

Rural Water Hygiene Intervention in Katol

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Abstract: - This paper describes the methodology used for and finding of and tilting of assessment of sustainability of rural water hygiene intervention under Tal. katol. Nagpur District. Water treatment project implemented by the government of Katol Nagpur District with support of the government of Maharashtra. The methodology involve development of the assessment tools household, survey , focus group discussion interviews with key informants and audit of water hygiene infrastructure.The sustainability of the project was assess against may be indicators group under five categories such as institutional, social, financial, technical and sanitation and hygiene. The overall sustainability score for the project of (Katol Tal. Nagpur District Nagpur) average 89% in 2019 that shows a significant increase when compare with previous year project score (70% in 2015, 78% in 2017).

Key words: methodology, Assessment of sustainability, hygiene intervention.

1.INTRODUCTION:

The Government of Katol District Nagpur with support of Government of Maharashtra implemented by Katol Water Hygiene Project during 2018 to 2019. The project sought to contribute to improve child survival through increase assest to sustainable safe water and improve hygiene practices in Katol Tal. District Nagpur.The key achievement of this project was till January 2019 includes provision of access to safe water supply to 43,270. Beneficiaries through construction of 15 pipe water supply system that in (involved more than 250 Km of pipeline) and drilling of 19 boreholes provision of pipe water supply 12 schools and colleges , 5 health centre also provision of rain water harvesting facilities over this places .here by promotion of safe hygiene practices and household sanitation 43.270 people and capacity building for sustainable population and maintenance of the supported water system .The Katol water supply project which had a total budget of 50 to 60 Lakhs was coordinated by Katol water and sanitation under the leadership of Ministry of infrastructure of Government of Maharashtra. This project describes the methodology used for assessment of the sustainability of the Katol water supply project as well as its key beneficially

1.1 Description Of Methodology:

This sustainability of rural and water hygiene intervention remains major challenge in the developing construction like India. In Katol ,where the coverage of include water supply and sanitation is 85% and 83% (GoK ,2018) respectively .the methodology used for the assessment of the sustainability of intervation implemented under Katol water supply project was based on the data collection and exercise .

The data collection exercise used for the assessment is briefly described as follows:

1.1.1: Household Survey:

In this household interviews (10000 households) were conducted to get the use of the community member of behaviour change communication intervention, hygiene practices source of water and cost of water. At each household, face to face interview was conducted as well as a structure observation aspects general hygiene condition of the home

Example: cleanliness, waste disposal, availability of latrine, condition of latrine, construction quality status.

In addition to the above, the numerator look out for incidences of open defecation around the community as they visited the limited household.

1.1.2: Interview with Key Information

Total of 26 key informant interview were conducted. The key information were selected on their roles screen relation to the water and sanitation and include Government Ministries, school head teachers and health centres officials.

1.1.3: Focus on Discussion

A total of 23 group discussion were conducted with community member and water point committees.

1.1.4 : Facility Audit

A facility audit was carried out using an observation for the facilities supported under the project in the Katol Tal.

In this regard 15 water supply system constructed under the project in the Katol Tal. Nagpur Dist. Where assessed (94% of which were constructed before end of 2016). As regards boreholes, 13 out of 19 boreholes constructed were surveyed.

All the data collected was analysed & finding from the focus group. Discussion and facility audit were summarized into grids. The indicators used and the corresponding weightage used for assessment of the sustainability are present in Table 1.

Table:- 1: Matrix used for calculation of sustainability scores

Categories And Indicators	Maximum score
1 . Institutional Aspect	Out of
1.1 Enabling environment – Katol water supply project system, policies and procedures at the national, district and community level are functional and community level are functional and meet the demand of user	4.5
1.2 clarity of roles and responsibilities – Katol water supply service	5

users, authority and service providers at the local, district and the national level are clear on their roles and responsibilities and are capable of full filling these role effectively	
1.3 existence of update database for water supply system	4
Total	13.5
2. Social Aspect	
2.1 community known where to go in case of breakdown of water supply system	4
2.2 representation of woman in water points committees	3
2.3 social marketing -training and information on Katol water supply and behaviour change received at household level	4
2.4 social inclusion – all community member (including woman ,widows ,poor and people with disabilities) are involve in Katol water supply activities	4
2.5 community perception towards the water supply system (accessibility, acceptability, affordability ,quantity and quality)	3
TOTAL	18
3.Financial Aspect -Water Supply	
3.1 system to collect and manage funds in functional	4
3.2 quality of financial records	5
3.3 income is equal to or higher than the expenses	4.5
3.4 financial capacity of the district for major repairs	4
Total	17.5
4.Technical Aspect -Water Supply	
4.1 construction quality	5
4.2 functionality	4
4.3 maintenance	5
4.4 availability and acceptability of spare parts	5
4.5 frequency of break down	4
4.6 capacity of the private water operators for routine repairs	5
4.7 times spent to repair	4
Total	32
5. Sanitation And Hygiene	
5.1 functionality (quality and maintenance of latrine)	4
5.2 status of open defecation	2
5.3 hygiene	3
Total	9
Overall Total Score	90

