shares its border with six states, namely Odisha in the east, Jharkhand in the north-east, Madhya Pradesh in the north-west, Uttar Pradesh in the north, Maharashtra in the west and Andhra Pradesh in the south. The state is endowed with a rich cultural heritage that includes its varied crafts, folk dance, food and theatre, and attractive natural diversity.

Borders of Chhattisgarh are Uttar Pradesh, Jharkhand, Odisha and Madhya Pradesh. The study

area falls in three districts; Raipur, Surguja and Dantewada. This district has over extension between south-eastern part of Vindhya-Chal-Baghelkhand region of peninsular India. It lies between $23^{\circ} 37' 25''$ To $24^{\circ} 6' 17''$ north latitude and $81^{\circ} 34' 40''$ To $84^{\circ} 4' 40''$ east longitude . 244.62 km long east to west and 167.37 broad North to South, this land have as area of about 16359 Sq. Km. The map shows the location of study area: (see fig-1)

Fig-1



4. STUDY SAMPLING AND METHODOLOGY

The study attempts to know about the major bottlenecks in rural sanitation in the districts and State. To know the bottlenecks in sanitation, three sample districts were selected based on physical and financial performance. Also it was re-verified by sanitation report card published by the Govt of India. Based on the progress report three districts were selected most progressive, medium progressive and least progressive districts in sanitation ladder. A colour code has been used to know indicate wise bottle necks in sanitation. The major indicators are enabling environment, supply chain, quality and

demand. In each district 50 sample Gram Panchayat's has been taken. Also to know first, the outputs, outcomes, and impacts of the sanitation campaign, along with measurable indicators. What did the campaign hope to achieve and what indicators could be used to determine whether the campaign met its objectives or not? To measure the program's effects, indicators of outputs (e.g., number of latrines), outcomes (e.g., use of latrines), and impacts (e.g., child diarrhea) were measured before and after the intervention. The tools used for the study are focused group discussion, and key informant interviews for ascertaining the bottlenecks in community level, district level and State level WASH programs.

5. DATA INTERPRETATION AND ANALYSIS

Although significant progress has been made in terms of individual household toilet coverage in the state which is 54%, it is alarming to note that about 85 percent people still go for open defecation (Swasth Panchayat Survey 2010, Department of health and Census 2011). The data released by census 2011 shows that only 14.5% of rural households use a house hold latrine. According to the Census 2011 the Dhamtari and Sarguja districts are the top two considering the number of households using toilets whereas districts like Korea, Kabirdham, Bijapur, Narayanpur and Dantewada have the lowest usage of toilets. The Nirmal Bharat Abhiyan has the aim of accelerating sanitation coverage in all the GPs for attaining the open defecation free status by 2022; however if one considers the present rate of coverage of population through sanitation facilities, Chhattisgarh will be

able to achieve the MDG target of open defecation free in 2046. The huge gap between coverage and usage indicates the need for emphasizing behaviour change as one of the main elements of Sanitation program in State, which has also been recognized by the Government of India through the launch of Sanitation and Hygiene Advocacy and Communication Strategy (SHACS).

In this paper district wise primary survey data analysis for both water and Sanitation: The water and sanitation analysis is based on colour coding. 0- less than 50% (Red); 0.5 - between 50 and 75 % (Yellow); 1 - more than 75% (Green). First Gram Panchayat wise water & sanitation data collection, compilation and consolidated data representation in district level.

