

KCCI / 2010 – 02

WASH and Women

A situation analysis of living and working conditions in the Tea Gardens of Dibrugarh District, Assam

Rachel Amiya
Sarika Gupta
Nasreen Habib
Ellen Whitesides

In collaboration with
The Assam Branch of the Indian Tea Association
Dibrugarh, Assam

Disclaimer

The views expressed in these case studies are those of the authors alone, and do not necessarily reflect the policies or the views of UNICEF and/or the Assam Branch of the Indian Tea Association.

Contents

List of Tables, Graphs, and Maps	1
Acknowledgements	3
List of Acronyms	4
Foreword	5
Executive Summary	6
Introduction	9
Setting of the Study	9
The Tea Community and Social Exclusion	10
Previous Disease Outbreaks	11
Background: Overview of Current Programmatic Input	12
UNICEF and the YCS Initiative	12
PPP with NRHM	13
Adolescent Girls' Clubs	14
The TSC and the WASH Programme	15
Objectives of the Study	17
Methodology	18
Sampling Design: Selection of Gardens	18
Research Instruments	19
Data Collection	20
Data Compilation	21
Analysis Plan	21
Constraints and Limitations of the Study	21
Findings	24
Facilities Overview: WASH Amenities Available in the Gardens	24
Theme 1: Household Consumption Behaviour	25
Connection between spending on WASH products and better health	26
Consumption patterns related to WASH products	27
Labour line household finances	29
Theme 2: Sanitation and Hygiene at Home and in the Hospital	31
Behavioural practices	31
Waste disposal	32
Theme 3: Menstrual Hygiene	37
The cultural context: Knowledge and beliefs about menstruation	37
Menstrual hygiene management (MHM)	40

Impact on girls' education and female disempowerment	43
Theme 4:Community Participation	44
The dependency syndrome	45
Participation via management	45
Organized participation	46
Participation as citizens	48
Conclusion and Recommendations	50
WASH Programming	51
Infrastructure and Programming Inputs by Management/Government	52
Collaborative Effort among all Actors for Nurturing a Cottage Industry	53
References	54
Web References	55
Annexure I: WHO Guidelines for 16 Bed Hospital	56
Annexure II: Research instruments	69
Annexure III	102
Annexure IV	106

List of Photographs, Maps, Figures and Tables

Photographs

Photograph 1: A 'UNICEF-style' sanitary toilet with water seal and leach pit	13
Photograph 2: Garden shop	28

Maps:

Map 1: Dibrugarh district, Assam	9
Map 2: Gardens included in detailed research	18

Figures:

Figure 1: Populations of sampled Gardens	18
Figure 2: WASH facilities available in sampled Gardens	19
Figure 3: Summary statistics of individual questionnaire	20
Figure 4: Usable toilet availability	24
Figure 5: WASH facilities in public spaces	24
Figure 6: WASH facilities in hospitals	25
Figure 7: WASH facilities in households	25
Figure 8: Perceived connection to health	26
Figure 9: Division of monetary monthly income	29
Figure 10: Washing hands with soap after defecation	31
Figure 11: Washing hands with soap before eating	31
Figure 12: Sources of contamination of hand pumps	31
Figure 13: Waste disposal methods at home	33
Figure 14: Waste disposal methods in the hospital	34
Figure 15: Claimholder's ratings of Garden hospitals	35
Figure 16: Do you think girls should be taught about menstruation at school? On what subject matter?	38
Figure 17: Traditional beliefs and restrictions surrounding menstruation	39
Figure 18: Distribution by absorbent material used in last menstruation	40
Figure 19: Have you ever been absent from school or work due to menstruation?	43
Figure 20: Key factors linked to reported absenteeism	43
Figure 21: Who do you feel is most responsible to provide you with better facilities?	45
Figure 22: Service user perception of and interactions with management	46
Figure 23: Was the necessary action taken on your complaint?	46
Figure 24: Respondents who feel entitled by law to adequate water and sanitation facilities	49
Figure 25: Respondents who feel entitled to government welfare schemes	49

Tables:		
Table 1:	Comparison of current study sample with Gap Study (UNICEF 2010) sample	22
Table 2:	Ability to identify WASH connections to health	27
Table 3:	Percentage of hospitals in which colour-coded dustbins observed (N=9)	34
Table 4:	Stakeholder’s ratings of Garden hospitals	35
Table 5:	Hospital’s adherence to WHO recommendations	36
Table 6:	Female perspective on Garden hospitals	36
Table 7:	Menarche-related variables	37
Table 8:	Key comparative advantages of commercially-made sanitary pads vs homemade cloths	41
Table 9:	MHM best practice assessment	42
Table 10:	Satisfaction with WASH facilities	44
Table 11:	Summary of key grassroots organizations operating in the Tea Gardens	47

Acknowledgments

We would like to extend our sincerest gratitude to the following people who helped us throughout the course of our research and ensured the success of our project:

We would like to thank UNICEF Guwahati for their logistical support during the course of our stay in Assam. We would like to specifically thank Mr. Somnath Basu from UNICEF Guwahati, our supervisor, for tirelessly helping us from beginning to end in our research study. He provided valuable insight and guidance in all steps of the process from finalizing the objectives of our study, to fine-tuning our research instruments, to producing our final report. In addition, Ms. Bernadatte Rai from UNICEF Guwahati provided guidance and encouragement as we finalized our report and presentation. We would also like to extend our appreciation to the UNICEF country office, especially Ms. Amrita Singh for her constant guidance.

We are also very grateful to Mr. G.D Tripathi, the Deputy Commissioner of Dibrugarh district, Assam for his helpful insights and positive response towards implementation of our recommendations. We also congratulate him on being promoted to be the Secretary to the Chief Minister's Office. We are also thankful to Mr. Bhaskar Pegu of the Dibrugarh WASH cell for his valuable inputs.

We would like to thank the staff of ABITA Zone-1 for generously allowing us to use their resources and office space and encouraging our study. We are also deeply indebted to Mr. Sandip Ghosh, the secretary of our host institution, ABITA, for his logistical support and for his tireless supervision of our everyday needs. In addition, we thank the Tea Garden managers, staff and especially all the wonderful people of the Tea Community who made our report possible.

We are sincerely thankful to Mr. Paul Frank and Mr. Gokul Saikia for seamlessly facilitating our field visits, and organizing, translating, and liaising with Tea Garden managements and staff. We would also like to express our heartfelt gratitude to our capable and dedicated translators Ipshita and Sahina for their constant endeavour to act as a bridge between us and the Tea Community.

We are also grateful to our generous hosts Mr. Partha Pratim Baruah and his wife Mrs. Guddi for their warm hospitality towards us. We are thankful to Junaki and Maloti for all the nourishing meals.

Last but not the least, we thank Knowledge Community on Children in India (KCCI) for letting us be a part of this summer internship programme, which has proved to be an unforgettable experience for all of us.

List of Acronyms

ABITA	Assam Branch of the Indian Tea Association
BCC	Behaviour Change Communication
BPL	Below Poverty Line
CHD	Centre for Humanistic Development
CSD	Child Survival and Development
DSW	Department of Social Welfare
FGD	Focus Group Discussion
GOI	Government of India
HIV	Human Immunodeficiency Virus
ICSD	Integrated Child Development Services
IEC	Information Education Communication
ITA	Indian Tea Association
IYCN	Infant and Young Child Nutrition
KCCI	Knowledge Community on Children in India
LP	Lower Primary School
NGO	Non-Governmental Organization
NRHM	National Rural Health Mission
ORS	Oral Rehydration Salts
PLA	Plantation Labour Act
PPP	Public-Private Partnership
RTI	Reproductive Tract Infection
SHG	Self-Help Group
SRC	Sishu Raksha Committee
TSC	Total Sanitation Campaign
TTWD	Tea Tribes Welfare Department
UNICEF	United Nations Children's Fund
UTI	Urinary Tract Infection
WASH	Water, Sanitation and Hygiene
YCS	Young Child Survival Initiative

Foreword

The Knowledge Community on Children (KCCI) in India is a partnership between the Government of India and UNICEF which aims to fill knowledge gaps and promote information-sharing on policies and programmes related to children in India. In 2010, under the aegis of this initiative, 44 graduate students from India and across the world visited and documented initiatives focused on child rights and development. Their vibrant perspectives, commitment, and hard work is reflected in this series of case studies, which are published by UNICEF.

These 2010 case studies identified interventions working at different levels – institutional mechanism to safeguard rights of children at state and national level, implementation of a flagship programme at a district level, and within community such as tribal tea community in Assam. More importantly, these case studies document the challenges and potentials of cutting edge models that invest resources, human and financial, in supporting individuals and their communities forge the long hard path towards greater empowerment and entitlement to public resources.

UNICEF recognises the potential and power of young people as drivers of change and future leadership across the globe. As such, the KCCI Summer Internship Programme also aims to develop a cadre of young research and development professionals with an interest, commitment and skills relating to the promotion and protection of child rights. UNICEF will continue this collaboration with young researchers, the Government of India and academia, so as to bring fresh perspectives and energy to development research and our ongoing efforts towards the fulfillment of the rights of children and women in India.



Karin Hulshof

Representative

UNICEF India

Executive Summary

The inhabitants of the Tea Gardens of Assam have been migrating from various parts of India to Assam for more than a century. Over time their numbers have multiplied as they continue to live within the confines of the Tea Gardens, isolated geographically, socially and economically from the surroundings and more affluent Assamese society. Today, the Tea Community constitutes 25 per cent of the population of Assam but inhabits only 5 per cent of Assam's land.¹ Exacerbating the effects of their isolation, the welfare of the Tea Community has historically been left to Garden management, and they have not traditionally been the beneficiaries of government welfare schemes.

As a corporate mandate, UNICEF has identified the Tea Community as socially excluded and has converged with all sectoral programmes to promote the status of this community, particularly children. In Dibrugarh (the integrated district identified by UNICEF) the Tea Communities represent 25 per cent of the population confined to 19 per cent of the land.² As mentioned earlier, government intervention in the Tea Gardens has been minimal until in 2007 when the National Rural Health Mission (NRHM) entered into a Public Private Partnership to strengthen the health services inside the Gardens. At the same time, the Total Sanitation Campaign launched by the Government of India in 1999 has had very little presence in the Tea Gardens.

In recent years, however, in partnership with UNICEF, Water, Sanitation and Hygiene(WASH) programming has made its way into the Tea Garden Communities of Dibrugarh district, Assam. Namely, the Young Child Survival (YCS) Initiative carried out by UNICEF in conjunction with the Assam branch of the Indian Tea Association (ABITA) was brought to the Gardens in 2007. Inspired by the UNICEF-ABITA partnership for provision of sanitation inside the Tea Gardens, a Government of Assam sponsored WASH programme was launched in the Tea Gardens in 2009.

The following report attempts to explore four critical facets of WASH status inside the Tea Gardens. In the process, some of the ongoing WASH interventions have also been evaluated in terms of their impact and outreach. Noting the significant role women play in ensuring the well-being of children, families, and communities, the study places a special emphasis on the female perspective. Specifically, the report covers the following four research themes under WASH:

¹ Conversation with ABITA secretary Zone-1, July 2010.

² Ibid.

- ◆ Household consumption behaviour
- ◆ Sanitation and hygiene at home and in the hospital
- ◆ Menstrual hygiene management
- ◆ Community participation

Relating to these four themes, data was collected in nine Tea Gardens of Dibrugarh district, Assam. In each Garden, the team recorded a checklist of available WASH facilities, interviewed individual men, women and adolescent girls from the community, and also interviewed key informants such as the manager, the doctor, and a labour union leader. Additionally, the team conducted focus group discussions, with adolescent girls and adult women. The aim of using diverse research instruments and targeting a wide array of functionaries was to obtain the most balanced and nuanced data possible with sufficient triangulation of information.

This study illustrates significant gaps in awareness and provision of basic facilities pertaining to WASH in the Tea Community. Women represent a particularly vulnerable population as their specific hygiene needs often go overlooked, especially because they are not the primary decision makers of household spending and are also less comfortable in directly voicing their concerns to the management.

Positive findings include that hand washing with soap is largely prevalent in the Tea Community and a significant number of households also own essential WASH products, which they do associate with health. Still, notable gaps exist in the awareness, usage, and availability of specific WASH products.

In addition, current WASH programming is limited in the areas of waste management and menstrual hygiene management. Findings indicate that no formal waste management system is in place in homes or hospitals. Similarly, while cursory inputs exist neither have systematic information about causes and hygienic management of menstruation been disseminated to females nor are proper facilities provided for females in this regard.

Finally, members of the Tea Community participate in their own welfare through grassroots organizations and by voicing concerns to management. Yet, they have not fully understood their place as citizens and do not recognize the government as an important resource.

A number of steps can be taken to address these issues. Firstly, WASH programming can further incorporate behaviour change communication (BCC) and information education communication (IEC) inputs in the following areas:

- ◆ **Toilet usage:** *Educate on its connection to health as well as proper use of water in toilets*
- ◆ **Drinking water:** *Educate on importance of water treatment and hygienic transfer methods*
- ◆ **Waste management:** *Emphasize garbage segregation and proper disposal*

- ♦ **Menstrual hygiene management:** *Disseminate systematic information on best practices*
- ♦ **Female-specific diseases:** *Educate on connection to WASH practices and promote treatment*
- ♦ **Sanitation in the hospital:** *Ensure World Health Organisation, UNICEF, and NRHM guidelines are followed*

Within this approach, grassroots organizations already present inside the Gardens should be actively involved, and men should be targeted as primary decision makers in household consumption of WASH products.

In addition, management and government should work in collaboration to ensure that the infrastructure needed to make WASH programmes successful is in place in the Tea Gardens, specifically garbage disposal systems, facilities for managing menstruation, and education programmes on basic rights and government resources.

The report begins with an introduction which establishes the context of the study and gives a brief history of the Tea Community. Following this, the background section presents an overview of current WASH-related initiatives operating in the Gardens that were studied. Next, the purpose and research objectives are clearly articulated. The methodology section goes on to explain the research instruments, population samples, data collection and analysis methods used in the study, ending with a note on research limitations. The findings section represents a bulk of the report and carefully lays out key findings in each of the four thematic research areas covered. Finally, the report ends with a conclusion followed by recommendations for improving the current state of WASH facilities and practices within the Tea Community.

Introduction

Setting of the Study

The northeastern region of India is a geographically and socially isolated region of the country with the state of Assam at its centre. Assam's Dibrugarh district, home to the world's largest area covered by tea gardens, provided the setting for our research.³ The stormy Brahmaputra river flows through this district which extends from 27° 5' 38" N to 27° 42' 30" N latitude and 94° 33' 46" E to 95° 29' 8" E longitude.

Map 1: Dibrugarh district, Assam



The research team worked through a partnership between UNICEF and a host institution, in this case the Assam Branch of the Indian Tea Association (ABITA). The Indian Tea Association (ITA) is by far the oldest tea association in India and the ABITA branch is an extension of it. Our host institution was located in ABITA Zone-1, headed by a Secretary who discharges all duties including oversight of welfare initiatives undertaken in the Tea Gardens. ABITA in partnership with UNICEF has heralded a series of ground breaking initiatives within the Tea Community. ABITA Zone-1 is spread across three administrative districts of Upper Assam – Dibrugarh, Shivsagar and Tinsukia.

³ <http://dibrugarh.gov.in/>

The Tea Community and social Exclusion

Assam is the largest producer of tea in India, contributing around 50 per cent to the country's total tea production.⁴ Tea plantations in Assam date back to 1839. The research conducted involved the Tea Community of Dibrugarh district, Assam. The Tea Community in Assam is the product of a colonial migration policy designed to fuel the region's enclave economy. Labour contractors, popularly called the 'Sardars' recruited the Tea Community from diverse locations like the Chotanagpur plateau, Orissa, Tamil Nadu and even the Andaman Islands. They came from different tribal groups such as the Santhals, Mundas, Oraons, Kharias, Gonds, Khonds, Kisang and Nagesias. These tribal groups eventually settled in Assam after completion of their contract period. The Tea Community today lives in clustered settlements called labour lines within tea gardens around the periphery of villages of ethnic Assamese communities. The process of integration with the local Assamese society has been also limited by their geographical isolation, although the language they speak, (Sadri) is a mix of various tribal dialects and Assamese. The up-and-coming Tea Community activist/poet Kamal Kumar Tanti says '*the mainstream middle class Assamese is yet to consider us as a part of greater Assamese nationality, though from time to time, they claim we are*'⁵. Such isolation for an extended period of almost 150 years has contributed to 'captive like conditions' effecting the spirit of the community.

The present population of the Tea Community in Dibrugarh is estimated to be 25 per cent of the total population of the district. Despite their numerical strength and long history in the region, stretching back more than a century, they remain 'outsiders' bereft of the tribal status accorded to them in their place of origin and deprived of benefits derived by the other Backward Tribes.

The hierarchical set-up within the Tea Gardens primarily includes the manager at the top followed by the assistant managers and the welfare officer, who is responsible for looking after the welfare of the Tea Community. The workers are mainly divided into permanent workers, temporary workers and non- workers. According to the Plantation Labour Act (PLA), Assam 1956, only the permanent workers are fully entitled by law to rations, accommodation including a sanitary toilet, and free medical aid provided by the management. The temporary workers receive rations and medical aid only during the period of employment. The non-workers are mostly dependants of permanent workers and temporary workers and they receive benefits indirectly according to the employment status of the worker on which they depend.

⁴ <http://www.mail-archive.com/assam@pikespeak.uccs.edu/msg10099.html>

⁵ <http://www.thehindu.com/life-and-style/society/article541908.ece>

Previous Disease Outbreaks

Gastro-Intestinal Outbreaks and Water Borne Diseases, Morbidity, Mortality: Recurrent Concerns

*'Every year, between April and September, many tea labourers die of water-borne diseases like cholera and gastro-enteritis because of drinking contaminated water'*⁶

In fragile socio-economic communities such as the Tea Community, under-nutrition and communicable diseases are still the major causes of disease burden. The poor health and nutrition conditions as well as water and sanitation status in the labour lines earlier led to a series of major disease outbreaks. According to an official estimate, 30 garden workers died in three months in 2004 for want of proper treatment for diseases such as malaria, gastro-enteritis and diarrhoea. Illiteracy, lack of adequate sanitary toilets, over-crowding and unhygienic living conditions in the labour lines make the garden population particularly vulnerable to various communicable diseases and malnutrition. Malaria and common infectious diseases like filariasis, pulmonary tuberculosis, cholera, and diarrhoea are wide-spread in the Tea Gardens. Moreover, anaemia was detected to be almost universal within the Tea Community and major interventions arose towards its eradication.