The scores per district from the above analysis were then categorized as follows:

- 1) Below 50% = Low sustainabilitylevel
- 2) Below 51% -75% = Average sustainability level
- 3) Between 76% -90% = Satisfactory sustainability level
- 4) Above 90% = Good sustainabilitylevel

KEY RESULTS:

Overall project of Katol (70% in 2015 & 78% in 2017) (GoK in 2018).This increase to 89% in 2019. As can be seen from 2001 Fig.1 there is also considerable improvement in district scores over the year. Whereas, in previous assessment Katol found to be at satisfactory sustainability levels. Now, all district mare almost at par regarding sustainability levels due mainly to hand over of the management of water

supply system to the considerable changes and create awareness amongst community of the village.

2. INSTITUTIONAL SUSTAINABILITY:

The score achieved by the project in 2019 for various categories of sustainability and hygiene aspect are briefly discussed as follows:

- 1) The institutional sustainability averages 86%. The contributing factor to the satisfactory score for institutional sustainability including sectors, reforms, implemented by the Government of Katol which resulted in creation of Rural Water Supply services divisions in Katol Water & Sanitation Corporation in 2019.
- 2) The social sustainability averaged 83%. The satisfactory sustainability score was attributed to high awareness of community regarding where to report of breakage/non-functionality, high degree of community awareness of the diseases that can be awareness washing hands with hands with soap, positive perceptions of community members towards of women, widows, the elderly & the poor in the project activities and improved community perception.
- 3) The overall financial sustainability for the project was rated at 90% i.e. 10% higher than 2015 score and one percentage point shy of good sustainability. While all the districts recorded increase in financial sustainability, Katol recorded the highest increase from 80% in 2015 to 100% in 2017.
- 4) Other contributing factors included effective system of collection and management of funds (i.e. water vendors who sell water), high cost recovery and financial capacity of districts to undertake major repairs. Some districts, however, recorded low scores with regard the quality of financial records available with thePWOs.
- 5) The overall financial sustainability for the water supply system averaged 91%, the only indicator which was categorized as having “ good sustainability level “. The high technical sustainability score for the project was attributed to good construction quality, high functionality of the systems, easy availability of spares, ability of private operators to undertake timely repairs and low frequency of breakdowns.
- 6) The overall sustainability score for sanitation and hygiene averaged 69%. Though it increased considerably from an average of 55% in 2015, it remained the lowest of all the sustainability aspects assessed despite the high latrine coverage (93%) in the target districts. The low score for sanitation and hygiene was attributed mainly to the

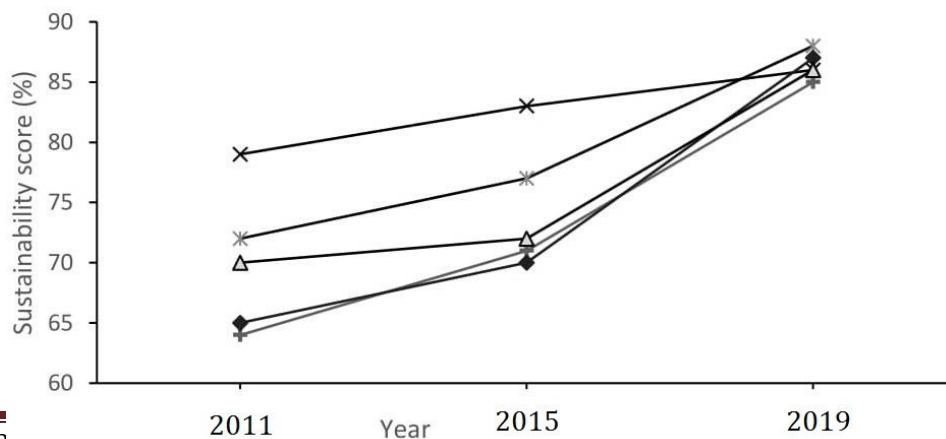


Figure 1: Project sustainability trends during 2015 to 2020

challenges pertaining to the quality of cleanliness situation for latrines, availability of hand washing facilities in the vicinity of latrines and hygiene around water points.