5.1 Dandewada: The following table shows about Dandewada district level data interpretation and analysis on Sanitation and Water

Table-1 District Level Sanitation Indicator survey result for Dantewada district and its result:

Categories	Determinants of using an improved sanitation facility	Country specific sanitation indicators	Rate as per Definition	Result
Enabling environment	Legislation/Policy supportive of universal access to safe drinking-water	Does the PHED feel that National programme - NRDWP - is enough for "to provide drinking water security in rural areas i.e. providing every rural person with enough safe water for drinking, cooking and other domestic needs at all times and in all situations, including periods of drought and flood and for livestock." Does teh PHED feel that NRDWP has well-defined targets with monitoring and reporting mechanisms.	0- (Red) - Policy/legislation does not exist 0.5 (Yellow) : Policy/legislation exists but inadequate, not implemented or enforced 1 (Green) : Appropriate policy/legislation exists and implemented	
	Adequate budget/expenditure for development of safe drinking-water supply	(1) Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Proportion of budget released to the district against total allocation for NRDW programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3)% financial progress against target (overall)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(4)% financial progress against target (Piped)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % financial progress against target (Other improved)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % O&M funds utilised	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Appropriate sector-wide management/coordination mechanism in place for drinking-water at all levels	(1) Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Is District Support Unit in place ?	0- No (Red) ; 1 - Yes (Green)	
		(3) % of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % GPs wherein VWSC functional as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % of GPs who have trained manpower in planning, management as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(7) Number of manpower employed for Drinking Water programme per unit population of the district	mention numbers	Not known
		(8) Who is ultimately responsible for implementation in the district - PHED/DWSM/PRI's ?	mention name	PHED
		(9) Planning done at district level or is it aggregated from GPs Plan ?	0- No (Red) ; 1 - Yes (Green)	
supply	Availability of essential commodities/inputs for safe drinking-water supply	(1) % GPs implementing O&M of water supply schemes	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(2) % of GPs who have trained manpower in O&M as per the PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red
		(3) Are there turnaround time benchmarks for resolution of O&M issues ?	0 - No; 1- Yes	Green
		(4) What % schemes are delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	Red
		(5) What % of delay beyond 1 week in O&M resolution due to technical reasons - manpower, equipment	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red). In case of not data please mention this	Yellow
	Access to safe drinking-water supply facilities	(1) % Overall Coverage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(2) % Coverage -piped water	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(3) % Coverage - other improved	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Yellow
demand	Financial access to safe drinking-water	(1) How many schemes sanctioned against the budgeted / approved schemes in last 3 years?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(2) What % schemes delayed beyond 1 month due to delay in funds transfer	1- less than 10%; 0.5 - between 10 and 25 % ; 0 - more than 25%	Red
		(3) Proportion of PRIs who have enough resources for O&M	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red
		(4) What % of O&M expenditure received from users ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(5) What is the budget % earmarked for O&M ?	0- less than 5 % (Red) ; 0.5 - between 5 and 10 % (Yellow) ; 1 - more than 10% (Green)	Green
		(6) What % of delay beyond 1 week in O&M resolution due to financial reasons	1- less than 10%; 0.5 - between 10 and 25 % ; 0 - more than 25%	Green

	Social and cultural practices and beliefs supporting safe drinking-water	(1) % of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Continuous use of safe drinking-water	(1) What % of Full Covered (FC) villages likely to turn non-FC in next 1 year due to quality issues ?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(2) What % of FC villages likely to turn non-FC in next 1 year due to inadequate availability?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
quality	Quality assurance mechanism for safe drinking-water in place	(1) % GPs where VWSC performs M&E	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % GPs where quality testing done at least once in a year	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % of Fully Covered (FC) villages that have continued to be FC during last two years	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

Table-2 District level Water Indicator Survey Analysis and its result

Toolkit for interview with Dantewada District-Water				
Categories	Determinants of using an improved Sanitation facility	Indicators	Definations	Results
enabling environment	Legislation/Policy supportive of universal access to safe drinking-water	Does the PHED feel that National programme - NRDWP - is enough for "to provide drinking water security in rural areas i.e. providing every rural person with enough safe water for drinking, cooking and other domestic needs at all times and in all situations, including periods of drought and flood and for livestock." Does teh PHEd feel that NRDWP has well-defined targets with monitoring and reporting mechanisms.	0- (Red) - Policy/legislation does not exist 0.5 (Yellow) : Policy/legislation exists but inadequate, not implemented or enforced 1 (Green) : Appropriate policy/legislation exists and implemented	
	Adequate budget/expenditure for development of safe drinking-water supply	(1) Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	