This scenario made Government intervention in the Tea Gardens essential and thus, the National Rural Health Mission (NRHM) was brought to the Tea Gardens in 2007 through a Public-Private Partnerships (PPP) with the Garden management. The NRHM-funded hospitals not only improved facilities but also catered to the temporary workers as well as the non-workers, extending medical services to the most marginalized sections of the Tea Community.

Further, frequent cholera outbreaks resulting in high morbidity and mortality have been the primary trigger behind UNICEF intervention in the Tea Gardens. The Young Child Survival (YCS) initiative was started to look after the health, sanitation and nutrition needs of the children of the Tea Gardens. To stall diarrhoeal deaths, the 'Sishu Raksha' Committees (SRCs) as well as staff of the Garden hospitals were trained on water quality surveillance. Promotion of hand washing practices was also carried out through the SRCs and Adolescent Girls' Clubs inside the Tea Gardens.

⁶ 'Seasonal Water-borne diseases at bay this year,' The Times of India, Guwahati Edition, Monday, 26 July, 2010.

Background:

Overview of current programmatic input

In collaboration with local government and stakeholders in the tea industry, UNICEF has supported and established a number of programmes and initiatives in Dibrugarh district in an attempt to extend the provision of WASH services to the excluded inhabitants of the Tea Community. Outlined below are several of the key programmes that have emerged over the past few years.

UNICEF and the YCS Initiative

UNICEF launched the Young Child's Survival (YCS) Initiative in Dibrugarh district in 2007 in partnership with ABITA. Phase I of the programme was introduced in 30 ABITA Tea Gardens in June 2007 with the basic aim of addressing the neglected Health, Nutrition and WASH-related needs of the Tea Community, focusing particularly on children and mothers of infants. From 2008-2009, the programme entered Phase II and was extended to a further 33 Tea Gardens, bringing the total coverage to 63 Tea Gardens in ABITA Zone-1.

Under the broad headings of Health, Nutrition, and WASH, the YCS Initiative pursues three primary modes of action:

1. IEC and BCC programmes to stimulate behaviour change and ensure community participation and ownership of YCS programmes;
2. Capacity building of key stakeholders through demonstration of technical inputs and transfer of low cost, appropriate technology; and
3. Advocating with the Garden Management to propagate and scale up YCS programmes, while negotiating with the district administration for extension of government services.⁷

Within the Tea Community, Block Coordinators oversee YCS programme implementation, and appoint 'Sishu Raksha' Committees (SRCs) in every Garden to enact awareness-generating activities at the community level. Established in 2007, the SRCs were designed to have a representative membership of five mothers of children under five, three adolescent girls, and two adolescent boys; one SRC was envisioned for every 100 people, roughly one SRC per labour line in practice.

⁷ 'Young Child Survival Initiative in the socially excluded Tea Communities, April 2010 to December 2011, 128 – Gardens of Dibrugarh, Tinsukia & Sivasagar District,' ABITA Zone-1, UNICEF-Assam, 2010; Mussoorie Case Study, 'Child Survival and Development: Partnership with ABITA in Tea Gardens in Dibrugarh District of Assam,' Assam, February 2009.

Focusing our attention on the WASH branch of YCS objectives, the Initiative has executed a wide range of programmes in the Tea Gardens in the years since its inception, including:

Photograph 1: A ‘UNICEF-style’ sanitary toilet with water seal and leach pit



- ◆ Construction of five model home ‘demonstration’ toilets (Photograph 1) per garden, built under a cost-sharing plan by which UNICEF covers substructure costs and the beneficiary or Garden management pays for the superstructure;
- ◆ Training of 120 masons in the construction of sanitary toilets, drawn from the Tea Gardens with a view to sustainability;
- ◆ Replication of 700 sanitary toilets in addition to the 315 initial demonstration toilets;
- ◆ Observation of Global Handwashing Day (October 15) in all Lower Primary (LP) schools, with the participation of 2,500 children;
- ◆ Training of SRCs and Garden hospital staff on water quality surveillance using H₂S strips and chlorination;
- ◆ Training of 276 SRCs for awareness-generating activities; and
- Institution of awareness programmes in 50 Gardens with 3,500 participants, focusing especially on promotion of hand washing behaviour.⁸

PPP with NRHM

The NRHM was launched by the GOI in 2005 as a seven-year programme geared to ensuring the provision of quality healthcare to India’s rural populations, with special focus on 18 states demonstrating weak public health indicators and/or weak infrastructure. Though Assam is among these 18 targeted states, access to government roll-out of essential health services was originally

⁸ Ibid. Listed data up-to-date as of the end of 2009. Further expansions still in the pipeline.

sporadic or entirely absent within the Tea Gardens. To ensure that the fruits of NRHM's success in Assam would reach the otherwise excluded Tea Community, UNICEF actively advocated with the Government of Assam for the extension of NRHM to Tea Gardens. In 2007, these efforts led to the statewide replication of a Public-Private Partnership (PPP) model for Tea Garden hospitals in which NRHM-supported facilities and services are institutionalized in the Tea Gardens at low cost.

With the signing of the PPPs between Tea Garden managements and the NRHM, various NRHM-led initiatives were expanded to the Tea Gardens, including:

- ◆ Streamlining of logistics, implementation and reporting on routine immunization;
- ◆ Introduction of oral rehydration salts (ORS)-Zinc for diarrhoea management;
- ◆ Extending government support to Tea Garden hospitals to ensure safe delivery; and
- ◆ Providing incentives to pregnant mothers for institutional delivery.

In the first phase of the PPP-NRHM model, 60 Tea Garden hospitals have been strengthened with logistics, ambulance services and other essential health care services including labour rooms and equipment. Concurrently, health workers and staff of Garden hospitals have benefited from capacity-building to optimize the benefits made available by the government.⁹

Adolescent Girls' Clubs

Starting from 2007, UNICEF has been fostering the formation of Adolescent Girls' Clubs in the Tea Gardens of Assam under the banner of its Child Protection programme and with support from ABITA. Stemming from the work of a small ABITA-sponsored survey of Tea Gardens conducted in 2006, UNICEF identified girls' access to education, high drop-out rates and early marriage as key areas for action. In this context, UNICEF and ABITA targeted adolescent girls for their potential as key agents of change.

Organizers envisioned Adolescent Girls' Clubs as a forum for building confidence and verbal expression in young women. The Clubs aim to generate heightened awareness on various health and social concerns while encouraging girls to stay in school and to challenge social taboos. Club members receive counseling on practical life skills like proper hygiene during menstruation, HIV protection and anaemia treatment, which affect many young women in the Tea Community. The expectation is that the girls reached in this manner will spread the word further, with ripple effects sending waves of positive impact across their communities.

Though the seed was initially planted in just 30 Gardens, the initiative has blossomed now into 131 Clubs and counting. The Adolescent Girls' Clubs typically meet at least twice monthly to

⁹ Mussoorie Case Study, 'Child Survival and Development: Partnership with ABITA in Tea Gardens in Dibrugarh District of Assam,' Assam, February 2009.

discuss topical issues such as child marriage, child labour, and corporal punishment. They are also involved in a variety of educational activities within the Tea Communities, acting as catalysts for change. Adolescent Girls' Clubs have the potential to adopt a wide range of mandates, including serving as an effective platform for water, sanitation and hygiene initiatives at the grassroots level.

The TSC and the WASH Programme

The GOI launched the Total Sanitation Campaign (TSC) in 1999 as a comprehensive programme for promotion of sanitation coverage, with the broader goal of eradicating the practice of open defecation in India. Under this initiative, the GOI targets provision of sanitary toilets to all households by the year 2012. Yet there are important gaps in TSC implementation. Of particular significance in the Tea Garden context, the programme caters primarily to registered Below Poverty Level (BPL) households. Hence, an issue of exclusion arises within the Tea Community and in that a sizeable population of unregistered temporary workers without official BPL identification inhabits the labour lines.¹⁰

It is in this context that the Government of Assam sponsored WASH programme originated as a mechanism to facilitate inclusive application of TSC and other Government sponsored health, water and sanitation, education and early childhood interventions within the Tea Gardens of Assam. Based on the findings of a 2008 study conducted in partnership with the Centre for Humanistic Development (CHD),¹¹ UNICEF identified and advocated the urgent need for a strong and committed partnership between the Government and diverse stakeholders towards the betterment of WASH facilities inside the Tea Gardens. While certain benefits had already been extended through existing programmes like the YCS initiative and the PPP-NRHM model, the WASH programme aims at a more comprehensive approach to include Tea Community within the purview of Government programming.¹² Hence, the WASH cell was incorporated in March 2009 as a state-level initiative by the Government of Assam, headed in Dibrugarh district by the Deputy Commissioner.

Implemented in convergence with the TSC, the WASH programme aims to ensure full coverage of the Tea Garden areas with sanitary toilets by working in partnership with UNICEF, non-governmental organizations (NGOs), community-based selfhelp groups (SHGs), and community leaders. Construction of toilets in the Tea Gardens of Dibrugarh district has been executed by NGOs and SHGs, in coordination with the Tea Garden management, the village-level Panchayat bodies, and local self-government institutions. Though funding comes from the government,

¹⁰ One Dibrugarh District WASH representative interviewed by our team estimated that 90 per cent of unregistered tea labourers do not have BPL ID numbers.

¹¹ 'A study on sanitation and hygiene conditions in Tea Gardens of Assam,' op. cit.

¹² UNICEF, 'Report on dissemination workshop – WASH in Tea Gardens.'

beneficiaries are expected to contribute, in monetary terms or otherwise, to the construction of the toilet so as to encourage a sense of ownership.

Beyond the physical construction of the toilets, the WASH programme endeavours to foster community participation from start to finish – from inspiring people to take action at the outset to seeking their active cooperation in the process, through encouraging the utilization and maintenance of toilets once completed. To this end, the programme has recently stepped up its focus on awareness generation to encourage both utilization of constructed toilets and dissemination of information on the benefits of sanitary toilets.¹³ A significant portion of the WASH programme's current scope is the propagation of general hygiene messages on hand-washing and other behavioural practices through Information, Education, and Communication (IEC) and Behaviour Change Communication (BCC) campaigns.

¹³ Throughout this paper, 'sanitary toilet' refers to a toilet equipped with both water seal and leach pits, in accordance with UNICEF standards.

Objectives of the study

The current WASH facilities available in the Tea Gardens of Dibrugarh district, Assam have been well recorded and analyzed in recent reports.¹⁴ These reports identify areas for improvement and record implementation of WASH programmes including YCS and the TSC. Recognizing the strong connection between child survival and women's health, awareness and empowerment, this research seeks to further the knowledge base through a situational analysis of Tea Garden WASH facilities from the under-examined female perspective.

Our study focuses on the key topic of unmet female demand for WASH facilities. Within this broad topic we closely examine four original themes as follows:

- ♦ **Household consumption behaviour**; the differences in awareness, procurement, and preferences for WASH-related products and facilities based on gender. In order to set the context for our study we look at the propensity to consume WASH products and the connection between WASH spending and health especially comparing the responses of men and women.
- ♦ **Sanitation and hygiene conditions and practices in the hospital and home**, especially pertaining to female-specific issues. This section focuses specifically on behavioural practices, waste management, evaluating the awareness of the key hospital stakeholders, and female-specific diseases.
- ♦ **Menstrual hygiene** as an under-explored area of sanitation and hygiene in the garden. Areas explored in this vast topic include knowledge, attitude and practice surrounding menstruation; current practices in menstrual hygiene management; and impact on girls' education.
- ♦ **Community participation** as related to WASH facilities. In this section we examine the extent to which the community takes ownership of their own WASH welfare by identifying the extent to which they approach management, participate in grassroots organizations, and participate as citizens of the government. The effect of gender on participation is also noted.

While assessments of available WASH facilities and case studies of the YCS initiative have been well documented, each of the above mentioned themes is under-explored and provides relevant information for the content of future implementable programmes.

¹⁴ Centre for Humanistic Development, 'A Study on Sanitation and Hygiene Conditions in Tea Gardens in Assam,' May 2008; Mussoorie Case Study, 'Child Survival and Development: Partnership with ABITA in Tea Gardens in Dibrugarh District of Assam,' Assam, February 2009; 'Young Child Survival Initiative in the socially excluded Tea Communities, April 2010 to December 2011, 128 – Gardens of Dibrugarh, Tinsukia & Sivasagar District,' ABITA Zone-1, UNICEF-Assam, 2010.

Methodology

Map 2: Gardens included in detailed research



Sampling Design: Selection of Gardens

Within Dibrugarh district ABITA Zone-1, 63 Tea Gardens currently implement the YCS initiative. From this pool of 63 Gardens, the Secretary of ABITA Zone-1 shortlisted 20 Gardens and our team randomly selected eight Gardens to be included in the detailed research (Map 3). Additionally, a ninth garden was chosen from outside the shortlist as additional data was needed. Gardens included in the sample span a variety of different population sizes and offer different levels of WASH facilities as shown in Figures 1 and 2.

Figure 1: Populations of sampled Gardens

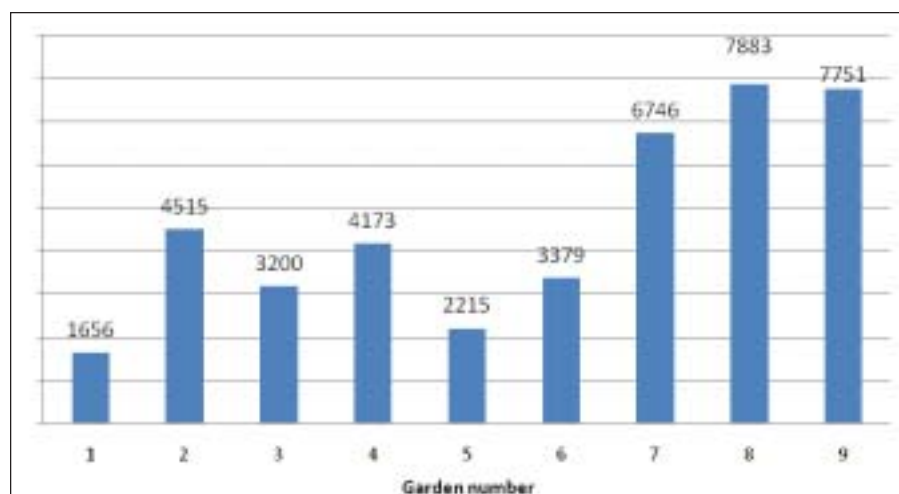
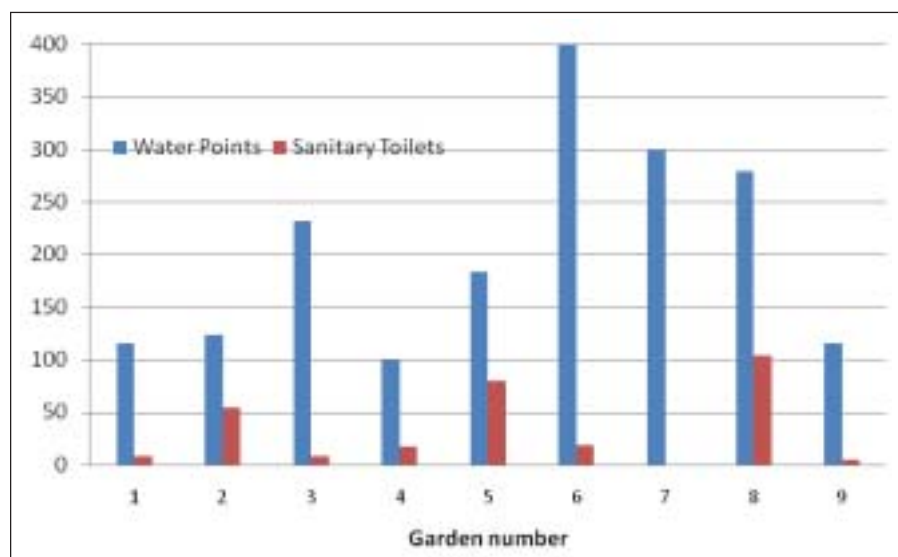


Figure 2: WASH facilities available in sampled Gardens



Research Instruments

Primary data was collected from the Gardens through four different instruments:¹⁵

- ◆ Garden Checklist
- ◆ Key Informant Interview Questions
- ◆ Focus Group Discussion (FGD) Guides
- ◆ Individual Questionnaires

The Garden Checklist included basic data about the Garden and its facilities such as the population of the Garden, and WASH facilities available in the labour lines. Additionally, we recorded types of WASH facilities available in schools, the hospital, the crèche, the anganwadi centre, the factory, and the fields. Finally, we visited garden shops and collected data on availability of WASH products and their prices.

Key informant interviews collected opinions and information from a wide variety of stakeholders within the Garden including the manager, the welfare officer, the doctor, a teacher and representatives from different participatory groups. These group leaders included a female member of the “Sishu Raksha” Committee, a labour union leader, and, in two Gardens, a representative from the Garden Mothers’ Club.

Our Focus Group Discussion guide included questions designed to facilitate an hour to hour-and-a-half long discussion. Focus groups intended to provide a safe and comfortable atmosphere for participants to share information regarding our four research themes as well as their overall experience of sanitation and hygiene in the Garden.

¹⁵ All instruments can be found in Annexure 2 of the soft document.

Our final information-gathering instrument consisted of three different individual questionnaires, one for men, one for women and one for adolescent girls. Many questions spanned all three questionnaires but there were some specific questions for each group as well.

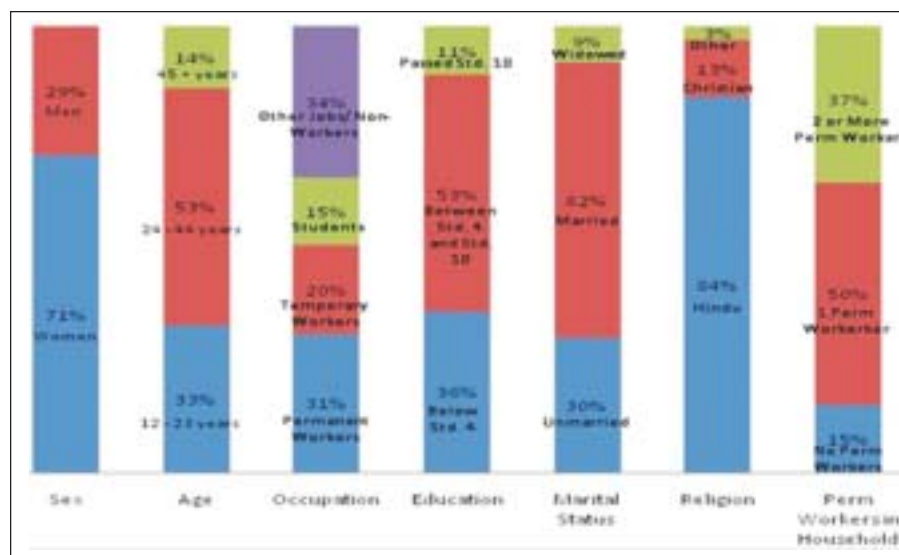
Data Collection

Data collection with the four instruments lasted approximately five to six hours in a single day in each Garden. Upon arrival at the Garden our team, as well as our two field facilitators and two translators, met briefly to discuss our study with the Garden management. After this meeting we divided into three groups with research team members rotating between implementation of the various instruments.

