

# Monitoring Hygiene Behaviour: The Simpler Way

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## Abstract

In India heavy investments have been made in rural water supply since 80s, but the resulting health benefits have been severely limited by the poor progress in sanitation. This research analysis is based upon the case study of a highly acclaimed and successful water and sanitation project in around 857 villages of Indian mountain state through multi-stakeholder participation between 1996-2004. This study relates to the in-depth understanding of health & hygiene and environmental sanitation issues, and put forth the findings of best monitoring practice examples in hygiene interventions by examining the sustaining impact of such simpler tools. Here, the project stakeholders practiced a simple and easy self-monitoring tool to access the project process, progress, impact and outcome in health and hygiene interventions. This has also been established as informative, investigative and analytical monitoring tool and proved its importance through wider use during and after the project and its wider replication in similar programmes. The tool helped in reducing the morbidity, generating demand for safe drinking water and sanitation facilities, and in understanding and adopting best hygiene practices in routine. A comparative analysis has also been done from the data of 7 sample villages of different geographical locations and 3 round healthy home survey study by third party agency in 46 sample villages between 2000-2004.

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## Introduction

1. An estimated 2.6 billion people - representing half the developing world - lack toilets and other forms of improved sanitation. Sanitation coverage in the developing world rose from 34 per cent in 1990 to 49 percent in 2002. If present trends continue, however, close to 2.4 billion people worldwide will still be without improved sanitation in 2015, that is, almost as many as there are today. The sanitation target can be met only with a dramatic increase in investment in services (UN-2005).

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2. In 1998, 2.2 million people died because of diarrhoeal diseases, of which the vast majority were children. In addition poor sanitation has led to the infestation of nearly a billion people - largely children - with a variety of worm infections, with its corresponding costs in health and energy. About 88 percent of diarrhoeal disease is attributed to unsafe water supply, inadequate sanitation and hygiene and 1.8 million people die every year from diarrhoeal diseases (including cholera); 90 percent are children under 5, mostly in developing countries. In every 8 seconds a child dies from drinking contaminated water (that is 10,000 a day). And 500 million people are at risk from trachoma, 146 million are threatened by blindness and 6 million people are visually impaired from this disease (UNESCO-water facts 2005).

3. The adoption of the millennium development goals, drawn from the United Nations millennium declaration, was a seminal event in the history of the United Nations. It constituted an unprecedented promise by world leaders to address, as a single package, peace, security, development, human rights and fundamental freedoms (UN-2005). Virtually every man, woman and child on the planet knows the importance of hygiene and enjoys safe and adequate water and sanitation. People work closely with local government and non-governmental organisations to manage water and sanitation systems so as to meet basic needs while protecting the environment.... Everywhere in the world, people live in clean and healthy environments. Communities and governments benefit from the resulting improved health and the related economic development (Vision 21, vi, 2000).

4. It is obvious that lack of sanitation and hygiene is a public disaster that deserves the highest priority. Most of these infections, which statistics tell about, are preventable. Diseases such as diarrhoea and parasitic worm infections need to be tackled by making improvements to water and sanitation facilities. However such improvements must go hand in hand with hygiene behaviour change, if the transmission of disease is to be prevented. Access to sanitation facilities is a fundamental right that safeguards health and human dignity (Burger, L. 2000). The recent drinking water quality guidelines also underline the preference to check and reduce the entry of pathogens into water sources from the microbial risks associated with possible contamination from multiple sources (WHO-2004) through community management.

5. In India heavy investments have been made in rural water supply since 80s, but the resulting health benefits have been severely limited by the poor progress in sanitation. This research analysis is based upon the case study from a highly acclaimed and successful pilot project, Swajal-UARWSES1 in India, from 1996-2004. The project covered 857 villages in Himalayan Mountain state Uttaranchal through multi-stakeholders participation. The major rationale of the project was sustainable health & hygiene benefits to the rural community by improved water supply and environmental sanitation facilities through demand responsive approach (UARWSES-1996).

6. Among the objectives of the project, the basic endeavor was to understand and work for health and environmental sanitation awareness – HESA - to reduce water borne diseases by breaking the chain of faecal-oral disease transmission. This case study example put forth the use and findings of successful health and hygiene practice

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<sup>1</sup> The Swajal-Uttaranchal (then UP) Rural Water Supply and Environmental Sanitation project run by government of Uttaranchal in year 1996 with the support of Government of India and World Bank. The civil society organization and user community were the important involved partners in the project process.

interventions and monitoring tool used in a participatory water and sanitation project in India and examines the sustaining multiple impacts of simpler monitoring techniques.