	(2) Proportion of budget released to the district against total allocation for NRDW programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(3)% financial progress against target (overall)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(4)% financial progress against target (Piped)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(5) % financial progress against target (Other improved)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(6) % O&M funds utilised	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
Appropriate sector-wide management/coordination mechanism in place for drinking-water at all levels	(1) Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	
	(2) Is District Support Unit in place ?	0- No (Red) ; 1 - Yes (Green)	
	(3) % of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(4) BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(5) % GPs wherein VWSC functional as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(6) % of GPs who have trained manpower in planning, management as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	(7) Number of manpower employed for Drinking Water programme per unit population of the district	mention numbers	Not known
	(8) Who is ultimately responsible for implementation in the district - PHED/DWSM/PRI ?	mention name	PHED

		(9) Planning done at district level or is it aggregated from GPs Plan ?	0- No (Red) ; 1 - Yes (Green)	
supply	Availability of essential commodities/inputs for safe drinking-water supply	(1) % GPs implementing O&M of water supply schemes	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % of GPs who have trained manpower in O&M as per the PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) Are there turnaround time benchmarks for resolution of O&M issues ?	0 - No; 1- Yes	
		(4) What % schemes are delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(5) What % of delay beyond 1 week in O&M resolution due to technical reasons - manpower, equipment	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red). In case of not data please mention this	
	Access to safe drinking-water supply facilities	(1) % Overall Coverage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % Coverage - piped water	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % Coverage - other improved	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
demand	Financial access to safe drinking-water	(1) How many schemes sanctioned against the budgeted / approved schemes in last 3 years?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) What % schemes delayed beyond 1 month due to delay in funds transfer	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	
		(3) Proportion of PRIs who have enough resources for O&M	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) What % of O&M expenditure received from users ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(5) What is the budget % earmarked for O&M ?	0- less than 5 % (Red) ; 0.5 - between 5 and 10 % (Yellow) ; 1 - more than 10% (Green)	
		(6) What % of delay beyond 1 week in O&M resolution due to financial reasons	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	
	Social and cultural practices and beliefs supporting safe drinking-water	(1) % of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Continuous use of safe drinking-water	(1) What % of Full Covered (FC) villages likely to turn non-FC in next 1 year due to quality issues ?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(2) What % of FC villages likely to turn non-FC in next 1 year due to inadequate availability?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
quality	Quality assurance mechanism for safe drinking-water in place	(1) % GPs where VWSC performs M&E	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % GPs where quality testing done at least once in a year	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % of Fully Covered (FC) villages that have continued to be FC during last two years	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

5.2 Raipur:

Table-3 Raipur District, Sanitation indicators and its result

Tool for interview with PHED the information can be collected form the Executive Engineer				
Categories	Determinants of using an improved Sanitation facility	Indicators	Definations	Results
	Legislation/Policy supporting the elimination of open defecation	Is the National programme - NBA - effective to achieve 100% ODF status. Does this have well-defined targets with monitoring and reporting mechanisms.	0 (Red) = National sanitation legislation/policy does not describe ODF verification process; 0.5 (Yellow) =National sanitation legislation inadequately/partially describe ODF verification process and and monitoring system is weak ; 1 (green) =sufficiently described ODF verification process and monitoring systems are in place and functioning.	