The first group consisted of two team members including one member conversant in Sadri. This group conducted FGDs with two different groups of 5-10 women in each Garden, roughly separated as adolescent girls with young women (ages 13-23) and adult women (aged 24+). We implemented this instrument in seven of the nine Gardens visited; in the additional two Gardens we implemented only the other three research instruments.

The second group consisted of one team member accompanied by a field facilitator and translator if necessary; this group completed the Garden checklist as well as the key informant interviews. Key Informants provided valuable data to triangulate the information gathered from labour line households and FGDs.

Figure 3: Summary statistics of individual questionnaire



The final group, consisting of a team member and translator if necessary, conducted individual questionnaires with members of the Tea Community. This group moved from house to house in the labour lines interviewing the 55 individuals / 51 households summarized in Figure 3. Our respondents were chosen randomly by going house to house in the labour lines but effort

was made to represent different age groups, genders, occupations and marital statuses in each Garden.

Data Compilation

After collecting information in the field our group developed collection instruments to organize information gathered. To compile information from key informant interviews we used Microsoft Word documents, one for each key informant. Within these documents, the responses from each garden were collected and organized by question in order to directly compare results.

Information from FGDs was collected both by a note-taker during the discussion as well as by tape recorder to review the information later. Responses were recorded in table form organized by question and all information was verified by reviewing the tape-recorded sessions.

Both the Garden Checklist and the individual questionnaire responses were stored in Microsoft Excel spreadsheets. The Garden Checklist document includes columns for each question and verbal responses for each Garden in the nine rows. The Excel sheet recording household questionnaires is fully compatible with both SPSS and STATA software for statistical analysis and includes a full code-book describing numerical entries for each answer choice and the exact form of each question asked.

Analysis Plan

Statistical analysis was done on the data gather from individual questionnaires using both SPSS and STATA software. All claims of statistical difference mentioned in the study were confirmed using a t-test and are statistically significant with p-values less than .05. Additionally comparisons were made to zero with alpha at the .05 level to claim statistical difference from zero. Where applicable, FGD data is used in addition to individual questionnaire data in order to increase sample size and robustness of results. This technique was used only if FGD questions were exact replicates of questions asked in the individual questionnaire.

Constraints and Limitations of the study

◆ Sample size

While every effort was made to construct a study that was comprehensive in its scope and representative in respondents, the sample size we were able to gather limited our study in terms of robustness. This sample size is restricted in the number of survey respondents as well as the number of Gardens we were able to visit. Additionally, after some data was compiled, gaps in information generated specific questions which we addressed with an extremely limited respondent base (mini survey of 16 respondents from two Gardens). These questions are intended to broaden the perspective of collected data, but the associated results require further investigation before significant conclusions can be made.

♦ **Possible selection bias**

Even though our group attempted to target representation of different occupations, religions, marital status, age and gender, we were guided and facilitated by people more familiar with the Tea Community than ourselves. Often our survey collectors were escorted by a member of management, and while no one was present during the actual interview besides the translator, interviewee, and respondent, never-the-less some bias may be present in the households targeted to answer the survey. In order to check the robustness of our survey data, we compared it to synopsis data from the recently published (2010) Gap Study reflecting facilities in Tea Gardens throughout Assam (Table 1). This study drew on a significantly larger sample base of 786 Gardens, 20 households per Garden.¹⁶ From the below data it is evident that our sample is significantly more educated than the sample in the Gap Study, but receives statistically the same access to facilities. Because our sample had a higher than average education level the gaps that we found in terms of knowledge and behavioural practices could be even more significant in the overall population of the Tea Community.

Table 1: Comparison of current study sample with Gap Study (UNICEF 2010) sample

Category	Indicator	Gap Study sample	Present sample
Access to WASH Facilities: Perm. Worker Households	Toilet has no water seal	58%	60%
Access to WASH Facilities: Temp. Worker Households	Toilet has no water seal	69%	66%
Education	Less than Std. 4	78 - 79%	36%
	Std. 10 or higher	1 -1.5%	11%

♦ **Language barriers**

Our group was fortunate to include one member fluent in both English and Assamese as well as conversant in Sadri. Other group members relied on translators who were not as familiar with the subject matter or nuances of our particular research themes. While we are indebted to the hard work and dedication of our translators, we realize our incomprehension of Sadri limits our ability to fully understand and accurately interpret responses.

♦ **Sensitivity of subject matter**

Because of the sensitive nature of many questions in both the individual questionnaire as well as the FGDs, respondents as well as interpreters had to adjust to talking about subject matter that may not typically be discussed such as spending habits, menstrual practices, or confrontations with management. While recognizing the limitations of the data collected, we see our study as

¹⁶ ‘Gap Study in Tea Gardens of Assam,’ UNICEF, July 2010.

not only informative in itself but also as an instigator to increased communication within these themes in the future.

♦ **Recall nature of questions**

Many questions in the household survey as well as the focus group discussions asked respondents to recall decisions or actions that happened many days, or even years, in the past. For example, individuals were asked to recall purchasing decisions related to WASH products, overall household spending patterns, frequency of management actions, and even personal memories associated with the onset of menstruation. Because this data relies heavily on the memory of the respondent, its accuracy may not be fully robust. The responses collected are, strictly the opinion and recollection of the respondents involved and represent an important perception but not necessarily a factual representation of events.

Findings

Facilities Overview: WASH Amenities Available in the Tea Gardens

While visiting each of the nine sampled Gardens, our team took note of WASH facilities in public spaces, the hospital, and labour line households. From the Garden Checklist and individual questionnaire, we found the following access to facilities (Figures 4-7).

Figure 4: Usable toilet availability

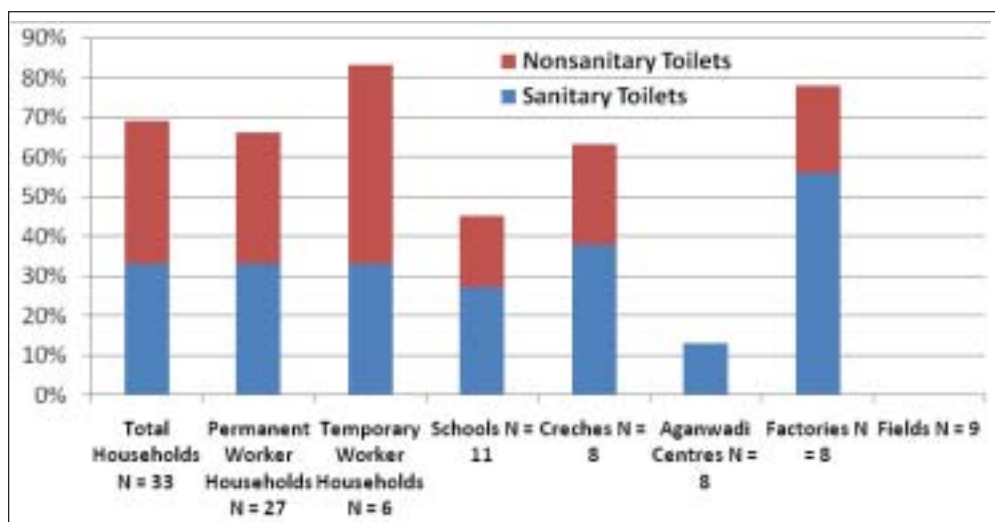


Figure 5: WASH facilities in public spaces

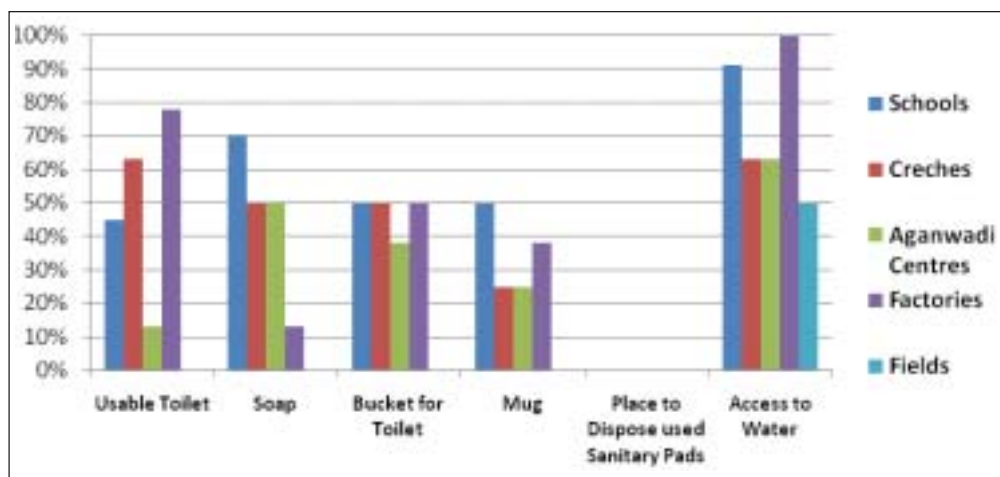


Figure 6: WASH facilities in hospitals (N = 9)

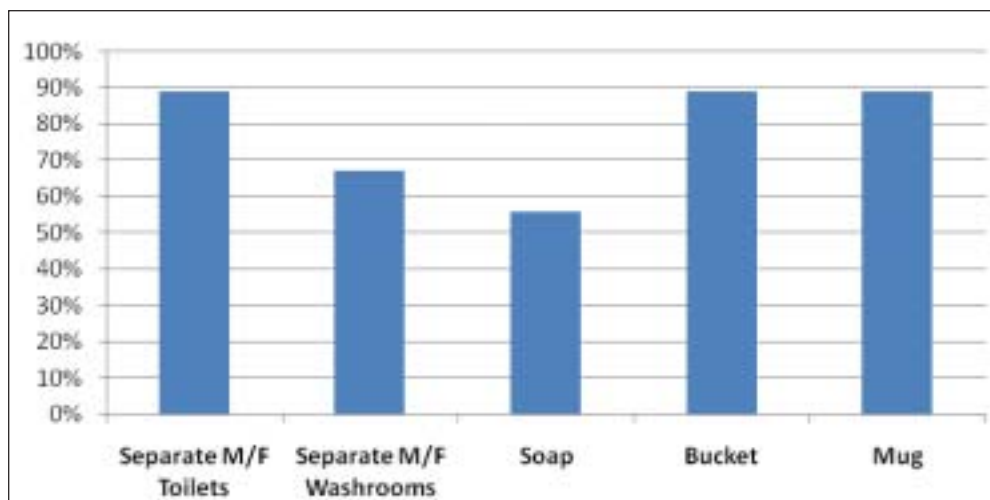
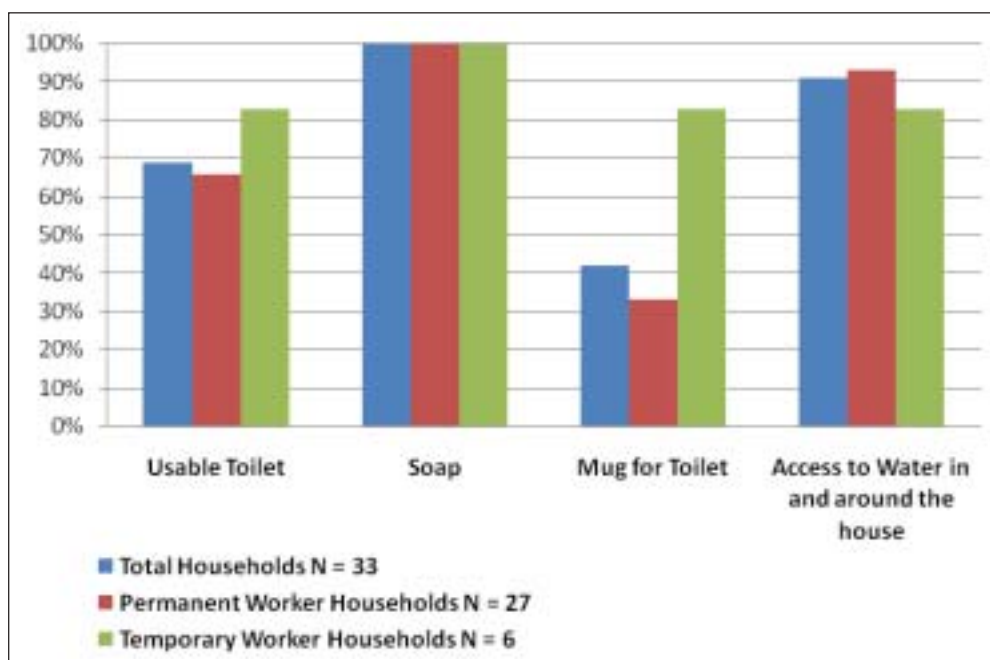


Figure 7: WASH facilities in households



Theme 1: Household Consumption Behaviour

In order to explore purchasing decisions behind water, sanitation, and hygiene issues in the Tea Garden labour lines, we chose Household Consumption and Behaviour as our first research theme. Within this theme we looked specifically at the perceived connection between household spending on WASH related products and better health. We also looked into the consumption patterns behind those WASH-related products including who purchase WASH related items and what stores carry such items. Finally, to conclude the household consumption section, we delved further into finances in a small ‘mini survey’ of Garden households specifically examining spending preferences among men and women.

Figure 8: Perceived connection to health

Percent of respondents who connect each item to health:	
Soap	100%
Washing Hands	100%
Hand Pump	98%
Towel	98%
Treating Drinking Water	96%
Toothpaste/brush	92%
Bleach/ Cleaning Solution	89%
Sanitary Pad/Cloth	89%
Toilet	89%
Bucket	87%
Water Container for Toilet	72%
Mops/Cleaning Rags	65%
Non-Health Items:	
Mobile Phone	49%
Sauf/Chutkey	32%

Connection between spending on WASH products and better health

“Improving global access to clean drinking water and safe sanitation is one of the least expensive and most effective means to improve public health and save lives.”¹⁷

Any spending a household allocates towards products that improve the sanitation conditions in their home also directly impacts the health of those living in the household. At the same time, even if households are willing to spend money on better health, consumption decisions on WASH products cannot reflect this preference unless an individual connects proper sanitation with better health.

In order to test whether this connection is perceived by labour line households we surveyed a group of men and women between the ages of 12 and 60 regarding a list of 12 WASH-related products and facilities and two non-health-related items (Figure 8). Overall, the respondents connected all the WASH items to health significantly more than the non-health-related items, except for cleaning rags. Respondents also connected the presence of a water container or mug in the toilet to health less than other items¹⁸. Two of the strongest perceived links were between

¹⁷ Montgomery, Maggie A. and Elimelech, Menachem, ‘Water and Sanitation in Developing Countries: Including Health in the Equation,’ *Environmental Science & Technology* 41(1), pp. 17-24.

¹⁸ All WASH related items statistically significantly higher per cent connect to health than non-health items at the 5% level except mops/cleaning rags, statistically the same as mobile phone. Water container for toilet and mops/cleaning rags statistically less than other WASH-related items at the 5% level.

soap and health and between washing hands with soap and water and health, both areas that have been targeted by previous WASH campaigns in the Gardens. There was no difference between male and female respondents' perceived connection between WASH products and health.¹⁹

In addition to connecting WASH-related products to health, a smaller group of respondents were asked to further articulate that relation, and describe the connection they saw between the product and a healthier lifestyle. Their answers fell mainly into three categories which are described in Table 2

For soap, and washing hands with soap and water, nearly all respondents could identify the connection with killing germs and could also demonstrate appropriate hand washing techniques.

Table 2: Ability to identify WASH connections to health

Correctly Identified the Connection to Health	Misunderstanding or Incomplete Connection	Cannot Correctly Identify Connection
<ul style="list-style-type: none"> • Soap • Washing Hands with Soap 	<ul style="list-style-type: none"> • Toilet • Hand Pump 	<ul style="list-style-type: none"> • Sanitary Pads/ Cloths for menstruation

In the second category, some respondents could correctly identify the oral fecal pathway that connects toilets to health but most respondents gave answers associating foul odour to an unhealthy facility. Additionally, for hand pumps many respondents reported that water from a hand pump is drinkable and that clean water combats coughs or the common cold. Respondents for the most part did not identify the fact that visibly clean water is not necessarily clean or mention safe extraction as a connection to health.

Finally, with sanitary pads or cloth for menstruation, a third category emerged wherein although many respondents connect the product to health, they were unable to clearly specify that connection. Most respondents associated sanitary supplies with stain protection rather than health outcomes, and no respondents mentioned a connection to urinary tract or vaginal infections.

Consumption patterns related to WASH products

In addition to connecting basic WASH-related products to health, most labour line households own a variety of these same items. Based on a verbally reported survey and an observational survey in fewer households, we found that 100 per cent of households own the necessity items of soap, a towel, a bucket, and a broom. There was no difference between the verbally reporting

¹⁹ All male and female percentages statistically the same at the 5% level for all 12 products.

households and the observed households in ownership of any product.²⁰ The majority of households also own toothpaste, at least one toothbrush, a container for drinking water, washing powder for clothes, and shampoo. Two WASH-related products owned by very few households include a mug/water container for the toilet, and a ladle for drinking water.

Procurement patterns among WASH-related items varied significantly from household to household. Some households have a single purchaser within the family and others report different people buying different products. There were no products that women bought more than men²¹. But men bought a number of products more than women including shaving cream/razors, bleach, towels, soap, brooms, and buckets.²² This makes men **the primary consumers of WASH products in the household and therefore, a potential audience for future education on health-related consumer items.**

Photograph 2: Garden shop



In terms of procurement location, some households buy all of their WASH products inside the Garden while others buy all of them outside the Garden, and many households purchase products in a combination of places including a fortnightly market set up for the Tea Community, or hawkers that sell door-to-door. Tea Garden households purchase only one of the WASH-related items, washing powder for clothes, more often from inside the Garden.²³ Consumers purchase

²⁰ No statistically significant difference found between verbal reporting and observation on any WASH-related product at the 5% level.

²¹ No difference with women greater than men statistically significant at the 5% level.

²² All differences greater for men than women and statistically significant at the 5% level.