## Material and methods



*In this watsan<sup>2</sup> project the functionalities worked upon the important objectives with beneficiary community in a participatory way for health interventions by adopting healthy home survey – HHS - as regular activity for disseminating information, investigating the practice and analyzing the project impact. This was a self-monitoring tool for better hygiene and sanitation practices to reduce morbidity, generating demand for safe drinking water and sanitation facilities (latrines, soak pits, garbage pits, compost pits, drainage, etc.). It also helped the community to understand about personal, domestic and environmental sanitation issues in an easy way.*

*The project cycle was supplemented with various health and hygiene oriented interventions in HESA<sup>3</sup>, include: cluster level discussion with women and children groups, training to water point representing women, traditional birth attendants, village health promoters and school teachers. The training included information upon mother & child health-MCH, diarrhoea management, disease transmission rout, health & hygiene benefits and the facilitation of community for the regular use of sanitary latrines, soak pits, compost pits, garbage pits and drainage etc. During the process to assess the impact of all these health interventions the project partners adopted a participatory monitoring tool called Healthy Home Survey. This was an informative, investigative and analytical monitoring tool, used successfully during and after project.*



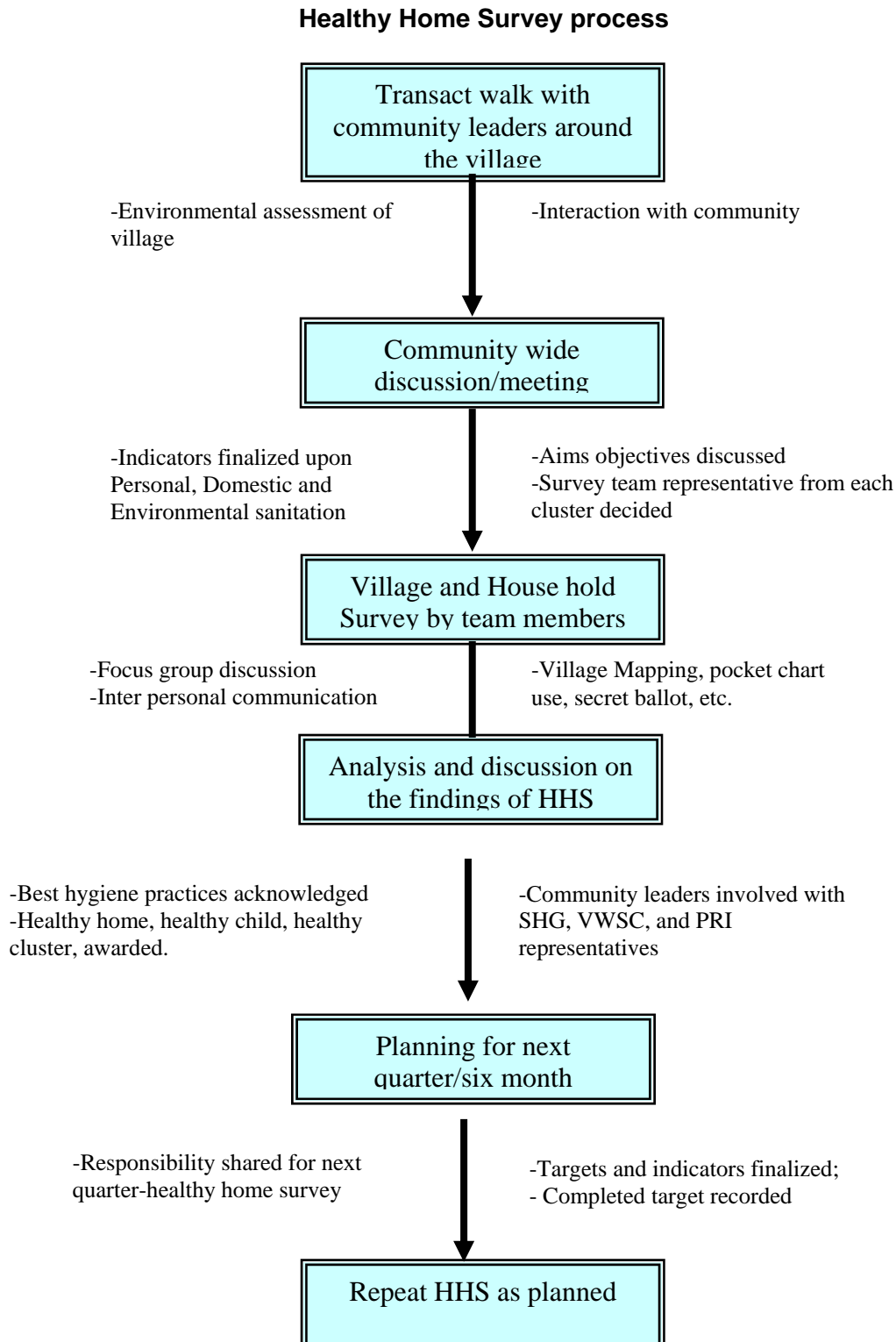
Bringing the positive behavioral changes towards Health and Environmental Sanitation, the project adopted healthy home survey as a self monitoring tool in which the community itself decides the health and hygiene status on three key components; personal, domestic and environmental sanitation by fixing the monitoring indicators. At initial stages information was given