	Adequate budget/expenditure for sanitation	Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	
		Proportion of budget released to the district against total allocation for NBA programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% financial progress against target for BPL/APL/School/ Anganwadi/RSM/PC	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% financial progress against target for IEC	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Management/Coordination of sanitation sector at all levels	Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	
		Is District Support Unit in place consisting of district coordinators with accountant etc.?	0- No (Red) ; 1 - Yes (Green)	
		% of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Are the BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% GPs wherein VWSC functional as per information with PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Number of manpower employed under NBA programme per unit population of the district		
		Is there a designated institution at district level for capacity building and training on hardware for sanitation?	0- No (Red) ; 1 - Yes (Green)	
		Who is ultimately responsible for implementation in the district - PHED/DWSM/PRIs ?		
	Is the planning done at district level or is it aggregated from GPs Plan ?	0 - No aggregation of GP plan ; 1 - Aggregation of GP plans	Not known	
Supply	Availability of essential sanitation commodities/inputs	% of GPs who have trained manpower in sanitation hardware as per PHED data	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	PHED
		Average number of sanitary outlets within a days travel - per GP in the district	0- Nil ; 0.5 - 1 to 3 ; 1- > 3	
		% target achievement for RSM/PC	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		What % physical targets delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green) ; 0.5 - between 10 and 25 % (Yellow) ; 0 - more than 25% (Red)	
	Access to information on sanitation	Average number of trained motivators per GP in the district as per data of PHED	0- Nil ; 0.5 - 1 to 3 ; 1- > 3	

		Payment to motivators is on a fixed basis or incentive based	0- No payment (Red) ; 0.5 - Fixed (Yellow) ; 1 - Incentive based Green)	
		Average number of IEC events organised per GP in a year	0- Nil ; 0.5 - 1 to 3 ; 1- > 3	
		% GP where trained BRC functionaries engaged in community mobilisation?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% of GPs who have manpower trained on IEC for sanitation	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Are there targets for number of IEC programmes - component-wise (training, awareness generation camps, audi-video shows etc) in the district ?	0- No (Red) ; 1 - Yes (Green)	
		% target achieved for IEC programmes - component-wise	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% of GPs wherein IEC comapigns on sanitation and hygiene organised in schools for improved sanitation	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Is there a designated institution at district level for IEC for sanitation?	0- No (Red) ; 1 - Yes (Green)	
Demand	Financial access to improved sanitation	Proportion of population in the district that have accessed incentives for IHHL - of those eligible	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% of BPL target as a proportion of BPL population in the district	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Proportion of disbursements delayed to BPL households beyond 2 months	1- less than 10%; 0.5 - between 10 and 25 % ; 0 - more than 25%	
		% physical targets delayed beyond 1 month due to delay in funds transfer	1- less than 10% (Green) ; 0.5 - between 10 and 25 % (Yellow) ; 0 - more than 25% (Red)	
		Average IEC cost per unit increase in coverage %	you can mention the avarage cost	Not known
		Average IPC cost per unit increase in coverage	you can mention the avarage cost	Not known
	Social and cultural practices and beliefs supporting sanitation	% of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Continuous use of sanitation facilities	% of Nirmal Gram GPs that have slipped back	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		% estimate of toilets not being used in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		% target achievement for BPL / APL IHHL / school/ anganwadi toilet construction	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

Quality	Quality Assurance Mechanisms in programmes to support Open Defecation Free communities	(1) Proportion of NGP winners against the target	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) Proportion of NGP winners that have continued to remain ODF.	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) Average number of VWSC meetings held in Year in a GP	0- Nil ; 0.5 for 3 to 6 ; 1 for 7-12	
		(4) % GPs where VWSC performs M&E for sanitation usage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