²³ Statistically significant at the 5% level

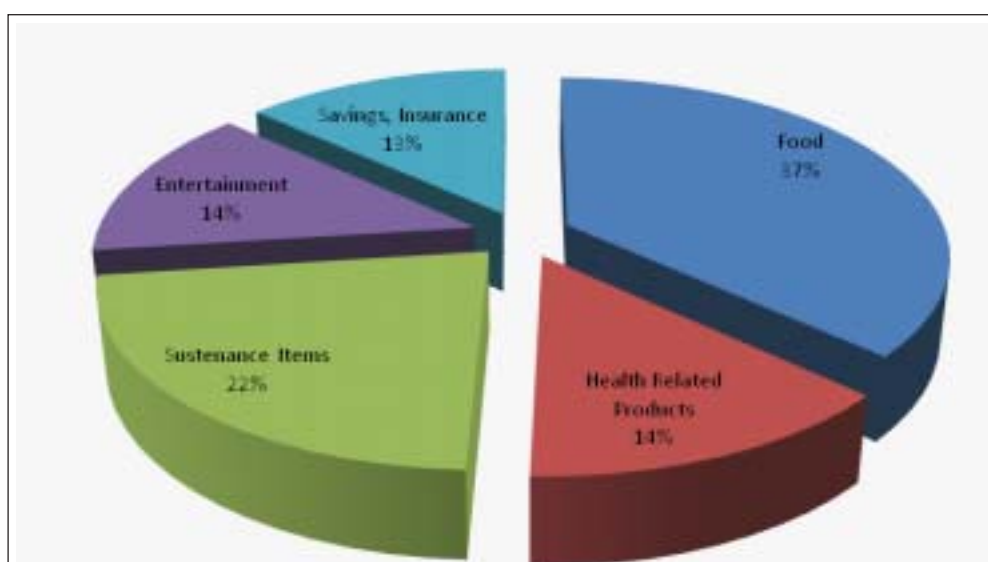
many items more often outside the Garden including buckets, mugs, containers for storing drinking water storage, and nail clippers.²⁴ While most households own buckets and containers for drinking water, the number of households owning mugs for the toilet might increase if they were more widely available inside the Garden.

Since so many Tea Garden households buy WASH-related products outside the Garden, the question of the items stocked in Garden shops becomes particularly relevant and intriguing (Photograph 2 depicts a typical Garden shop). The vast majority (83 per cent) of respondents answered that for the items they currently purchase outside the Garden, they would prefer to purchase these items inside the Garden if they were available. Less than 20 per cent of the surveyed Garden shops stock mugs, shaving cream, towels, water containers, liquid soap, sanitary pads or nail clippers. Of these items, only towels and water containers are widely used in labour line households.

Labour line household finances

Our examination of labour line household spending practices draws on a mini-survey and only intends to give a glimpse into spending patterns within the Tea Community (Figure 9). On average, as in many low income households, the largest portion of income (37 per cent) was spent on food to supplement rations. When comparing all the maximum spending values reported in the sample, the lowest maximum was reported spent on health-related items. Additionally households spend approximately equal amounts on savings, health-related items, and entertainment.

Figure 9: Division of monetary monthly income



²⁴ All items statistically significantly purchased more outside the Garden at the 5% level.

This data supports the findings of Daryl Collins, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven in their recent book “Portfolios of the Poor” which investigates the surprising phenomenon “that most of the households, even those living on less than one dollar a day per person, rarely consume every penny of income as soon as it is earned. They seek, instead, to “manage” their money by saving when they can and borrowing when they need to.”²⁵ Tea Community households practice the same behaviour of setting money aside for the future observed by Collins and his co-authors among poor people worldwide. Collins et al further articulate the increased necessity of putting money aside in this fashion because of the irregular nature of a poor household’s income. “Small incomes mean that poor people are more often than others placed in the position of needing to intermediate. The uncertainty and irregularity of their income compounds the problem by ratcheting up the need to hold reserves, or to borrow when the income fails to arrive.”²⁶ Since many Tea Community household’s have irregular income, especially in the case of temporary workers or non-workers, the necessity of putting money aside becomes even greater and should not be seen as conspicuous consumption but instead as a necessity of a BPL lifestyle.²⁷ However, how far this kind of savings is mitigating the economic vulnerability of this category of the population needs to be further explored.

In order to assess a gendered perspective of household spending our full survey compared spending preferences of men and women. Out of 12 possible spending categories not including food, men and women were asked if they would prefer to increase spending, decrease spending, or if they were satisfied with the current amount of household spending in each category. The majority of women want to increase savings (81 per cent), and spending on household repairs (50 per cent). Women also want to decrease spending in five different categories²⁸. The majority of men (71 per cent) want to increase savings but there are no categories where the majority of men want to decrease spending. From this result we see that men are more satisfied overall with household spending decisions, and can infer that the household more often spends on men’s priorities. Since neither gender indicated a preference to increase spending on health related items, all participants might benefit from additional education on the benefits to such items in the home.

²⁵ Collins, Daryl, Morduch, Jonathan, Rutherford, Stuart, Ruthven, Orlanda, *Portfolios of the Poor: How the World’s Poor Live on \$2 a Day*, Princeton University Press, Princeton N.J. USA, 2009.

²⁶ Ibid pp.14.

²⁷ Ibid pp.65 – 94.

²⁸ Non-essential small foods (58%), transportation (56%), entertainment (52%), and non-alcoholic drinks (50%)

Theme 2: Sanitation and hygiene at home and in the hospital

Behavioural practices

Figure 10: Washing hands with soap after defecation

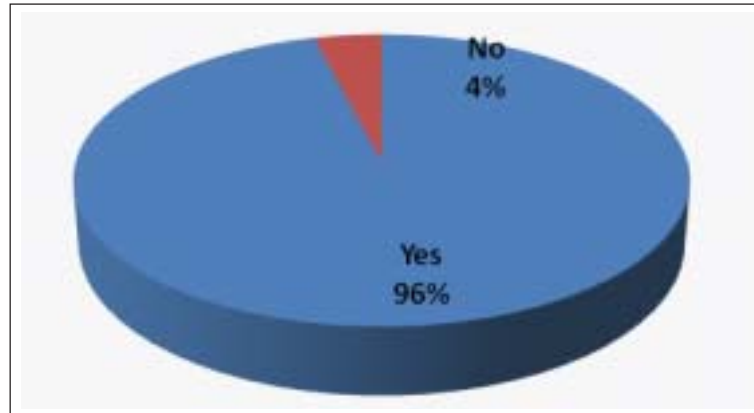


Figure 11: Washing hands with soap before eating

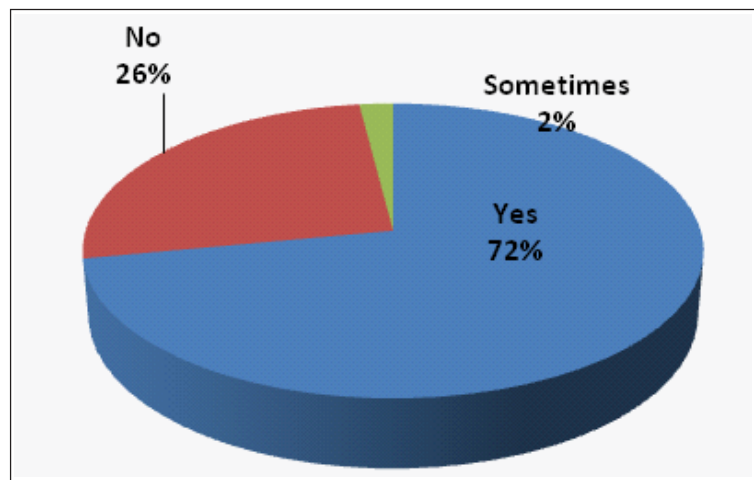
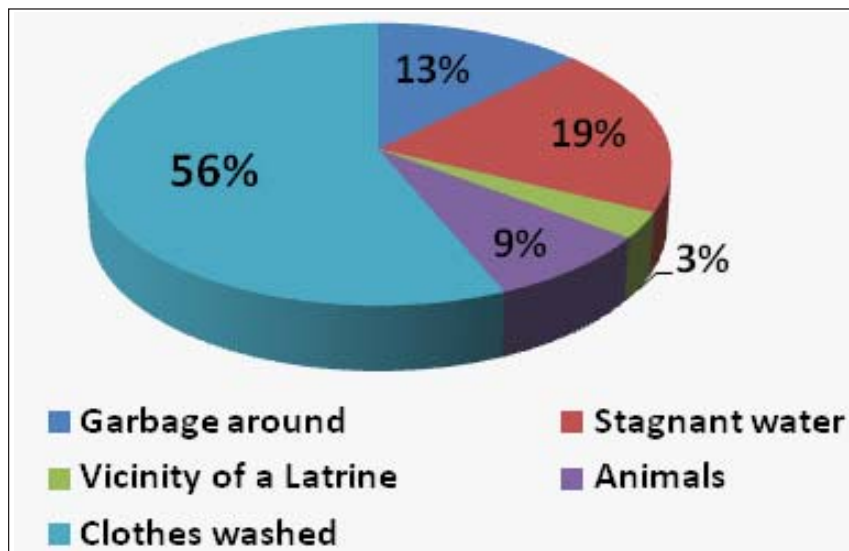


Figure 12: Sources of contamination of hand pumps



Washing hands with soap is an important health behaviour that has been actively pursued and promoted by the WASH campaign launched by UNICEF and its partners. As is visible in figures 10 and 11, such initiatives have resulted in a huge impact in the Tea Community with a significant number of people washing hands with soap after defecation and before eating. The FGD's also reveal a very substantial number of people connected a clean environment to good health (92 per cent). This also supports the finding that UNICEF and its partners have had a positive influence in raising the awareness levels of the Tea Community.

All households surveyed access drinking water from tube wells. Given this finding, we further delved into the contamination of tube wells. As is evident from Figure 12, there are multiple sources of contamination of all the tube-wells surveyed. Washing clothes at the source was reported with alarmingly high frequency which can lead to dirty/soapy water seeping into the water source rendering it unfit for drinking. This practice can be partially attributed to the general lack of separate washrooms for bathing/ washing clothes in the labour lines.

We also examined drinking water practices in our study and found that a majority believe that clean and healthy drinking water comes directly from the tube wells. Among FGD respondents, 74 per cent could not connect unhealthy drinking water to diarrhoea thus underlying the finding that they do not possess knowledge about the connection between unhealthy drinking water and possible diseases. Also, 64.5 per cent reveal that they drink untreated water. During our survey, we also found out that though some people treat water before drinking, they do not drink treated water exclusively. Education on the health benefits of drinking treated water exclusively such as boiling/filtering it before drinking requires immediate and extensive attention. Finally, transferring water with a ladle and thus not contaminating the water source is not practiced by 77 per cent of the households surveyed. Appropriate BCC campaigns need to be effected in these areas led by Health workers currently active within the Tea Community.

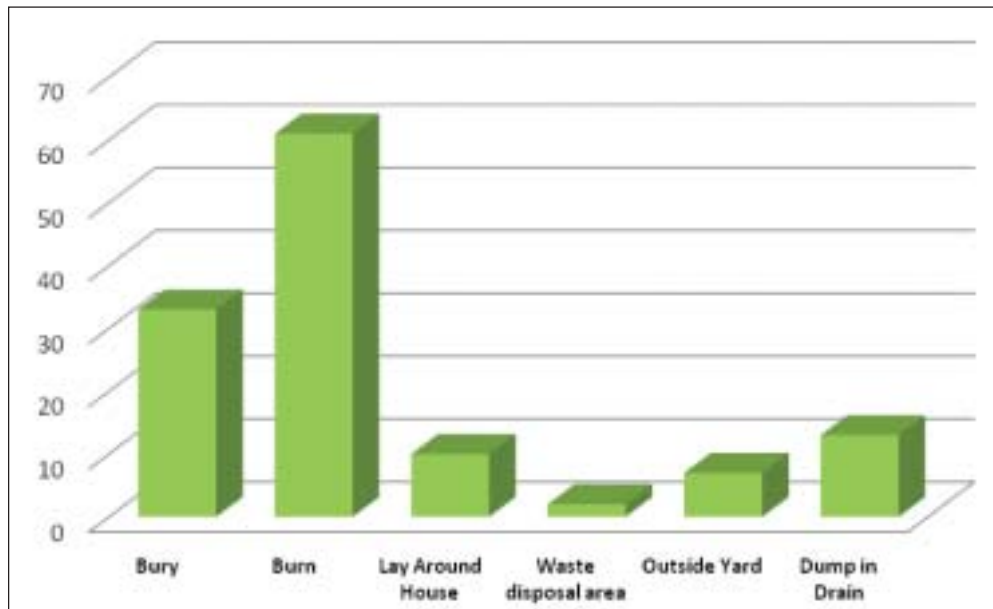
Waste Disposal

Waste Disposal at Home

Proper Waste Disposal is not just a public health concern but a strong community concern as well. Waste especially toxic waste if not segregated and disposed of suitably can leach into the ground and contaminate our water sources and also lead to environmental contamination. Even non-toxic waste contributes to polluting our environment. Thus, our research focuses on this vital but low impact section of current WASH Programmes.

The Tea Community has had no exposure to systematic garbage disposal management. Unlike in the towns and neighboring villages where they have a municipal board/ Panchayat committee to look after the same, the Tea Gardens do not have an organized body to look after garbage disposal.

Figure 13: Waste disposal methods at home



As depicted in Figure 13, a large number of respondents burn their garbage. Waste segregation is not practiced and polythene is unanimously burnt underlining a potential health hazard. A significant number of respondents also dump their garbage in the drains, let it lie around the house or dump it outside the yard hinting at alarming levels of environmental contamination. Additionally, the respondents also reported a lack of space for garbage disposal in the labour lines as the houses are very close together. Unlike in the typical Indian villages, the labour lines are majorly cluster settlements which leaves very little space between the garbage heaps and their living space. The open garbage disposal pits are thus adjacent to their houses and a potential breeding ground for germs.

The respondents in the FGD's could correctly connect that stagnant/unclean drains breed mosquitoes and lead to malaria but do not possess knowledge about mitigation.

The first step should therefore be Behaviour Change:

- ♦ **To disperse awareness about correct garbage disposal techniques through structured IEC campaigns.**

FGD respondents unanimously agreed that a garbage disposal truck/cart on the lines of the municipal disposal truck would be a highly convenient option in this scenario.

The second step should involve providing basic infrastructure

- ♦ **A proper garbage collecting and disposal system should be provided.**

Most respondents from FGD's also reported a problem of stagnant overflowing drains and irregular spraying of insecticide.

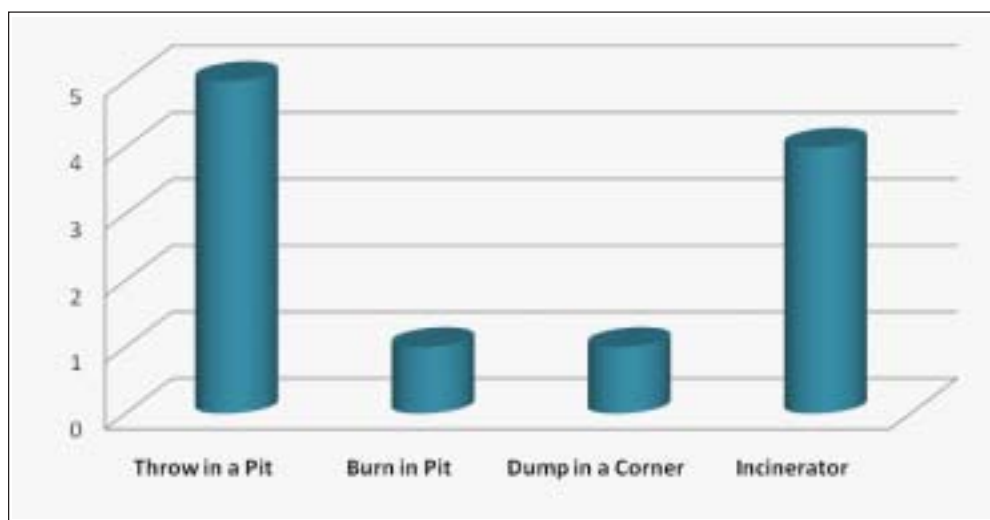
The third step thus should be towards providing adequate facilities

- ♦ Regular cleaning of the overflowing/ stagnant drains on a weekly basis especially during the wet monsoon season.

Waste disposal in the hospital

Biomedical waste disposal in the Tea Gardens is an area of grave concern. Proper disposal of hospital waste is of paramount importance because of its toxic and hazardous nature.

Figure 14: Waste disposal methods in the hospital



The majority of the Garden hospitals use pits to bury hospital waste as clearly indicated by Figure 14. Only about half of them have separate burial pits segregated into bio-degradable and non-bio degradable waste. Even in the hospitals having segregated pits, the hazardous waste is not put into deep concrete burial pits but buried in open scattered pits which contaminate the surrounding environment. Only 44 per cent of the hospitals surveyed possessed Incinerators. The ones that did have Incinerators were typically tin drums used for burning waste and were not scientifically approved.

Of all the hospitals surveyed, 77 percent are under NRHM and as such should have a mandatory deep, covered, concrete pit for burial of hazardous waste. Currently however, none of the hospitals have such a pit. The implications of hazardous waste lying openly around the hospital is an over whelming health risk.

Table 3: Percentage of hospitals in which colour-coded dustbins observed (N=9)

Red: Solid Waste Bio- Hazard	Blue: Waste Sharps	Green: Domestic Waste	Black: Discarded Drugs	Yellow: Human Anatomical
44%	44%	22%	22%	0%

The colour coded dustbins are mandatory for all hospitals as outlined in the Ministry of Health and Family Welfare Guidelines. During our survey, we observed that only a few hospitals had colour coded dustbins and bio-medical waste was not segregated (Table 3). Moreover, where present, the colour coded dustbins were only found in a particular room of the hospital (the maternity room or the dressing room for example). They were not found uniformly throughout the hospital or even in multiple rooms. They were also rarely covered.