to beneficiary community by the women self help groups (SHGs) and Village Water & Sanitation Committee (VWSC) representatives by the workers of civil society organization. The process of healthy home survey took place in every project village

<sup>2</sup> Watsan: Water and sanitation.

<sup>3</sup> HESA: Health and environmental sanitation awareness.

through a set process to assess progress in health & hygiene behaviour pattern and evaluate the impact in a systematic way by user community (Flow diagram-1).



### **Flow diagram-1**

7. During a participatory process community was encouraged to fix different survey indicators-***Annexure-I***. Since user community of the village fixes the indicators, they may vary from village to village, but these were the basic major indicators. After fixing indicators, an informal Healthy Home Survey Team<sup>4</sup> is decided. At the end of HHS process the team further discusses and fixes targets for next quarter or six month.

### **Result and analysis**

8. It has been observed that if improved water supply and basic sanitation were extended to the present-day unserved, it is estimated that the burden of infectious diarrhoeas would be reduced by some 17 percent; if universal piped, well-regulated water supply and full sanitation were achieved, this would reduce the burden by some 70 percent. Hygiene interventions including hygiene education and promotion of hand washing can reduce diarrhoeal cases by up to 45 percent (UNESCO water facts-2005).

9. The international decade for action 2005-15 directly reinforces and urges countries to meet the MDG 7, Target 10. The Millennium declaration, adopted in September 2000 by the heads of 189 UN Member States, set clear, time-bound targets for making real progress on the most pressing development issues we face. The water Target 10 was reiterated at the 2002 World Summit on Sustainable Development in Johannesburg, where a sanitation target was added. Achieving these targets will directly affect the lives and future prospects of billions of people around the globe. It will also set the world on a positive course at the start of the 21st century. Although global sanitation coverage raised from 49 percent in 1990 to 58 percent in 2002, still, some 2.6 billion people-half of the developing world live without improved sanitation. The sanitation coverage in the developing world (49%) is only half that of the developed world (98%). In order to meet the sanitation MDG target, an additional 370,000 people per day up to 2015 should gain access to improved sanitation.

10. The recent drinking water quality guidelines (WHO-2004) explain about safety of drinking-water supplies that is based upon multiple barriers and management approach by reducing reliance only on treatment process. It advocates the preference to check or reduce the entry of pathogens in to water sources from the microbial risks associated with contamination from human or animal faeces, which is the source of pathogenic bacteria, viruses, protozoa and helminths. As improved water supply reduces diarrhoea morbidity by between 6 and 25 percent, if severe outcomes are included improved sanitation reduces diarrhoea morbidity by 32 percent (UNESCO-water facts 2005).

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<sup>4</sup> The team consists of two self-help group members, two village water sanitation committee representatives, one school teacher/health worker and one worker from civil society organization.

11. As the finding of this case study it has been established by the project that to maximize potential benefits of water supply and sanitation, technical and behavioral measures go hand in hand. Therefore, the benefits of safe water supply cannot be realistic if water is not collected and handled safely and constructed latrines are not in regular use. Hygiene and environmental sanitation awareness-HESA is meant to establish the linkage between improved facilities and user practices. This explains the comparative analysis from the Healthy Home Survey data of 7 sample villages of different geographical locations covering 71 percent of sample households and 3 round healthy home survey study<sup>5</sup> by third party agency in 46 sample villages between 2000-2003<sup>6</sup>. It is important to mention that during the study the healthy home survey tool was used to access (qualitative & quantitative) the project process, progress and impact, which may have the variation of  $\pm 5$  percent in given data.