Table-4 Raipur District Water Indicators and its result

Toolkit for interview with Raipur District				
Categories	Determinants of using an improved Sanitation facility	Indicators	Definations	Results
enabling environment	Legislation/Policy supportive of universal access to safe drinking-water	Does the PHED feel that National programme - NRDWP - is enough for "to provide drinking water security in rural areas i.e. providing every rural person with enough safe water for drinking, cooking and other domestic needs at all times and in all situations, including periods of drought and flood and for livestock." Does teh PHED feel that NRDWP has well-defined targets with monitoring and reporting mechanisms.	0- (Red) - Policy/legislation does not exist 0.5 (Yellow) : Policy/legislation exists but inadequate, not implemented or enforced 1 (Green) : Appropriate policy/legislation exists and implemented	
	Adequate budget/expenditure for development of safe drinking-water supply	(1) Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Proportion of budget released to the district against total allocation for NRDW programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3)% financial progress against target (overall)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4)% financial progress against target (Piped)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % financial progress against target (Other improved)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % O&M funds utilised	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Appropriate sector-wide management/coordination mechanism in place for drinking-water at all levels	(1) Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	

		(2) Is District Support Unit in place ?	0- No (Red) ; 1 - Yes (Green)	
		(3) % of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % GPs wherein VWSC functional as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % of GPs who have trained manpower in planning, management as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(7) Number of manpower employed for Drinking Water programme per unit population of the district	mention numbers	Not known
		(8) Who is ultimately responsible for implementation in the district - PHED/DWSM/PRI's ?	mention name	PHED
		(9) Planning done at district level or is it aggregated from GPs Plan ?	0- No (Red) ; 1 - Yes (Green)	
supply	Availability of essential commodities/inputs for safe drinking-water supply	(1) % GPs implementing O&M of water supply schemes	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % of GPs who have trained manpower in O&M as per the PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) Are there turnaround time benchmarks for resolution of O&M issues ?	0 - No; 1- Yes	
		(4) What % schemes are delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(5) What % of delay beyond 1 week in O&M resolution due to technical reasons - manpower, equipment	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red). In case of not data please mention this	
	Access to safe drinking-water supply facilities	(1) % Overall Coverage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % Coverage - piped water	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % Coverage - other improved	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
demand	Financial access to safe drinking-water	(1) How many schemes sanctioned against the budgeted / approved schemes in last 3 years?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(2) What % schemes delayed beyond 1 month due to delay in funds transfer	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	Red
		(3) Proportion of PRIs who have enough resources for O&M	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) What % of O&M expenditure received from users ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(5) What is the budget % earmarked for O&M ?	0- less than 5 % (Red) ; 0.5 - between 5 and 10 % (Yellow) ; 1 - more than 10% (Green)	
		(6) What % of delay beyond 1 week in O&M resolution due to financial reasons	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	Green
	Social and cultural practices and beliefs supporting safe drinking-water	(1) % of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Continuous use of safe drinking-water	(1) What % of Full Covered (FC) villages likely to turn non-FC in next 1 year due to quality issues ?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	Yellow
		(2) What % of FC villages likely to turn non-FC in next 1 year due to inadequate availability?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
quality	Quality assurance mechanism for safe drinking-water in place	(1) % GPs where VWSC performs M&E	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red
		(2) % GPs where quality testing done at least once in a year	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % of Fully Covered (FC) villages that have continued to be FC during last two years	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

5.3 Surguja:

Table-5 Surguja District Sanitation Indicators and its result

Surguja District Sanitation Indicators				
Categories	Determinants of using an improved Sanitation facility	Indicators	Definitions	Results
enabling environment	Legislation/Policy supportive of universal access to safe drinking-water	Does the PHED feel that National programme - NRDWP - is enough for "to provide drinking water security in rural areas i.e. providing every rural person with enough safe water for drinking, cooking and other domestic needs at all times and in all situations, including periods of drought and flood and for livestock." Does teh PHED feel that NRDWP has well-defined targets with monitoring and reporting mechanisms.	0- (Red) - Policy/legislation does not exist 0.5 (Yellow) : Policy/legislation exists but inadequate, not implemented or enforced 1 (Green) : Appropriate policy/legislation exists and implemented	Green