Some significant concerns about the Garden hospitals

Figure 15: Claimholder’s ratings of Garden hospitals

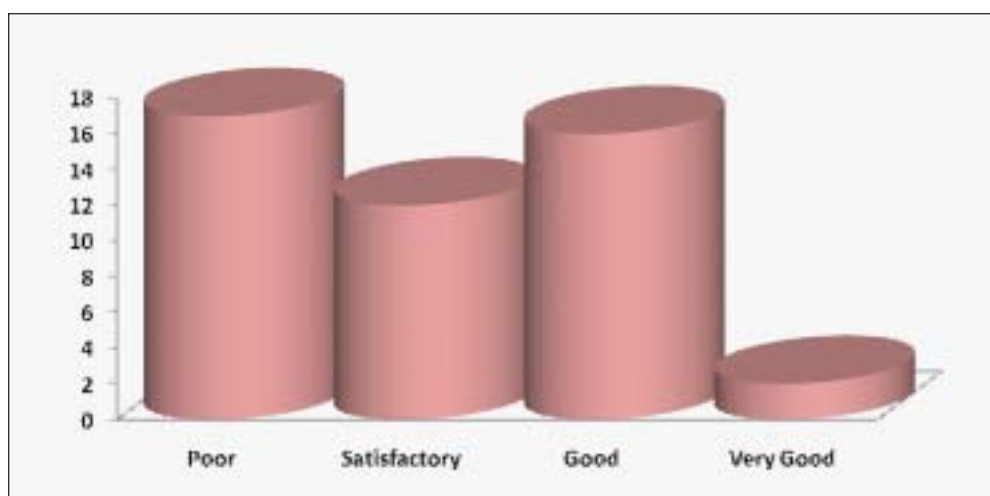


Table 4: Stakeholder’s ratings of Garden hospitals

Garden	Doctor	Welfare Officer
1	6	7
2	8	8
3	7	8
4	6	6
5	6	10
6	8	7
7	9	8
8	8	7.5
9	6	6
Averages	7.1	7.5

The above Table 4 and Figure 15 show an evaluation carried out to assess how the stakeholders viewed the facilities provided Vis-à-vis the claimholders perception of those facilities. There is clearly a gap between the two. On further probing in the FGD’s, the gaps thus identified have

been a lack of soap, foul odour and unclean toilets, unclean bed sheets or no bed sheets in some cases and no mosquito nets.

The Ministry of Health and Family Welfare follows the WHO guidelines as its yardstick for maintaining sanitation and hygiene in Indian hospitals. With this in mind, the level of awareness of the main stakeholders of the Garden hospitals — the welfare officer and the doctor — were conducted during the survey. None of the welfare officers surveyed knew about the standard guidelines for sanitation and hygiene in hospitals whereas 60 per cent of them claimed to monitor the regular sanitation and hygiene of the hospitals themselves. About 71 per cent of the doctors surveyed had no knowledge about the standard WHO guidelines also. Further, only 16 per cent of the doctors surveyed claimed information about the ‘Diarrhoea Management Protocol’ disseminated by UNICEF.

Besides, gaps between what the WHO guidelines demand and current facilities available were substantial. Some of the WHO parameters tested during our survey and the findings thereof are as follows:

Table 5: Hospital’s adherence to WHO recommendations

WHO Recommendations	Hospitals Following (%)	Hospitals Not Following (%)
A 6 feet distance between beds	11.1	88.9
Female wards receptive to sunlight	88.8	11.2
Disinfected bed sheets	77.7	22.3
Disinfected mattresses	55.5	44.5

Focusing on the gender perspective of the Garden hospitals, the survey reveals:

Table 6: Female perspective on garden hospitals

Total female patients as against male patients accessing hospital	55 %
Total surveyed women suffering from UTI’s and Vaginal infections	56 %
Total surveyed women accessing hospital for UTI/Vaginal infections	23 %

The findings outline the fact that a majority of the women do not access medical help for their specific female diseases though they do access the Garden hospital. The major reasons they gave were:

- ♦ **I do not attach importance to my specific female diseases and think medical help is necessary**
- ♦ **There is a lack of special training/ medicines to treat specific female diseases in the Garden hospital**

Theme 3: Menstrual Hygiene

With a view to exploring a critical though broadly overlooked area of WASH, we examined menstrual hygiene within the Tea Gardens from several angles. From a female perspective, access to appropriate knowledge, a conducive cultural environment, and the necessary facilities to manage menstruation hygienically, and with dignity, is vital for attainment of a healthy and productive life.²⁹

The cultural context: Knowledge and beliefs about menstruation

Considering the menstrual experience from its first occurrence, our team collected data on several variables associated with menarche (Table 7).³⁰

Table 7: Menarche-related variables³¹

Variable	Adolescent Girls & Young Women, 12-23 yrs. (N=15/56/46/27)	Adult Women, 24-60 yrs. (N=15/43/20/29)	Total (N=30/99/66/56)
Mean age at menarche	12.3 yrs	13.0 yrs	12.7 yrs
Had prior knowledge at menarche	46%	26%	37%
Learned about menstruation at school	9%	20%	12%
Felt scared at menarche	63%	72%	67%

Overall, only 37 per cent of respondents reported receiving any information on menstruation prior to their first personal experience of it. Among those having prior knowledge, most identified their sister or sister-in-law (37 per cent), mother (34 per cent) or friends (23 per cent) as the source. Only 12 per cent had learned about menstruation at school, and FGD participants indicated that such information was generally limited to a basic overview of the physical process or cursory nutrition and hygiene advice. Fear was the most commonly cited reaction at menarche among women and girls in the Tea Gardens. Shedding light on a possible source of this fear, in four out of the 12 FGDs as well as in a number of personal interviews, women recounted stories of confusing their first menstrual experience with an infestation of leeches; in all such cases, they linked the confusion with a lack of pre-menarcheal knowledge or exposure.

²⁹ Mahon, Therese and Fernandes, Maria, 'Menstrual hygiene in South Asia: a neglected issue for WASH (water, sanitation and hygiene) programmes,' *Gender & Development*, 18(1), pp. 99 – 113.

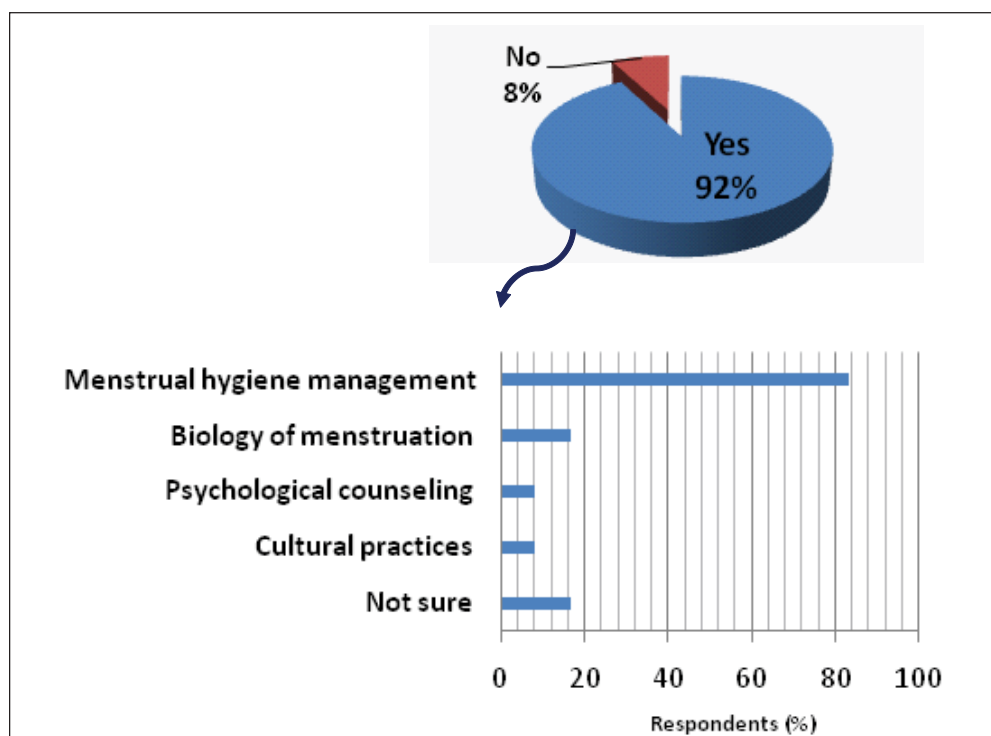
³⁰ Menarche refers to the first menstrual period, or menstrual bleeding.

³¹ Difference between percentages delineated in red is statistically significant at the 5 per cent level.

Splitting the analysis by broad generation categories – adolescent girls and young women (12-23 years), and adult women (24-60 years) – it emerges that the younger generation is significantly more likely to be familiar with menstruation at the time of menarche than older generations of women.³² Extrapolating from this discrepancy, it appears that the channels through which adolescent girls are receiving information about menstruation within the Tea Gardens are relatively stronger in more recent generations than to previous generations.

Our team also found rampant misconceptions on the cause and purpose of menstruation. The majority of women surveyed identified ‘*Gift of Nature/God*’ as the cause, casting the experience in a positive though mystic light, and some held negative conceptions of menstruation as an abnormal pathological process (‘*Disease*’) or ‘*Punishment for sin*’ (12 per cent). Notably, only 7 per cent of respondents, all adolescent girls or young women, correctly reported the cause as ‘*Physiological process.*’ Further probing in FGD settings, however, did reveal a tenuous connection of menstruation to a woman’s reproductive capacity in a number of women initially claiming no knowledge on the cause.

Figure 16: Do you think girls should be taught about menstruation at school? / On what subject matter? (N=13)



The male perspective

With a view to gaining a holistic sense of the socio-cultural bearings impacting on menstrual issues in the Tea Communities, we also surveyed men regarding their knowledge and beliefs on

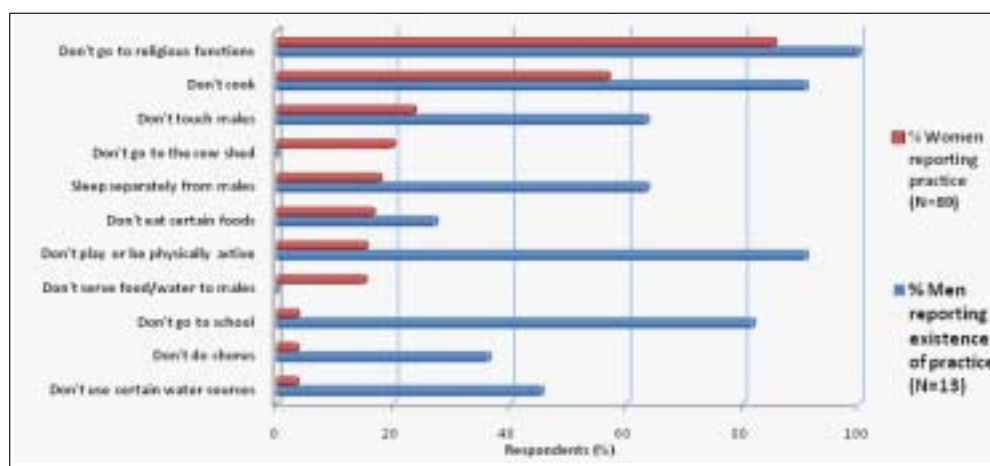
³² This difference was significant at the 5 per cent level.

menstruation and found high levels of basic recognition combined with high levels of negative association. Majority of men are at least conceptually familiar with menstruation and also believe that girls should be taught about menstruation at school, especially on the subject of ‘Menstrual hygiene management’ (Figure 16). Providing insight into the tone of the male perception of menstruation, slightly over half (54 per cent) of men surveyed said that they regard females as ‘unclean’ during menstruation.

Menstrual taboos and restrictions

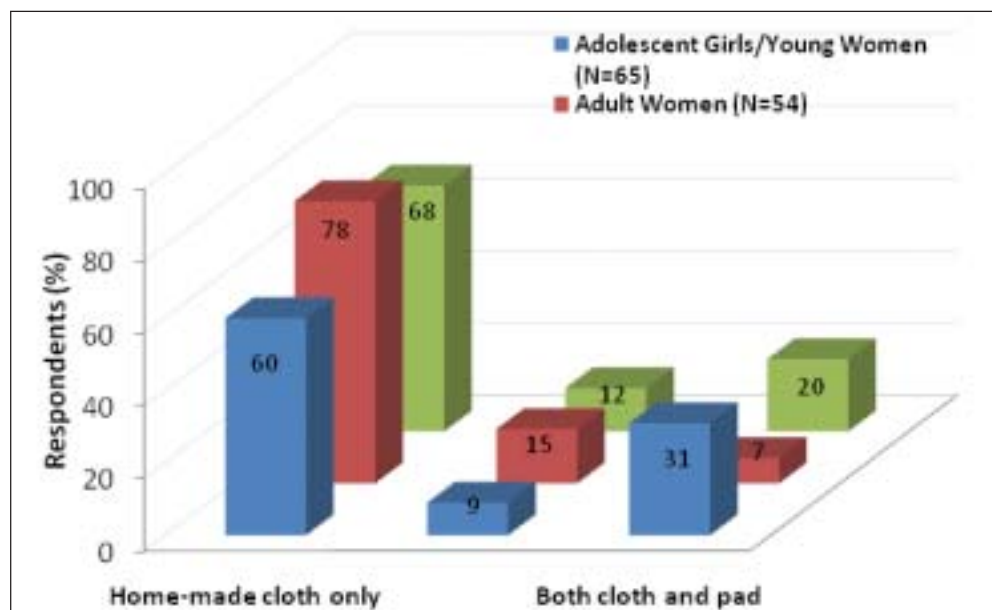
The team also gathered data from both men and women regarding common taboos surrounding menstruation in the Tea Gardens. Survey and FGD findings alike reveal that traditional beliefs and restrictions surrounding menstruation are firmly established and passed down through generations, typically by the example of the mother or other female relative. Based on FGDs, very few women seem inclined to challenge these rituals, often because they subscribe to the concept of their own impurity during menstruation and because they believe the restrictions to be in their own best interests.

Figure 17: Traditional beliefs and restrictions surrounding menstruation



We found significant gender discrepancies in the level of support for various menstrual restrictions (Figure 17). For all but two restrictions, the percentage of men recognizing the practice as customary was higher than the percentage of women reporting active subscription to that practice. While many of these taboos hinge on deeply ingrained cultural and religious beliefs and are not necessarily problematic from a public health perspective, there are some concerns. First of all, nearly 70 per cent of male respondents cited ‘*Don't go to school*’ as a restriction followed by women during citation, a practice which, if actually followed, would have a pronounced detrimental impact on girls’ education. Additionally, the high percentage (46 per cent) of men mentioning ‘*Don't use certain water sources*’ as a menstrual convention is a particular concern from a WASH perspective, as adherence to this practice would clearly compromise a woman’s capacity to hygienically manage her menstrual period. Each of these potentially harmful taboos seems to originate from a generalized misconception of menstruation as debilitating or polluting.

Figure 18: Distribution by absorbent material used in last menstruation



Menstrual hygiene management (MHM)

Current practices in MHM

Against this backdrop of attitudinal and socio-cultural underpinnings, the team explored current practices in menstrual hygiene management (MHM) within the Tea Gardens.

The majority of women and girls in the Tea Gardens are using re-usable homemade cloths to catch their menstrual flow, typically constructed from repurposed cotton materials (Figure 18). Within the survey respondents:

- ♦ 68 per cent use re-usable cloths only,
- ♦ 12 per cent use single-use commercially-made sanitary pads only, and
- ♦ 20 per cent use both types during their last menstruation.

Comparing the patterns of absorbent material utilization between age groups, adolescent girls and young women are significantly more likely than the older female generations to utilize disposable pads,³³ often as a component of a mixed method. Indeed, many participants made it clear during FGDs that, given the option to choose between sanitary pads and homemade cloths, they might wish to use the sanitary pad exclusively. However, because they cannot always afford them, many use cloth material when staying at home and sanitary pads only when venturing outside the home. This may be the case particularly in girls and younger women, who are less likely to have financial autonomy.

MHM awareness and decision making

To further explore the menstrual absorbent choices being made by service users in the gardens, we posed questions regarding awareness of alternative options and the reasoning behind given

(?)³³ Difference is statistically significant at the 5 per cent level. ??

choices. Among those women utilizing homemade cloths as their sole method of menstrual protection, one third had never heard of commercially-made disposable sanitary pads. We found that familiarity with single-use pads was linked to two main factors: age and education. Namely, younger and more educated women were significantly more likely to have awareness of both methods.³⁴ Thus, it appears that younger, more educated female generations in the Tea Community may have better access to sources of knowledge on progressive MHM methods, highlighting their potential as a vehicle for change at the grassroots level.

In the context of several FGDs, we garnered information on what different factors might be impacting on the menstrual absorbent choice. Key findings from these observations are summarized in Table 8 below, along with a public health perspective of the comparative advantages associated with the two methods.

Table 8: Key comparative advantages of commercially-made sanitary pads vs. homemade cloths³⁵

	Sanitary pad	Home-made cloth
User-identified advantages	<ul style="list-style-type: none"> ◆ Hygiene concerns ◆ Comfort / Absorbency ◆ Doctor’s recommendation ◆ Friend’s recommendation 	<ul style="list-style-type: none"> ◆ Availability / Access ◆ Comfort / Familiarity ◆ Economic factors (Lack of financial autonomy, particularly among Adolescent Girls/Young Women) ◆ ‘If use disposable pad, have to change it more frequently’ <i>(Misconception)</i>
Public health perspective	<ul style="list-style-type: none"> ◆ Better absorption, single-use, more breathable → More sterile ◆ More convenient/discreet to tote → Higher changing frequency facilitated → Reduced risk of reproductive tract infections (RTIs) and urinary tract infections (UTIs) ◆ Not necessary to wash → Conservation of water; less contamination of water sources 	<ul style="list-style-type: none"> ◆ Reduced risk of rashes/contact dermatitis for some women with sensitive skin or allergies ◆ Less overall waste created through reuse of material → Reduced environmental impact associated with disposal

³⁴ This effect was statistically significant at the 5 per cent level.

³⁵ Commonly cited or critical reasons/advantages are delineated in red within the table.

Beyond the type of menstrual absorbent used, there are several practices associated with managing menstruation in the most hygienic way possible. These methods may be considered best practice in terms of reducing the risk of RTIs/UTIs while also minimizing the harmful impact of improper waste disposal, as outlined in Table 9.

Table 9: MHM best practice assessments

Best Practice	Percentage reporting practice	
	Adolescent Girls & Young Women, 12-23 yrs. (N=16/13/36/12)	Adult Women, 24-60 yrs. (N=18/16/44/10)
Changing cloth/pad at least twice daily	100%	94%
Washing homemade cloths with soap	100%	100%
Drying homemade cloths in the sunlight	81%	66%
Proper disposal of used sanitary pads ³⁶	50%	50%

Though the majority of females surveyed appear to be adhering to MHM best practice guidelines as far as the changing and washing of pads and cloths, there is clearly room for improvement in the areas of proper drying of cloths and proper disposal of used sanitary pads. Even among those surveyed respondents reporting that they dry their cloths in the sunlight, participants in FGDs clarified that the location is often a separate, secluded area and many hide the drying cloths under other clothes out of embarrassment lest passersby see the bloodstains. Such a practice defeats the purpose of drying the cloths in the sunlight, as the cloths cannot be effectively sterilized by the ultraviolet rays. The issue of menstrual waste disposal seems also to be a particularly challenging area marked by certain confusion. A large number of women reported throwing their used sanitary pads into the latrine, a practice liable to lead to clogging. In this vein, FGDs also revealed some misunderstanding regarding the meaning of ‘disposable pad,’ as many girls described rinsing out the used pads prior to disposal.