- 7) As part of the sustainability assessment, water quality of sampled water supply systems was assessed though it was not included in the scoring exercise. The key issues identified in this regard included bacterial contamination and low pH for a few water sources.
- 8) The key recommendations of the sustainability assessment included the following:
 - 1) Conduct behavioral change communication campaigns in the target districts with strong focus on hygiene and sanitation promotion.
 - 2) Work with the private water operators and water point committees to devise and implement a mechanism for proper maintenance of the boreholes.
 - 3) Allocate appropriate funds to address the issue related to maintenance of rain water harvesting system in schools as well as accessibility of sanitation facilities (i.e. construction of ramps with appropriate slopes);
 - 4) Take appropriate actions for pH adjustment and chlorination of the concerned water supply systems; and
 - 5) Devise an adequate reporting and monitoring system for the private water operators and arrange refresher trainings for them.

3. FOLLOW-UP ACTIONS:

Following the completion of the sustainability assessment, the key findings were shared with the concerned districts and the assessment report was finalised in light of their comments and feedback, where relevant and agreed and accepted by the independent audit firm. Subsequently, the Ministry of Infrastructure, Government of Katol Water and Sanitation Corporation worked with districts to prepare the management response which listed the key actions to be implemented in order to address the issues affecting sustainability as identified during the assessment. The agreed actions as per the management response are being followed through regular meetings with the district teams as well as field visits. Moreover, the findings of this assessment were used for evidence based advocacy which resulted in bringing the sustainability high on the sector agenda nationally and subsequent establishment of a task on sustainability of rural water supplies under the Water and Sanitation Sector Working Group.

4. LESSONS LEARNED:

The following key lessons were learned from the assessment of the sustainability of Katol Water Supply project:

- 1) For projects like Katol Water Supply project, the assessment of sustainability could cost up to Rs.85,000 and take around four months to complete, including field work and drafting and finalization of the report. Given the fact that it is a time and resource intensive exercise, the assessment of sustainability needs to be planned carefully. Due consideration should be given to the timing i.e. rainy season, school

holidays, community events, harvesting season and other factors that are critical for collection of adequate data or may contribute to delays.

- 2) The indicators/sub-indicators and the corresponding weightage used for assessment of the sustainability should be adjusted with due consideration to the changes in the context and approaches as the project interventions progress during the implementation period.
- 3) It is extremely important to select the right independent auditing firm having relevant experience and expertise, based on competitive bidding process and reference checks. For the projects of longer duration, the possibility of signing a long term agreement with one firm should be considered to effect the cost and time savings and to have quality output.
- 4) Considering the turn-over of the project staff, especially for the projects of longer durations, it is important to design a training module on assessment of sustainability for the staff.
- 5) For a sustainability assessment to be really meaningful, it is critical to put in place a follow-up mechanism to ensure proper implementation of the follow-up actions.

5. CONCLUSIONS AND RECOMMENDATIONS:

The sustainability of Katol Water Supply Project was assessed using a tool adapted from the experiences of other countries with changes made to suit the local extent. The assessment showed that the overall project sustainability was at satisfactory level (89%) in 2017. A comparison of the findings of this and the previous project sustainability assessment showed a considerable improvement in sustainability scores over the years following. Following completion of the assessment, the Government of Katol are taking appropriate measures to address the issues that may negatively impact the sustainability of project interventions.

Given the resources and efforts required for carrying out the sustainability assessment, it is recommended to conduct these assessment once every two years rather than on annual basis. An alternative could be to design and carry out a simplified version of the sustainability assessment in between the comprehensive sustainability assessments. It is also recommended that the possibility of development of a simpler and cheaper sustainability assessment tool, which could be applied to large and small scale donor as well as government funded projects.

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REFERENCES

- 1) GoK (2016). (Katol water supply project integrated household living condition survey) (EICV) 2015-2016- Report : Utilities and Amenities , National Institute of Statistics, Government of Katol

- 2) Water Supply And Sanitation Collaborative Council
<http://www.wsscc.org>
- 3) <https://www.India> water portal.org
- 4) <https://www.ncbi.nlm.nih.gov>
- 5) <https://mdws.gov.in>
- 6) <https://www.researchgate.net> planningcommission.gov.in

Disclaimer:

The views expressed in this paper are solely of the authors and do not necessarily reflect the views of Government of Katol and Government of Maharashtra.

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