	Adequate budget/expenditure for development of safe drinking-water supply	(1) Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Proportion of budget released to the district against total allocation for NRDW programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3)% financial progress against target (overall)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4)% financial progress against target (Piped)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % financial progress against target (Other improved)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % O&M funds utilised	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Appropriate sector-wide management/coordination mechanism in place for drinking-water at all levels	(1) Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Is District Support Unit in place ?	0- No (Red) ; 1 - Yes (Green)	
		(3) % of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % GPs wherein VWSC functional as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % of GPs who have trained manpower in planning, management as per PHED	0- less than 50% (Red) 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(7) Number of manpower employed for Drinking Water programme per unit population of the district	mention numbers	Not known
		(8) Who is ultimately responsible for implementation in the district - PHED/DWSM/PRI's ?	mention name	PHED
		(9) Planning done at district level or is it aggregated from GPs Plan ?	0- No (Red) ; 1 - Yes (Green)	
supply	Availability of essential commodities/inputs for safe drinking-water supply	(1) % GPs implementing O&M of water supply schemes	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % of GPs who have trained manpower in O&M as per the PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(3) Are there turnaround time benchmarks for resolution of O&M issues ?	0 - No; 1- Yes	
		(4) What % schemes are delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(5) What % of delay beyond 1 week in O&M resolution due to technical reasons - manpower, equipment	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red). In case of not data please mention this	
	Access to safe drinking-water supply facilities	(1) % Overall Coverage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % Coverage - piped water	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % Coverage - other improved	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
demand	Financial access to safe drinking-water	(1) How many schemes sanctioned against the budgeted / approved schemes in last 3 years?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) What % schemes delayed beyond 1 month due to delay in funds transfer	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	
		(3) Proportion of PRIs who have enough resources for O&M	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) What % of O&M expenditure received from users ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) What is the budget % earmarked for O&M ?	0- less than 5 % (Red) ; 0.5 - between 5 and 10 % (Yellow) ; 1 - more than 10% (Green)	
		(6) What % of delay beyond 1 week in O&M resolution due to financial reasons	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	
	Social and cultural practices and beliefs supporting safe drinking-water	(1) % of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		Continuous use of safe drinking-water	(1) What % of Full Covered (FC) villages likely to turn non-FC in next 1 year due to quality issues ?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)
(2) What % of FC villages likely to turn non-FC in next 1 year due to inadequate availability?			1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
quality	Quality assurance mechanism for safe drinking-water in place	(1) % GPs where VWSC performs M&E	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % GPs where quality testing done at least once in a year	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(3) % of Fully Covered (FC) villages that have continued to be FC during last two years	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
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Table- 6 Surguja District Water indicators and its analysis