Surveying the overall MHM practices of women and girls in the Tea Gardens, it is clear that certain important messages have already been effectively conveyed. Indeed, when women were asked whether they had ever received information on MHM from any source, 62 per cent replied that they had. ‘*Mother*’ was cited most commonly as the source of such information, but not far behind this was a category of outside educators and community initiatives. For example, some women and girls reported hearing about MHM issues in UNICEF-led sessions, while others mentioned information they had picked up in the context of Adolescent Girls’

³⁶ Proper disposal of used sanitary pads refers to any disposal method outside of those considered improper, where improper disposal methods include throwing used pads into or behind the latrine, or leaving them lying about outside of a designated trash disposal area.

Clubs. Hence, the team observed that, even in the absence of formal WASH programming in the area of menstrual hygiene, the flow of information has already been set in tentative motion at the grassroots level – a flow that might fruitfully be harnessed and expanded with coordinated programmatic input in the future.

Impact on girls' education and female disempowerment

Finally, beyond the raw sanitation and hygiene concerns of menstrual hygiene, it is important to note the ramifications from the perspective of girls' education and the potential for female disempowerment through menstruation-linked absenteeism and social exclusion.

Figure 19: Have you ever been absent from school or work due to menstruation?

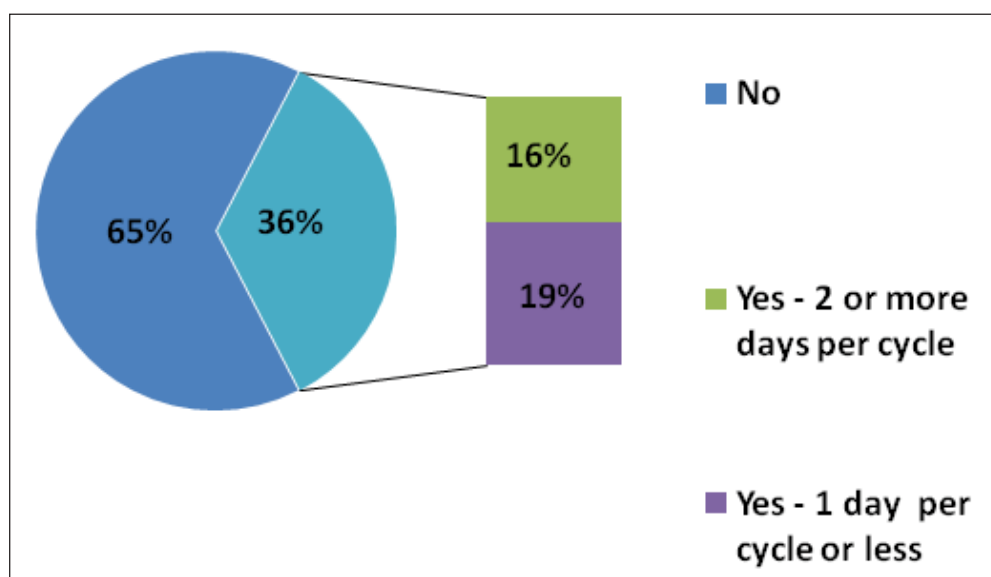


Figure 20: Key factors linked to reported absenteeism



Among the women and girls surveyed, 35 per cent had the experience of being absent from school or work at least one day for menstrual problems. Beyond physical absence during menstruation, our findings suggest that even those girls attending school during menstruation may not be in a position to learn effectively. Out of the nine adolescent girls surveyed on this matter, five reported feeling that menstrual problems interfered with their ‘ability to concentrate or think clearly at school’ (Figure 19).

From a WASH perspective, a key finding on this theme was that lack of adequate or private WASH facilities was an oft-cited reason for missing school or work. For example, many women in the FGDs complained about the absence of toilets or private washroom facilities in the fields. Meaningfully, previous research has indicated that girls’ attendance at school may be increased simply through improved sanitation and provision of the basic facilities required for the dignified and hygienic management of menstruation – basic amenities like privacy, water supply, and accessible means of waste disposal.³⁷

Finally, linking back to the adolescent girl’s first experience of menstruation, we found that girls not taught about menstruation before menarche are significantly more likely to have missed at least one day of school or work due to menstrual problems.³⁸ Though the extent of the connection in terms of the number of days missed is unclear, it may be that girls not sufficiently prepared for their first experience of menstruation may fall into an extended pattern of absenteeism. Hence, for the psychological, medical, and social well-being of the female member of the Tea Community, it appears that there is a critical need for education and awareness-raising on menstrual issues to be initiated from the earliest stage.

Theme 4: Community Participation

As a fourth research theme, we examined the extent to which the Tea Community uses various channels of participation to look after their own WASH welfare.

Table 10: Satisfaction with WASH facilities

Satisfied with water facilities	73%
Satisfied with drainage facilities	38%
Satisfied with toilet facilities	32%

In order for a population to participate in improving their living standards, an underlying dissatisfaction with current standards coupled with a recognized need for improved facilities

³⁷ Bhardwaj, S and A Patkar, *Menstrual hygiene and management in developing countries: taking stock*, Junction Social, 2004.

³⁸ This effect was statistically significant at the 5 per cent level.

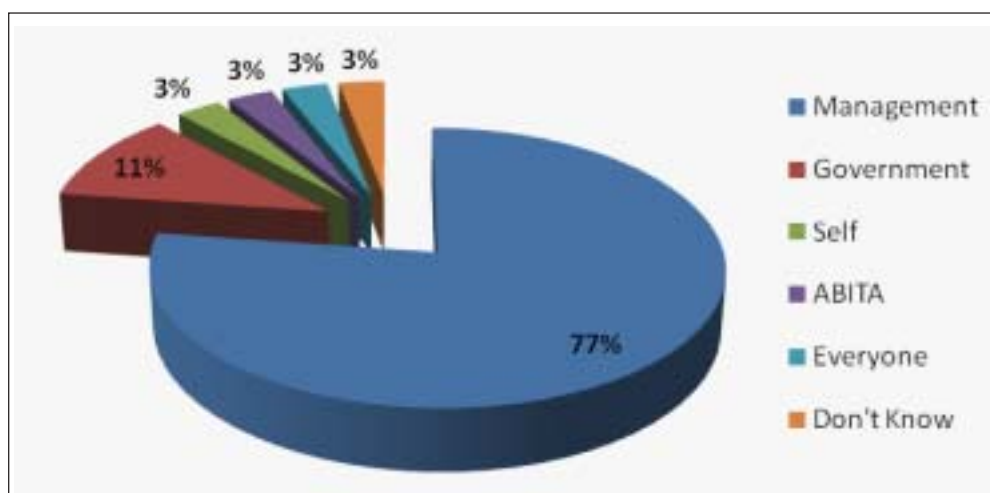
must exist. In this regard, the majority of the Tea Community did report dissatisfaction with their current WASH facilities, namely drainage and toilet facilities as shown in Table 10.

In addition, a majority (62 per cent) of those respondents that have seen water and sanitation facilities outside their Garden recognize those facilities as being better than their own. Notably, 95 per cent of respondents feel better water and sanitation facilities are needed in the Gardens, and 97 per cent claim to personally want these better facilities. Thus, the necessary foundations for participation are in place in the Tea Community.

The Dependency syndrome

Our study found that the people of the Tea Community depend heavily on management to solve their problems, provide them with services, and address their concerns. When asked who they feel is most responsible to provide them with better facilities, a large majority of respondents, 77 per cent, reported management. Only 11 per cent said government, and even fewer, 3 per cent, said themselves (Figure 21).

Figure 21: Who do you feel is most responsible to provide you with better facilities?



Interestingly, this dependency was found across both genders and among all levels of workers within the Garden, including permanent workers, temporary workers, and non-workers. This is problematic not only because dependency is not desirable, but also because only permanent workers are fully entitled to management's welfare services according to law. Therefore, many people within the Garden are depending on an entity that is not legally responsible to provide them with facilities and services.

Participation via management

Although they depend heavily on management, the Tea Community does not passively accept prevailing conditions. They participate in their welfare by taking initiative to raise concerns over their facilities and conditions to management. Accessibility of management does not seem to be an issue, and management has effectively made itself available to hear workers' complaints. However, 70 per cent of respondents that have raised concerns to management claim that no

action has been taken to address their needs, making this mode of participation largely ineffective (Figures 22- 23).

Figure 22: Service user perception of and interactions with management

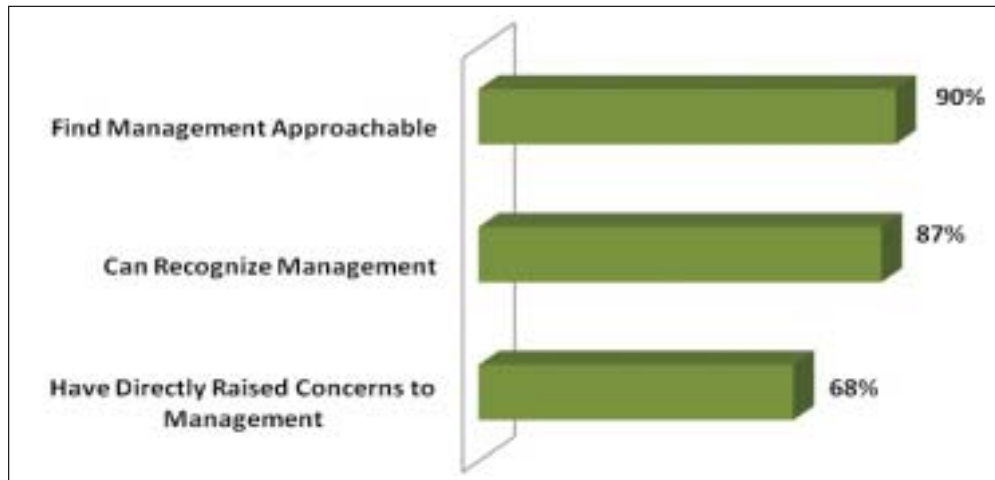
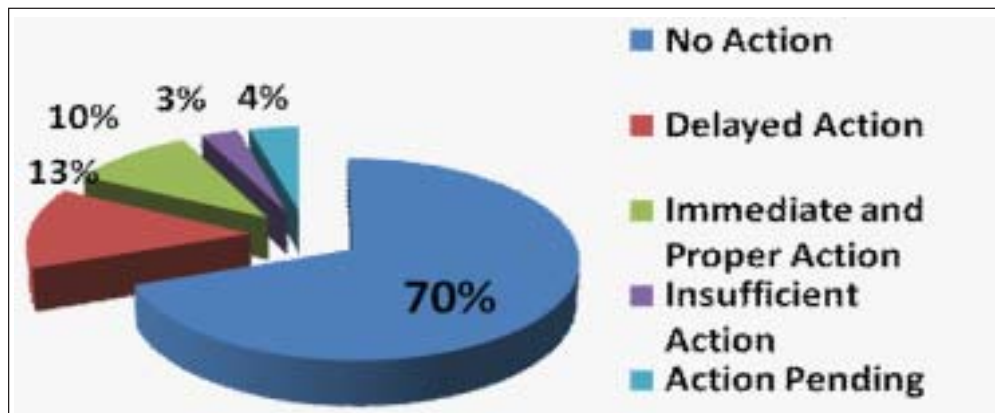


Figure 23: Was the necessary action taken on your complaint?



In addition, the disparity between the percentage of men (93 per cent) and women (52 per cent) that have raised concerns directly to management is statistically significant at the 1% level. However, discussions with women focus groups and interviews with management do not reflect that women’s voices are suppressed in this regard. Of the women who have not directly raised concerns to management, 86 per cent of married women said their husbands make complaints on their behalf, and 73 per cent said they felt they had freedom to make complaints on their own.. Management, for its part, seems to genuinely welcome complaints from both men and women. One thing to note, however, is that 58 per cent of women did report that they feel more comfortable making complaints to women than men, and only 3 out of the 9 Gardens visited have any female representation on their management staff.

Organized participation

Apart from raising concerns to management, the Tea Community also participates in its welfare via organized groups. A promising find is that females are highly active at the community level

in several of these organizations, in some cases even more so than men. The study identified four important and diverse grassroots organizations in the Garden, and Table 11 below summarizes their various attributes.

Table 11: Summary of key grassroots organizations operating in the Tea Gardens

	Labour Unions	Mothers' Club	Adolescent Girls' Club	SRCs
Purpose	Look after the concerns, grievances, and welfare of Garden labourers and represent the community's needs before management.	Raise awareness about various issues that affect well-being: health and hygiene, financial management, child rights, family planning, and alcoholism.	Provide a forum for discussing issues such health, hygiene, child rights, and child labour. Also, engage girls in cultural, educational, and sports activities.	Raise awareness to effect behaviour change in areas of health, nutrition, and WASH practices. Aimed at providing for healthier upbringing of children.
Membership	Can be limited to only permanent workers, open to all workers, or open to the entire community; varies between Gardens. Leaders are primarily men.	Can be limited to mothers only or open to all women and men; varies between Gardens.	Open to all adolescent girls; only for adolescent girls.	Designed to comprise five women with young children, three adolescent girls and two adolescent boys. Still, variations exist across Gardens.
Influence (Mostly self-reported)	Meet regularly with management. Most have been successful in gaining at least some concessions from management.	Make house-to-house visits. Have reduced gambling and alcoholism. Have educated pregnant women on proper care and increased awareness of family planning.	Girls reported to feel more confident in themselves and more aware of proper health and hygiene practices as well as child rights.	Weekly meetings open to whole community. Have instilled positive behaviour: early and exclusive breastfeeding, demand for sanitary toilets, hand-washing, keeping nutritional records of children.
Community Awareness	54% of respondents are aware of labour unions in their Gardens. Of those aware, 72% report attending meetings.	70% of respondents are aware of a Mothers' Club in their garden. (<i>Note: Relatively small sample size</i>)	<i>Most adolescent girls spoken to were selected from the Adolescent Girls' Club. Unable to comment on general awareness of club in community.</i>	30% of respondents are aware of the SRCs in their garden.

All four of these groups have various strengths in addressing the community's needs. Labour Unions are most influential in terms of bringing issues to the attention of management and serve as a necessary bridge between management and the Garden Community. Mothers' Clubs and SRCs are most influential in effecting behaviour change at the grassroots level, and they address issues pertaining to the widest scope of the population. Adolescent Girls' Clubs are an important vehicle for the empowerment, awareness, and participation of young women.

By surveying these groups and the way each functions within individual Gardens, we have identified best practices that some groups follow to be as effective and participatory as possible, which should be the aim of all groups to adopt:

- ◆ Inclusive of both genders (not including Adolescent Girls' Club)
- ◆ Well-advertised and open meetings
- ◆ House-to-house visits to raise awareness of key issues and to increase membership
- ◆ Community leadership instead of being organized and lead by management/government

Participation as citizens

Although some members of the Tea Community demonstrate both agitation and desire for change by voicing concerns to management or by participating in grassroots organizations, the community as a whole does not fully utilize the vehicle of participation as citizens. Whereas 68 per cent of respondents have raised concerns over their facilities to management, only 35 per cent have ever raised concerns to government. When asked why they have not contacted government to register a complaint, the two most common reasons were:

- ◆ I would not know where to go or who to approach (46 per cent)
- ◆ It never occurred to me to go to the government with my concerns (25 per cent)

Such responses highlight that the community at large does not find government easily accessible, nor do they clearly identify the government as an institution to which they can turn for having their needs met.

Furthermore, many people in the Tea Community are not aware of their rights and entitlements. When asked about the Plantation Labour Act, which is the most crucial binding legal document outlining the welfare responsibilities of management towards the Garden labourers, a startling 93 per cent of respondents had never even heard of it. Thus, it was out of question to have knowledge about the specific water and sanitation facilities the Act entitles them to. While permanent workers were aware of PLA, none of the temporary workers or non-workers knew of it. Even among the permanent workers, the percentage of those having knowledge about PLA was surprisingly as low as 18 per cent.

When asked generally about their legal entitlements, the majority of respondents did have a sense of their rights; however, there is significant disparity depending on employment status (Figures 24 - 25).

Figure 24: Respondents who feel entitled by law to adequate water and sanitation facilities

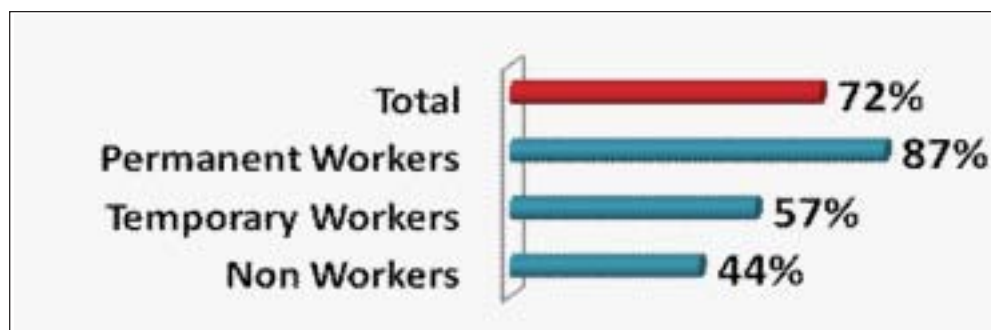
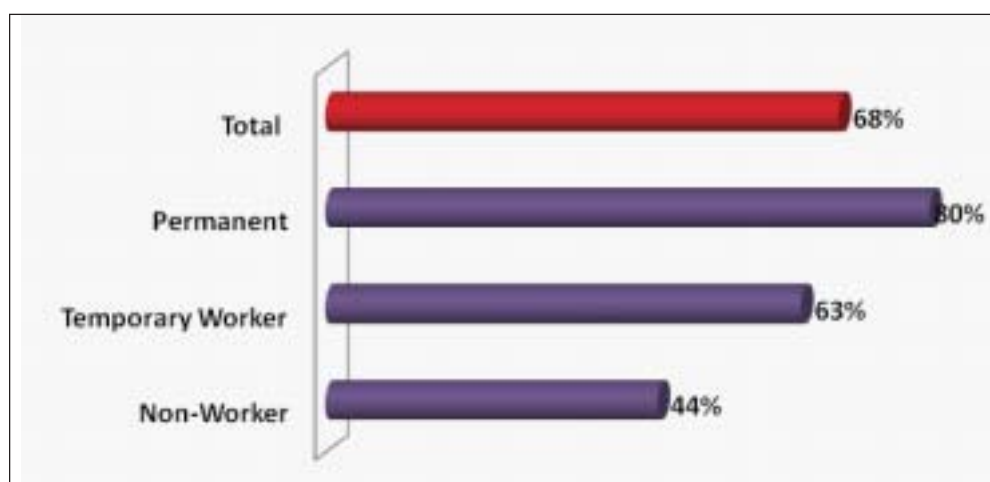


Figure 25: Respondents who feel entitled to government welfare schemes



Thus, it seems that the Tea Community's sense of entitlements is linked to their employment status, and they do not realize that they all have equal rights as citizens under the government. Perhaps living in a geographically isolated society which supports a hierarchy based on worker status has led people to associate all rights and entitlements with this status. FGDs further revealed that many people do not understand the concepts of citizenship, rights, or laws and have never been educated in this regard.