12. Following are the findings/observations<sup>7</sup> during the study upon major five (**Annexure-II**) major healthy home survey indicators (also see **Annexure-I**):

- a. The practice of washing hands before eating food significantly increased from a baseline of 22% to 67% at the end of project.
- b. The practice of washing hands with soap or ash after defecation increased from a base line of 29.4% to 97.7%.
- c. The use of safe water for drinking and cooking purpose increased from baseline 43% to 90%.
- d. The coverage and use of sanitary latrines increased from baseline 10% to 61% percent at the end of project.
- e. The practice of proper disposal of infant's excreta by the families increased from a baseline of 4% to 60%.
- f. Reduction in the incidence of diarrhea observed from 14% to 3.6%.

13. Looking upon various health & hygiene problems including infant mortality rate-IMR, which is 50 per 1000 live births in the state, the results of health & environmental sanitation awareness interventions are very much reassuring through healthy home survey process. It reveals that, the ability of user community in practicing better hygiene practices also depends crucially on the quality of simple and easy participatory techniques in assessing and monitoring progress. This tool proved its importance through its wider use in the project and helped the user groups in adopting healthy sanitation practices and in competing with neighboring houses vis-à-vis communities upon sanitation front.

## Conclusion

14. Monitoring progress towards achieving the MDGs in the water supply and sanitation sector is essential if the political commitment of the international community and national governments is to be maintained and put into practice. Monitoring information is also vital for advocacy, to promote the importance of water and sanitation issues in national policies and poverty reductions strategies (Kathleen, S. et al. 2004).

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<sup>5</sup>Borrower's evaluation: Implementation completion report, World Bank-IBRD4056 loan to Government of India-May 2003.

<sup>6</sup>The project cycle consists of pre planning-9 month, planning-12 month and implementation phase-12 month i.e. total 33 month.

<sup>7</sup>The base line survey conducted in 1999 and final or post project in year 2003.

15. The project<sup>8</sup> process has been mentioned as pioneer in the field of community empowerment, involvement of women, hygiene promotion and in the process and community contracting. The apex body at government of India's recent publication (2003) titled "Successful governance initiatives and best practices: Experiences from Indian States" has included a comprehensive write-up on the project and its process by aptly remarking, "By introducing several innovations in a hitherto stagnant situation, the project has proved to be not only applicable but also replicable"

16. Healthy home survey-HHS has proved to be an effective Self-monitoring tool for assessing the overall health & hygiene status of the community and bringing the behavioural changes through appropriate health and environmental sanitation awareness-HESA interventions. The findings of HHS have broken the myth that behavioural changes cannot be brought about in a short duration, if the interventions are planned properly and in a systematic way and at regular interval, the changes are bound to occur. This participatory monitoring approach proved that the incidence of diarrhoea is a 'syndrome' and its symptoms are 'unsafe behavioural practices'. This simple survey approach revealed that reduction in unsafe behavioural practices leads to reduction in incidence of health problems and moreover, the savings in medical expenses and reduction in loss of man-hours due to improved health, which cannot be quantified but has certainly improved the quality of life.

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<sup>8</sup> The Swajal-UARWSES project.

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**Annexure-I****Other major findings from Healthy Home Survey**

- i. Regular disinfections of water has been done in 70% of cases.
- ii. In sample villages about 90% of the households clean their pitcher daily with soap or ash.
- iii. In 77% cases the households keep water vessels at some height, out of the reach of children.
- iv. The handling of water through safe mode has been observed in 74.61% cases.
- v. The incidence of diarrhea in these villages has been observed 4% compared to earlier 15%.
- vi. Out of total family members using latrine, the percentage of female members found 92%, male 100% and Children 95%.
- vii. The cleanliness of latrines has been observed from initial 10 to 61%.
- viii. The use of compost pit increased from initial 0% to 35%.
- ix. In around 88% water sources there was not stagnation of water in comparison to earlier 54%.
- x. The percentage of clean lane was 44% at the time of base line increased up to 75%.

**Annexure-II****Healthy Home Survey: Indicators****A. Personal Hygiene:**

1. Households washing their hands by ash or soap after defecation; \*\*
2. Households washing their hands by ash or soap before eating; \*\*
3. Household using improved sanitary latrines for defecation; \*\*
4. House holds using safe water for drinking & cooking purposes\*\*.

**B. Domestic Sanitation:**

5. Household keeping their latrines clean;
6. Household not dipping the fingers in utensils while taking out safe water from source;
7. House holds practicing safe disposal of infant excreta; \*\*
8. Household keeping drinking water at a height, which is far from the reach of children;
9. Household not dipping the fingers in utensils while taking out water from utensil.

**C. Environmental Sanitation:**

10. Household using compost pit for the disposal of cow dung;
11. Household keeping drains clean;
12. No water logging around the water source or stand post;
13. Path/roads are clean.

\*\* Five major indicators in HHS process.