District SARGUJA				
Categories	Determinants of using an improved Sanitation facility	Indicators	Definitions	Results
enabling environment	Legislation/Policy supportive of universal access to safe drinking-water	Does the PHED feel that National programme - NRDWP - is enough for "to provide drinking water security in rural areas i.e. providing every rural person with enough safe water for drinking, cooking and other domestic needs at all times and in all situations, including periods of drought and flood and for livestock." Does teh PHED feel that NRDWP has well-defined targets with monitoring and reporting mechanisms.	0- (Red) - Policy/legislation does not exist 0.5 (Yellow) : Policy/legislation exists but inadequate, not implemented or enforced 1 (Green) : Appropriate policy/legislation exists and implemented	
	Adequate budget/expenditure for development of safe drinking-water supply	(1) Has the estimate of year-wise finances required made for 100% coverage ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Proportion of budget released to the district against total allocation for NRDW programme	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3)% financial progress against target (overall)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4)% financial progress against target (Piped)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(5) % financial progress against target (Other improved)	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % O&M funds utilised	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
	Appropriate sector-wide management/coordination mechanism in place for drinking-water at all levels	(1) Is DWSM in place ?	0- No (Red) ; 1 - Yes (Green)	
		(2) Is District Support Unit in place ?	0- No (Red) ; 1 - Yes (Green)	
		(3) % of blocks where BWSM in place ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(4) BRCs functional in the district ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(5) % GPs wherein VWSC functional as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(6) % of GPs who have trained manpower in planning, management as per PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(7) Number of manpower employed for Drinking Water programme per unit population of the district	mention numbers	Not known
		(8) Who is ultimately responsible for implementation in the district - PHED/DWSM/PRI's ?	mention name	PHED
		(9) Planning done at district level or is it aggregated from GPs Plan ?	0- No (Red) ; 1 - Yes (Green)	
supply	Availability of essential commodities/inputs for safe drinking-water supply	(1) % GPs implementing O&M of water supply schemes	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % of GPs who have trained manpower in O&M as per the PHED	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) Are there turnaround time benchmarks for resolution of O&M issues ?	0 - No; 1- Yes	
		(4) What % schemes are delayed beyond 1 month due to delay in availability of material, manpower etc	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	
		(5) What % of delay beyond 1 week in O&M resolution due to technical reasons - manpower, equipment	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red). In case of not data please mention this	
	Access to safe drinking-water supply facilities	(1) % Overall Coverage	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) % Coverage - piped water	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(3) % Coverage - other improved	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
demand	Financial access to safe drinking-water	(1) How many schemes sanctioned against the budgeted / approved schemes in last 3 years?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	
		(2) What % schemes delayed beyond 1 month due to delay in funds transfer	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	
		(3) Proportion of PRI's who have enough resources for O&M	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	

		(4) What % of O&M expenditure received from users ?	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
		(5) What is the budget % earmarked for O&M ?	0- less than 5 % (Red) ; 0.5 - between 5 and 10 % (Yellow) ; 1 - more than 10% (Green)	Yellow
		(6) What % of delay beyond 1 week in O&M resolution due to financial reasons	1- less than 10%; 0.5 - between 10 and 25 %; 0 - more than 25%	Green
	Social and cultural practices and beliefs supporting safe drinking-water	(1) % of backward classes - SC/ST - covered as % coverage of General Population	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Green
	Continuous use of safe drinking-water	(1) What % of Full Covered (FC) villages likely to turn non-FC in next 1year due to quality issues ?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	Yellow
		(2) What % of FC villages likely to turn non-FC in next 1 year due to inadequate availability?	1- less than 10% (Green); 0.5 - between 10 and 25 % (Yellow); 0 - more than 25% (Red)	Yellow
quality	Quality assurance mechanism for safe drinking-water in place	(1) % GPs where VWSC performs M&E	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red
		(2) % GPs where quality testing done at least once in a year	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red
		(3) % of Fully Covered (FC) villages that have continued to be FC during last two years	0- less than 50% (Red) ; 0.5 - between 50 and 75 % (Yellow) ; 1 - more than 75% (Green)	Red

6. CONCLUSION AND OUTCOME

The State PHED faced with certain limitations during implementation of the NBA. A few of these challenges as identified during FGD discussion/Primary data analysis with the Sarapancha, Sanitary worker, PHED staff are mentioned as below:

- The selection of villages for developing as open defecation free for obtaining the award of Nirmal Gram Puraskar(NGP) is done by the District water and Sanitation Committee and then the work started, hence it is not a community initiative. The sequence should be the other way around in terms of mobilization of selected communities at the beginning and then awarding them the NGP.
- The target of completion of toilets is treated as the most critical task by the PHED for obtaining the NGP. There are reports that during the visit of the Committee from Central Govt. for verification of the Panchayats for qualification

as NGP qualified the HH toilets even get constructed in the night without any awareness generation on usage of toilets.

- Unlike other States of country the Village water and Sanitation Committees do not have a legal entity in State. In 2011 the State Water and Sanitation Mission decided to absorb the few existing VWSC's in the Standing Committees of GPs.
- The toilets constructed in rural areas are often not functional or not used since the entire approach that is followed by the PHED towards ODF is based on supplies and behavior change does not get prioritized.
- The IEC material is mostly in form of wall writings and/or brochure distribution which is again a bottleneck since only half of the rural population is literate in the State.
- There exists a lack of capacity within the PHED for implementation of a demand driven sanitation program based on Behaviour change, since the staff consists of Engineering

professionals who have not been trained for mobilization of communities.