The following summarizes the main findings with regard to participation and citizenship:

- ◆ Most people in the Garden Community participate as subjects of management rather than as citizens of the government.
- ◆ A majority of people turn to management with their concerns and see management as their primary benefactor, even those who are not the management's responsibility by law.
- ◆ Although the government has increased its presence in the Gardens, many do not know how to contact government and do not recognize the government as a useful resource.
- ◆ Without knowledge of their rights and entitlements, the Tea Community lacks an essential element of empowerment required to be fully participatory.

Conclusion and Recommendations

Our findings indicate that the Tea Garden Community faces a variety of challenges associated with access to and awareness of proper water, sanitation, and hygiene facilities and practices. As they live in an isolated community, they are often unaware of best practices that exist in mainstream society. This problem is compounded by the inadequacy of current facilities to allow for proper WASH practices in schools, hospitals, fields, and oftentimes even in homes. These issues can become magnified for women as their spending priorities are not adequately represented in household purchases, as they have specific hygiene needs related to menstruation and female-specific diseases, and as they are less comfortable directly voicing their concerns to management as compared to men.

On a positive note, respondents almost unanimously report hand washing with soap after defecation and before having food. A large majority of the community also owns essential WASH products and associates most of these products to health, although the connection to health is not always properly understood. At the same time, gaps in consumption and understanding of specific WASH products and practices need to be addressed, as do gaps in which products are readily available inside the Garden.

Additionally, current WASH programming faces limitations in the areas of waste management and menstrual hygiene management. An in-depth look at waste disposal practices at home and in the hospital indicates that no formal system of garbage disposal is followed in the Tea Gardens, and waste materials are rarely categorized and disposed of properly. In a similar way, no systematic interventions have been made to ensure females are properly educated about menstruation and prepared for its onset. The current facilities available to females are not conducive to the healthy and dignified management of menstrual hygiene, nor are the females fully aware of best practices in this regard.

Finally, the Tea Garden Community recognizes the need for improved WASH facilities and takes initiative to voice their concerns to management, who they see as their primary benefactor. They also raise awareness and advocate for behaviour change through participation in grassroots organizations. At the same time, however, they lack the legal empowerment to confidently fight for their rights as citizens.

With these key findings in mind, the following recommendations are proposed to address the various issues that have been identified in this study:

WASH Programming

The following items should be added to or improved upon in future WASH programming, with an emphasis placed on behaviour change communication (BCC) and information education communication (IEC) inputs:

Toilet usage

- ♦ Educate community on link between proper toilet use and health.
- ♦ Promote proper water use in toilets, and ensure necessary items, mugs/water containers, are stocked in Garden shops.

Drinking water practices

- ♦ Educate on importance of treating drinking water and key sources of contamination.
- ♦ Educate on proper water transfer methods, especially use of ladle.

Garbage disposal management

- ♦ Educate community regarding hygienic waste disposal methods and proper classification of waste materials as biodegradable and non-biodegradable.
- ♦ Dedicate resources to design best method for waste disposal in the Tea Garden context and share programming guidelines with management.

Menstrual hygiene management

- ♦ Develop materials and training for delivery of menstrual hygiene programmes, separately targeting girls/women as service users and men/boys for raising awareness.
- ♦ Promote access to affordable sanitary napkin options within Tea Garden shops.

Female-specific diseases

- ♦ Raise awareness of female-specific diseases, their link to proper WASH facilities and practices, and the importance of seeking treatment.
- ♦ Ensure medical training of doctors/nurses in Gardens regarding female-specific diseases and ensure availability of appropriate medicines.

Sanitation in the hospital

- ♦ Advocate use of scientifically approved incinerators in hospitals.
- ♦ Disseminate information to doctors and welfare officers regarding sanitation and hygiene guidelines laid down by the WHO, NRHM, and UNICEF's Diarrhoea Management Protocol, and provide support in their implementation.

Two important notes on all above mentioned items:

Maximize existing resources

- ♦ It is highly advisable to use the strengths and targeting capacities of existing grassroots organizations, namely SRCs, Mothers' Clubs, and Adolescent Girls' Clubs, as well as key government workers, namely ASHA Kormis and Anganwadi Attendants, to serve as facilitators for launching WASH-related messages.
- ♦ This collaboration with existing community institutions and welfare workers will ensure community participation and will greatly increase the reach and efficacy of desired awareness and behaviour change programming.

Outreach to men

- ♦ As men have been identified as primary purchasers of WASH products, they should be targeted as emphatically as women and youth when delivering WASH-related messages, especially messages aimed at influencing household consumption patterns.
- ♦ Efforts should be made to ensure there is an effective organization/method to disseminate educational messages regarding health and hygiene, specifically, to men.

Infrastructure and Programming Inputs by Management/Government

Aside from programming that needs to be added as a component of WASH, additional steps need to be taken by management and/or government to ensure the infrastructure needed to make WASH programming successful is in place in the Tea Gardens. Thus, the following issues should be addressed to ensure long term WASH welfare in the community:

Garbage disposal system

- ♦ There is desperate need for infrastructure inputs to facilitate the proper disposal and management of waste. One strong recommendation is that a garbage truck be used to gather waste from labour lines and take it to a legitimate trash collecting area on a weekly basis.
- ♦ If such infrastructure is in place, promoting better practices amongst the community, such as proper use of dustbins, will be much more fruitful.

NRHM expansion

- ♦ As a government programme, NRHM treats all workers and dependents equally and thus has been an essential addition to healthcare provision in the Gardens.
- ♦ It should be expanded to cover all Gardens, as government intervention and spending on health is highly desirable for producing improved health outcomes, especially for those members of the Garden not covered under management's welfare programmes.

Facilitation of a menstruation-friendly environment at school and at work

- ◆ Menstrual health curriculum should be developed and taught to all girls in Standard V as an essential component of their education. This curriculum should include both the biology of menstruation as well as proper hygiene management.
- ◆ Current WASH infrastructure should be adapted to include the following in schools and in the fields where women work:
 - Separate and private sanitary toilets for males and females
 - Disposal units with incinerators attached to female toilets
 - Private washrooms for females to change cloths and wash up

Community empowerment campaign

- ◆ The community needs to be properly educated about concepts of citizenship, rights, and laws.
 - The government should ensure that basic rights and citizenship curriculum is being taught by teachers in Garden schools.
 - Labour unions should help educate adults of the laws that protect them.
- ◆ The government should raise awareness in the Garden community of how to access and utilize government resources.
- ◆ Government welfare schemes already present in the gardens should be clearly branded as government programmes so that the people realize they have an important benefactor outside of management, which will add to their sense of entitlement as citizens.
- ◆ Special efforts should be made by both management and government to have female representation amongst their leaders in order to empower women in the Garden to make direct complaints to these bodies instead of relying on men to go on their behalf.
- ◆ Financial savings should be advocated as a tool for greater self-reliance and for ending dependency on management or government in the future.

Collaborative Effort among all Actors for Nurturing a Cottage Industry

Many service providers noted the strong potential for a successful cottage industry in the Tea Gardens for the production of quality, affordable sanitary napkins. This entrepreneurial endeavour could be built within the framework of existing SHGs. The benefits to such an undertaking would be two-fold:

- ◆ It would serve as a community based, revenue generating initiative, providing a means for both participation and empowerment.
- ◆ It would provide the community with affordable access to an important female-specific WASH product and lead to greater awareness of proper menstrual hygiene management.

While we support the investigation of such an industry, potential limitations should be considered:

- ◆ Difficulty in replicating the quality of branded sanitary napkins.
- ◆ Inability to take advantage of low prices associated with economies of scale.

References

- ABITA Zone - 1 and UNICEF – Assam, ‘Young Child Survival Initiative in the socially excluded Tea Communities, April 2010 to December 2011, 128 – Gardens of Dibrugarh, Tinsukia & Sivasagar District,’ 2010.
- ‘Assam replies to Centre(?) Clean chit for tea industry on labour act,’ The Telegraph, April 10, 2009.(headline of the news item needs to be crosschecked since the heading seems to be in two parts and whether labour act has gone Act)
- Bhardwaj, S and A Patkar, *Menstrual hygiene and management in developing countries: taking stock*, Junction Social, 2004.
- Centre for Humanistic Development, ‘A Study on Sanitation and Hygiene Conditions in Tea Gardens in Assam,’ May 2008.
- Centre for Humanistic Development, ‘Assessment of Sanitation Programme in Tea Gardens: Current Monitoring and Evaluation 2009 – 2010,’ 2010.
- Collins, Daryl, Morduch, Jonathan, Rutherford, Stuart, Ruthven, Orlanda, *Portfolios of the Poor: How the World’s Poor Live on \$2 a Day*, Princeton University Press, Princeton N.J. USA, 2009.
- ‘Gap Study in Tea Gardens of Assam,’ UNICEF, July 2010.
- Mahon, Therese and Fernandes, Maria, ‘Menstrual hygiene in South Asia: a neglected issue for WASH (water, sanitation and hygiene) programmes,’ *Gender & Development*, 18(1), pp. 99 – 113.
- Montgomery, Maggie A. and Elimelech, Menachem, ‘Water and Sanitation in Developing Countries: Including Health in the Equation,’ *Environmental Science & Technology* 41(1), pp. 17-24.
- Mussoorie Case Study, ‘Child Survival and Development: Partnership with ABITA in Tea Gardens in Dibrugarh District of Assam,’ Assam, February 2009.
- ‘Seasonal Water-borne diseases at bay this year,’ The Times of India, Guwahati Edition, 26 July, 2010.

‘A study on sanitation and hygiene conditions in Tea Gardens of Assam,’ op. cit.

UNICEF, ‘Report on dissemination workshop – WASH in Tea Gardens.’

‘Young Child Survival Initiative in the socially excluded Tea Communities, April 2010 to December 2011, 128 – Gardens of Dibrugarh, Tinsukia & Sivasagar District,’ ABITA Zone-1, UNICEF-Assam, 2010.

Web References

<http://dibrugarh.gov.in/>

<http://mohfw.nic.in/>

<http://www.mail-archive.com/assam@pikespeak.uccs.edu/msg10099.html>

Annexure 1: WHO Guidelines for 16 bed hospital

Focus Group Discussion Guide - ADOLESCENTS

Date:.....	Tea Garden:	
Facilitator:	Note-taker:.....	Translator:
Number of participants:.....	Age range:	
Site:.....	Starting time.....	Ending time:.....

Introduce Moderators, Translators, Record Keepers

Introduce topic of research

Thank you for taking the time to join our discussion. We are interested in learning about some of the main health and hygiene needs of women/girls like you living in your community. We would like your permission to talk with you about your views on issues related to women's health and hygiene. You are not required to respond to any of the questions if you feel uncomfortable. However, please be assured that the information you share will remain confidential, so you should feel comfortable about sharing your thoughts and ideas freely. There are no 'right' or 'wrong' answers, because everyone experiences things differently. We are interested in the full range of experiences, so please feel free to share your point of view even if it differs from what others have said.

The information will help us to learn more about the health and well-being of young girls/women in the community and to advocate for improved services and assistance. I expect our conversation to last for about an hour.

Discussion group ground rules

Before we begin, let me suggest some guidelines that will make our discussion more productive.

- ◆ Please speak up—but only one person should speak at a time. We are recording the session because we don't want to miss any of your comments.
- ◆ My role here is to ask questions and to listen. I won't be actively participating in the conversation, only guiding it. I want you to feel free to talk to the group and not just to me. I'll move the discussion from one question to the next to try to keep us on track so that we

can finish by *[insert time]*.

- ♦ Any questions before we begin?

Introduction of Participants – name, age, ice-breaker

(Let's start by going around the group – tell us your name, how old you are, your current position, and what your favourite dish/movie/past-time is.)

First, I would like to ask you some general questions about your daily life and the activities of this club.

1. Do all of you attend school?
2. Do you know girls who do not attend school? What are some of the reasons why girls do not go to school or stop going?
3. When was your club started and how?
4. What kind of issues do you discuss in this club?
5. Do you ever discuss issues related to hygiene and health practices?
6. How has being a part of this group changed your life?
7. Have you ever vocalized your needs/concerns as a group to management, Government, Labour Unions, Schools or Hospitals?
 - a. If YES, How were you received?
 - b. If NO, Why not?
8. Do you feel you are entitled by law to adequate water and sanitation facilities?
9. Have you heard of the Plantation Labour Act?

If YES:

 - a. Do you know your rights are protected by this Act?
 - b. Do you feel the management is properly upholding all of your rights protected by this Act?

Now I have some questions about your health.

10. In general, what do you do when you have a health problem? Where do you go?

Do you do anything differently in case of female-specific health issues?
11. Have you ever visited the Garden hospital for female-specific diseases?
 - a. If YES, how was your experience?
 - b. If NO, could you elaborate why not?
12. Do you feel comfortable interacting with the hospital staff?
13. Do you feel the doctor adequately addresses your concerns?
14. What are your views on the sanitation and hygiene conditions of the Garden hospital? Do you think the Garden hospitals cater to female hygiene needs? (such as dustbins for disposing pads, privacy, etc.)

15. What are your views on the sanitation and hygiene conditions of the government hospital?
16. How do you keep yourself, your home and surroundings clean? (e.g. using a sanitary toilet, washing with soap, burning garbage, etc)
17. Do you think these practices are connected to your physical well-being?
18. Has anyone ever talked to you about the benefits of sanitary toilets? (e.g. awareness-generation by WASH, NGOs, by management, etc.) Please specify.
19. How do you ensure that the water you consume is healthy?
20. Do you connect diarrhoea to unhealthy drinking water?
21. How do you dispose of garbage at home? Can you think of any changes that could be made to make the system of garbage disposal in your community better? Do you think the primary responsibility for making such changes lies with you or with the management?
22. Do you think the stagnant drains around your house are susceptible to breeding of mosquitoes? Are enough steps taken by you/ the management to routinely spray DDT on these drains? Do you think malaria is a rampant concern in your Garden? Do you connect it to unhealthy disposal of waste and stagnant drains?

Okay, now I would like to talk with you a little bit about menstruation and your experience with your period.

23. How did you learn about menstruation? Did it come as a surprise to you when you got your first period? Do/did you learn about menstrual health issues in school? If so, what kind of things do/did you learn? Do/did you learn things outside of school? Like what? Where? Are/were you interested in learning more?
24. What do you think is the cause of menstruation?
25. What are some examples of ways to hygienically manage your period? How would you advise a younger female relative or friend experiencing her first period to take care of herself during menstruation? (Brainstorm a list.)
26. What method do you use to catch your menstrual flow? Where and how do you dispose of used pads or cloths at home, school, or elsewhere? In the case of reusable cloths, where do you hang them to dry? Where do you store the cloths between uses?
27. Do you think there are adequate toilet facilities and water sources at your house, school, and in your community for girls to manage their periods comfortably and hygienically? If not, what do you think is needed?
28. Have you noticed any changes in the quality and/or quantity of toilet and water facilities provided in your community over your lifetime? Such as what? How have these changes impacted your own experience of menstruation?
29. Is there anything that anyone has told you to do differently or to refrain from doing during your monthly period? Who? What? What do you think is the reason behind this? How does it make you feel?
30. Is there anything that you do differently during your monthly period for reasons of personal

comfort or habit? Like what? (e.g. bathing more frequently/less frequently, missing school or work, etc.)

31. In general, how do you feel about menstruation? How does it make you feel about yourself when you get your period?

Close the session

Thank you all for your time and ideas. This has been extremely helpful. As I said in the beginning, the purpose of this discussion was to help us learn more about what women/girls want and need so that we can think of ways to make your lives healthier and more comfortable!

Abbreviated Focus Group Discussion Guide - ADOLESCENTS

Date:	Village:	
Facilitator:	Note-taker:.....	Translator:
Number of participants:.....	Age range:	
Site:	Starting time.....	Ending time:.....

Introduce Moderators, Translators, Record Keepers

Introduce topic of research

Thank you for taking the time to join our discussion. We are interested in learning about some of the main health and hygiene needs of women/girls like you living in your community. We would like your permission to talk with you about your views on issues related to women’s health and hygiene. You are not required to respond to any of the questions if you feel uncomfortable. However, please be assured that the information you share will remain confidential, so you should feel comfortable about sharing your thoughts and ideas freely. There are no ‘right’ or ‘wrong’ answers, because everyone experiences things differently. We are interested in the full range of experiences, so please feel free to share your point of view even if it differs from what others have said.

The information will help us to learn more about the health and well-being of young girls/ women in the community and to advocate for improved services and assistance. I expect our conversation to last for about an hour.

Discussion group ground rules

Before we begin, let me suggest some guidelines that will make our discussion more productive.

- ♦ Please speak up—but only one person should speak at a time. We are recording the session because we don't want to miss any of your comments.
- ♦ My role here is to ask questions and to listen. I won't be actively participating in the conversation, only guiding it. I want you to feel free to talk to the group and not just to me. I will move the discussion from one question to the next to try to keep us on track so that we can finish by *[insert time]*.
- ♦ Any questions before we begin?

Introduction of Participants – name, age, ice-breaker

(Let's start by going around the group – tell us your name, how old you are, your current position, and what your favourite dish /movie/past-time is.)

First, I would like to ask you some general questions about your daily life and the activities of any club you might be a member of.

1. Do all of you attend school?
2. Do you know girls who do not attend school? What are some of the reasons why girls do not go to school or stop going?
3. Do you have any organized club to address your issues? If yes, how and why was your club formed?
4. How do you raise awareness about your club and recruit girls to join?
5. What kind of issues do you discuss in this club?
6. How has being a part of this group changed your life?
7. Have you ever vocalized your needs/concerns as a group to the Government, any NGO, Schools or Hospitals?
 - a. If YES, How were you received?
 - b. If NO, Why not?
8. Do you know what water and sanitation facilities you are entitled to by law? Has anyone ever talked to you about the water and sanitation facilities guaranteed by the Indian Constitution?

Now I have some questions about your health and your experiences with the hospitals within and outside the village.