- The PHED does not have a system of reporting and monitoring the IEC programs for Sanitation and they also do not prioritise this in their Program Implementation Plan
- There has been a trend for revision of subsidy amounts given for construction of household toilets that breeds a mentality in communities of not maintaining and repairing their IHHLs. The communities remain under the impression that they will be provided further financial assistance each year.
- Demand generation is often driven by the expectation of external support (subsidies) and not necessarily based on a strong understanding of the health benefits of ending Open Defecation.
- The status of villages declared NGP is often not sustainable and, communities, though awarded with NGP are often slipping back to practicing Open Defecation³.
- Toilet design is not always suitable to the community because of a lack of involvement from their side.
- The people residing in such rural areas of State that do not get selected for Nirmal Gram Puraskar do not have accessibility to hard ware for toilet construction, hence if people might be interested in construction of toilets themselves then do have availability of material for this purpose.
- During the sanitation programs the focus is more on providing individual household toilet rather than on the overall community benefit.
- There has been a recent directive from the Secretary PHED about the fact that only those Gram Panchayats will be considered for the Nirmal Gram Puraskar which have a piped water supply, this has proved to be a limitation for speeding up the process of elimination of open defecation as only 27% of the GPs in State have Piped water supply.
- The State gets rain fall of about 1300 mm per during monsoon season (June to September) which is high as compared to Country average of 912.8mm (source: Indian Meteorological Department); despite this Chhattisgarh also has periods of seasonal water scarcity as about 90% of the annual rainfall predicates during the monsoon season. In many districts the periods of no rainfall mean that hand pumps, dug wells

and water bodies go dry. The total number of habitations in State is 72,231 out of which 8815 or 12.2% habitations have Water Quality problems. Majority of WQ problems pertain to presence of Iron which is present in 95% of habitations.

- The main challenge in State with regard to NRDWP remains the quality of water supplied and the limitations in State wide water quality testing facilities. At present only 19 districts out of 27 in State have water quality testing labs. It is surprising to note that after March 2012 only 11% of water sources have been tested for water quality (source-data on website of the Ministry of Drinking Water and Sanitation). Another surprising fact is that water quality of only 1% habitations (1430 out of 72231) has been tested in laboratory after March 2012.
- The status of existing WQ testing infrastructure in State is not adequate considering the fact that there is no laboratory for testing bacteriological quality of water, despite the fact Chhattisgarh is recognized as a State with load diarrhea and each year during monsoons outbreaks are frequent. The IDSP data for 2011 confirmed 13 cases of cholera in State linked to water contamination and the data for 2012 shows that 21 deaths occurred due to ADD outbreaks
- Although the rural areas in State have good coverage of water supply, but the operation and maintenance of water sources remains a huge challenge. A survey report of 2010 from the State Ministry of Health and Family Welfare shows that only 73% of hand-pumps have sanitary conditions around them.
- Another gap that remains in the implementation of NRDWP in State is the lack of decentralization for management of community level water supply infrastructure. The State has never legalized the Village Water Sanitation Committees (VWSCs) like other Indian States and in 2012 the State Water and Sanitation Mission derecognized the VWSCs and instructed the Standing Committee of GPs for taking over the role and responsibilities of the
- The main reason for the above problems is the lack of adequate sensitization of the PHED officials regarding the need to prioritize water quality and resource sustainability. There is a need for sustained and evidence based advocacy. The CCDU of PHED had organized many exposure visits to other States for the staff

from PHED to WASMO, Gujarat, Maharashtra and West Bengal but some-how that has not translated into adequate action.

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