9. What are your views on the sanitation and hygiene conditions of the government hospital? Do you think the government hospitals cater to female hygiene needs? (Like dustbins for disposing pads, privacy, etc.)
10. What are your views on the sanitation and hygiene conditions of the private hospitals if you have been to any?

11. How do you keep yourself, your home, and surroundings clean? (e.g. using a sanitary toilet, washing with soap, burning garbage, etc)
12. Do you think these practices are connected to your physical well-being?
13. Has anyone ever talked to you about the benefits of sanitary toilets? (e.g. awareness-generation by WASH, NGOs, management, etc.) Please specify.
14. How do you ensure that the water you consume is healthy? What do you mean by healthy/unhealthy drinking water? Please elaborate.
15. How do you dispose of garbage at home? Can you think of any changes that could be made to make the system of garbage disposal in your community better? Do you think the primary responsibility for making such changes lies with you or with the government? Has anyone ever talked to you about garbage disposal management?
16. How is solid/liquid waste disposed of at your home? Is there any difference between the way you dispose of biodegradable and toxic waste? What are the methods of disposing them both that you practice?
17. Do you think the stagnant drains around your house are susceptible to breeding of mosquitoes? Are enough steps taken by you/ the government to routinely spray DDT on these drains? Do you think malaria is a rampant concern in your village? Do you connect it to unhealthy disposal of waste and stagnant drains? How regularly and by whom are the drains around your house cleaned?
18. What is the connection between each of these products and better health?
 - a. Soap
 - b. Sanitary pads/cloth
 - c. Toilets
 - d. Hand-pump
 - e. Treating water before drinking
 - f. Washing hands after defecation

Okay, now I'd like to talk with you a little bit about menstruation and your experience with your period.

19. How did you learn about menstruation? Did it come as a surprise to you when you got your first period? Do/did you learn about menstrual health issues in school? If so, what kind of things do/did you learn? Do/did you learn things outside of school? Where? Are/were you interested in learning more?
20. What do you think is the cause of menstruation?
21. What method do you use to catch your menstrual flow? Why have you chosen this method? Have you always used this method? If you have changed methods in the past, what were your reasons for making the switch?
22. Has menstruation ever interfered with your ability to either attend or perform optimally at school or at work? If so, please elaborate.

23. What are some examples of ways to hygienically manage your period? How would you advise a younger female relative or friend experiencing her first period to take care of herself during menstruation?
24. How did you learn the ways to hygienically manage your own period? What has been your main source of information?
25. Have you ever attended any group or club meeting covering menstrual hygiene issues?
 - a. If YES: What was the source of the information and in what forum was the meeting held?
 - b. If NO: Do you think such a session might be useful to have? Would you be interested in attending such a session?
26. Do you think that there are adequate toilet facilities and water sources at your house, school and in your community for girls to manage their periods comfortably and hygienically? If not, what do you think is needed?
27. Have you noticed any changes in the quality and/or quantity of toilet facilities and water facilities provided in the community over your lifetime? Please elaborate in what ways have these changes impacted your own experience of menstruation?

Close the session

Thank you all for your time and ideas. This has been extremely helpful. As I said in the beginning, the purpose of this discussion was to help us learn more about what women/girls want and need so that we can think of ways to make your lives healthier and more comfortable!

Focus Group Discussion Guide

Date:		Tea Garden:	
Facilitator:.....		Note-taker:.....	
Number of participants:		Age range:	
Site:		Starting time:.....	
		Ending time:.....	

Introduce Moderators, Translators, Record Keepers

Introduce topic of research

Thank you for taking the time to join our discussion. We are interested in learning about some of the main health and hygiene needs of women/girls like you living in your community. We would like your permission to talk with you about your views on issues related to women's health and hygiene. You are not required to respond to any of the questions if you feel

uncomfortable. However, please be assured that the information you share will remain confidential, so you should feel comfortable about sharing your thoughts and ideas freely. There are no 'right' or 'wrong' answers, because everyone experiences things differently. We are interested in the full range of experiences, so please feel free to share your point of view even if it differs from what others have said.

The information will help us to learn more about the health and well-being of young girls/women in the community and to advocate for improved services and assistance. I expect our conversation to last for about an hour.

Discussion group ground rules

Before we begin, let me suggest some guidelines that will make our discussion more productive.

- ◆ Please speak up—but only one person should speak at a time.
- ◆ You have probably noticed the microphone. We are recording the session because we don't want to miss any of your comments, but we won't be sharing the tape with anyone else.
- ◆ My role here is to ask questions and to listen. I won't be actively participating in the conversation, only guiding it. I want you to feel free to talk to the group and not just to me. I will move the discussion from one question to the next to try to keep us on track so that we can finish by [*insert time*].
- ◆ Any questions before we begin?

Introduction of Participants – name, age, ice-breaker

(Let's start by going around the group – tell us your name, how old you are, and what your favourite dish/movie/past-time is.)

First, I would like to ask you some general questions about your daily life and activities.

1. Are you a member of a Mother's Club in the Garden?

If YES:

- a. How did you hear about it and join?
- b. What issues are discussed? What are the benefits of this club?

Now I have some questions about your health.

2. What are your views on the sanitation and hygiene conditions of the Garden hospital? Do you think the Garden hospitals cater to female hygiene needs? (Such as dustbins for disposing pads, privacy, etc.)
3. What are your views on the sanitation and hygiene conditions of the government hospital?
4. How do you keep yourself, your home and surroundings clean? (e.g. using a sanitary toilet, washing with soap, burning garbage, etc)

5. Do you think these practices are connected to your physical well-being?
6. How do you ensure that the water you consume is healthy? What do you mean by healthy/unhealthy drinking water? Could you please elaborate?
7. Do you connect diarrhoea to unhealthy drinking water?
8. How do you dispose of garbage at home?
9. How do you dispose of solid/liquid waste? Is there any difference between the way you dispose of biodegradable and toxic waste? What are the methods of disposing of both that you practice?
10. Can you think of any changes that could be made to make the system of garbage disposal in your community better? Do you think the primary responsibility for making such changes lies with you or with the management?
11. Has anyone ever talked to you about garbage disposal management?
12. Do you think the stagnant drains around your house are susceptible to breeding of mosquitoes? Are enough steps taken by you/ the management to routinely spray DDT on these drains? Do you think malaria is a rampant concern in your Garden? Do you connect it to unhealthy disposal of waste and stagnant drains? How regularly and by whom are the drains around your house cleaned?

Okay, now I would like to talk with you a little bit about menstruation and your experience with your period.

13. How did you learn about menstruation? Did it come as a surprise to you when you got your first period? Do/did you learn about menstrual health issues in school? If so, what kind of things do/did you learn? Do/did you learn things outside of school? Where? Are/were you interested in learning more?
14. What do you think is the cause of menstruation?
15. What method do you use to catch your menstrual flow? Why have you chosen this method? Have you always used this method? If you have changed methods in the past, what were your reasons for making the switch?
16. Has menstruation ever interfered with your ability to either attend or perform optimally at school or at work? If so, please elaborate.
17. What are some examples of ways to hygienically manage your period? How would you advise a younger female relative or friend experiencing her first period to take care of herself during menstruation?
18. How did you yourself learn about how to hygienically manage your period? Have you ever attended any group or club meeting covering menstrual hygiene issues?
 - a.If YES: What was the source of the information and in what forum was the meeting held?
 - b.If NO: Do you think such a session might be useful to have? Would you be interested in attending such a session?

19. Do you think that there are adequate toilet facilities and water sources at your house, school and in your community for girls to manage their periods comfortably and hygienically? If not, what do you think is needed?
20. Have you noticed any changes in the quality and/or quantity of toilet facilities and water facilities provided in your community over your lifetime? Such as what? Please elaborate how have these changes impacted your own experience of menstruation ?

Close the Session

Thank you all for your time and ideas. This has been extremely helpful. As I said in the beginning, the purpose of this discussion was to help us learn more about what women/girls want and need so that we can think of ways to make your lives healthier and more comfortable!

Abbreviated Focus Group Discussion Guide

Date:	Tea Garden:
Facilitator:..... Note-taker:..... Translator:	
Number of participants:..... Age range:	
Site: Starting time..... Ending time:.....	

Introduce Moderators, Translators, Record Keepers

Introduce topic of research

Thank you for taking the time to join our discussion. We are interested in learning about some of the main health and hygiene needs of women/girls like you living in your community. We would like your permission to talk with you about your views on issues related to women’s health and hygiene. You are not required to respond to any of the questions if you feel uncomfortable. However, please be assured that the information you share will remain confidential, so you should feel comfortable about sharing your thoughts and ideas freely. There are no ‘right’ or ‘wrong’ answers, because everyone experiences things differently. We are interested in the full range of experiences, so please feel free to share your point of view even if it differs from what others have said.

The information will help us to learn more about the health and well-being of young girls/ women in the community and to advocate for improved services and assistance. I expect our conversation to last for about an hour.

Discussion group ground rules

Before we begin, let me suggest some guidelines that will make our discussion more productive.

- ◆ Please speak up—but only one person should speak at a time.
- ◆ You have probably noticed the microphone. We are recording the session because we don't want to miss any of your comments, but we won't be sharing the tape with anyone else.
- ◆ My role here is to ask questions and to listen. I won't be actively participating in the conversation, only guiding it. I want you to feel free to talk to the group and not just to me. I will move the discussion from one question to the next to try to keep us on track so that we can finish by [*insert time*].
- ◆ Any questions before we begin?

Introduction of Participants – name, age, ice-breaker

(Let's start by going around the group – tell us your name, how old you are, and what your favourite dish/movie/past-time is.)

First, I would like to ask you some general questions about your daily life and activities.

1. Are you a member of a Mother's Club in the garden? If YES:
 - a. How did you hear about it and join?
 - b. What issues are discussed? What are the benefits of this club?

Now I have some questions about your health.

2. What are your views on the sanitation and hygiene conditions of the Garden hospital? Do you think the Garden hospitals cater to female hygiene needs? (Such as dustbins for disposing pads, privacy, etc.)
3. What are your views on the sanitation and hygiene conditions of the government hospital?
4. How do you keep yourself, your home and surroundings clean? (e.g. using a sanitary toilet, washing with soap, burning garbage, etc)
5. Do you think these practices are connected to your physical well-being?
6. How do you ensure that the water you consume is healthy? What do you mean by healthy/unhealthy drinking water? Could you please elaborate?
7. Do you connect diarrhoea to unhealthy drinking water?
8. How do you dispose of garbage at home? Can you think of any changes that could be made to make the system of garbage disposal in your community better? Do you think the primary responsibility for making such changes lies with you or with the management? Has anyone ever talked to you about garbage disposal management?

9. How do you dispose of solid/liquid waste? Is there any difference between the way you dispose of biodegradable and toxic waste? What are the methods of disposing of both that you practice?
10. Do you think the stagnant drains around your house are susceptible to breeding of mosquitoes? Are enough steps taken by you/ the management to routinely spray DDT on these drains? Do you think malaria is a rampant concern in your Garden? Do you connect it to unhealthy disposal of waste and stagnant drains? How regularly and by whom are the drains around your house cleaned?
11. What is the connection between each of these products and better health?
 - g. Soap
 - h. Sanitary pads/cloth
 - i. Toilets
 - j. Hand-pump
 - k. Treating water before drinking
 - l. Washing hands after defecation

Okay, now I would like to talk with you a little bit about menstruation and your experience with your period.

12. How did you learn about menstruation? Did it come as a surprise to you when you got your first period? Do/did you learn about menstrual health issues in school? If so, what kind of things do/did you learn? Do/did you learn things outside of school? Where? Are/were you interested in learning more?
13. What do you think is the cause of menstruation?
14. What method do you use to catch your menstrual flow? Why have you chosen this method? Have you always used this method? If you have changed methods in the past, what were your reasons for making the switch?
15. Has menstruation ever interfered with your ability to either attend or perform optimally at school or at work? If so, please elaborate.
16. What are some examples of ways to hygienically manage your period? How would you advise a younger female relative or friend experiencing her first period to take care of herself during menstruation?
17. How did you learn about how to hygienically manage your own period? What has been your main source of information?
18. Have you ever attended any group or club meeting covering menstrual hygiene issues?
 - a.If YES: What was the source of the information and in what forum was the meeting held?
 - b. If NO: Do you think such a session might be useful to have? Would you be interested in attending such a session?
19. Do you think that there are adequate toilet facilities and water sources at your house, school and in your community for girls to manage their periods comfortably and hygienically? If not, what do you think is needed?

20. Have you noticed any changes in the quality and/or quantity of toilet facilities and water facilities provided in the community over your lifetime? Please elaborate in what ways have these changes impacted your own experience of menstruation?

Finally, I would like to talk to you about your involvement at the community level in issues of water, sanitation, and hygiene within the Garden.

21. Do you know what water and sanitation facilities you are entitled to by law?
22. Have you ever heard of the Plantation Labour Act?
23. If YES to (NOTE:Ref. number needs to be changed ???): Do you feel the management is upholding all your rights protected by that Act?
24. Are there ways for you to vocalize your concerns/complaints to the management? Explain.
25. Have you ever made complaints?
- a. If YES: How were they handled?
 - b. If NO: Why not?
26. Have you ever tried approaching the government to discuss your needs or concerns?
If NO: Why not?
27. Are you a member of a Labour Union? What impact do you think the Labour Union has in helping to redress the community's needs by working with the management?
28. Are you aware of SRC committees in your Garden? If so, what is the impact of these committees?

Close the session

Thank you all for your time and ideas. This has been extremely helpful. As I said in the beginning, the purpose of this discussion was to help us learn more about what women/girls want and need so that we can think of ways to make your lives healthier and more comfortable!

Annexure II: Research Instruments

Individual Questionnaires

Female Questionnaire:

Personal Number: _____

Date: _____

No.	Question	Response Options
1.	How far is the nearest toilet?	1. In and around my house 2. Near the house (within a two-house distance) 3. Far from the house (more than two houses away) 4. Other: _____
2.	If "In and around the house": Is it in usable condition? Y / N	If "Near" or "Far": 8. Do you want a toilet? Y / N 9. (y) Are you willing to pay for any part of it? <div style="text-align: right;">Y / N</div> 10. Where do you defecate? ___ Field ___ Neighbour's toilet ___ School toilet ___ Hospital toilet ___ Other: _____
3.	Does it have a water seal? Y / N	
4.	Does it have a leach pit? Y / N	
5.	Do you use it? Y / N	
6.	Did you pay for any part of it? Y / N	
7.	How much? _____	
11.	(If no to question 2:) Why do you not repair the condition?	
12.	Does your toilet exhibit the given properties?	a. Unclean pans b. Foul odour c. Difficult to access because of the mud all around

		d. Not well enclosed for privacy e. Have a bucket and a mug f. Have access to a water source to wash up after defecation g. Damaged pans
13.	How do you wash your hands after defecation?	1. With water only 2. With soap and water 3. With sand and water 4. I don't wash my hands after defecation
14.	Are there sufficient water access points in the Garden?	Yes <input type="checkbox"/> No <input type="checkbox"/>
15.	(n) Are you willing to pay for additional water access points in the Garden?	Yes <input type="checkbox"/> No <input type="checkbox"/>
16.	Is the nearest water access point in working order?	Yes <input type="checkbox"/> No <input type="checkbox"/>

17.	Does the hand pump you use exhibit any of the following sources of contamination? (<i>Circle all that apply.</i>)	a. Garbage around it b. Stagnant water c. Vicinity of a latrine d. Animals' drinking water from the same source. e. Clothes washed at the hand pump f. Others: _____
18.	Where do you get your water for drinking?	1. Tube well 2. Tap 3. Well 4. Other: _____
19.	How do you treat water before you deem it fit for drinking?	a. Boiling b. Water treated with bleach at a hand pump c. Filter it d. Other: _____
20.	How do you store water?	a. Mud pot b. Steel vessel c. Plastic bucket c. Filterd. Other: _____
21.	Is the vessel covered?	Y/N
22.	Do you use a ladle to transfer water?	Y/N
23.	Do you wash hands with soap before eating?	Y/ N

24.	Where do you get your water for bathing/washing clothes?	<ul style="list-style-type: none"> 1. Tube well 2. Tap 3. Well 4. Others: _____
25.	How far is the nearest water point? 1.	<ul style="list-style-type: none"> In and around my house 2. Near the house (within a two-house distance) 3. Far from the house (more than two houses away) 4. Others: _____
26.	Do you have access to a well enclosed bathing space?	Y / N
27.	Is the water you use for cooking boiled or treated (bleached, filtered) before use?	Y / N
28.	What cooking fuel do you use?	<ul style="list-style-type: none"> a. Fire wood b. Gas c. Others: _____
29.	Have you ever suffered from a respiratory disorder?	Y / N
30.	How frequently have you suffered from respiratory disorders?	<ul style="list-style-type: none"> a. Very often b. Often c. Once in a while d. Rarely/ Never
31.	How frequently have you suffered from vaginal/urinary tract infections?	<ul style="list-style-type: none"> a. Very often b. Often c. Once in a while d. Rarely/ Never
32.	Have you been to a Doctor for your specific female diseases? (urinary and vaginal infections, etc.)	Y / N
33.	What are the other common health problems you face?	<ul style="list-style-type: none"> a. Diarrhoea b. Anaemia c. Malaria d. Cold/fever e. Gastric problems f. Body pains g. Others: _____
34.	Have you been to a doctor for any of these problems?	Y / N

35.	How often do you visit a doctor?	a. Very often b. Often c. Once in a while d. Rarely
36.	Where is the doctor that you visit?	a. Garden hospital b. NRHM Garden hospital c. Government hospital d. Private hospital
37.	How do you rate the hygiene and sanitation practices at the Garden hospital?	a. Very good b. Good c. Satisfactory d. Poor
38.	How do you dispose of waste material? (garbage, sanitary pads, faeces of children, etc.)	a. Dig a hole and bury it b. Burn it c. Let it lie around the house. d. Dispose it in a trash collecting area e. Others: _____

Menstrual health & hygiene		
No.	Question	Response Options
39.	At what age did you start menstruating?	_____ years
40.	How did you feel when you got your first period?	1. <input type="checkbox"/> Excited 2. <input type="checkbox"/> Proud 3. <input type="checkbox"/> Embarrassed/Ashamed 4. <input type="checkbox"/> Scared/Nervous 5. <input type="checkbox"/> Confused 6. <input type="checkbox"/> No strong reaction 7. <input type="checkbox"/> Others: _____
41.	What protective material did you use during your first days of menstrual flow (on the occasion of your first period)?	1. <input type="checkbox"/> Homemade cloth/pad 2. <input type="checkbox"/> Commercially-made sanitary pad 3. <input type="checkbox"/> Others: _____
42.	Who provided you with the above material?	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Older sister 3. <input type="checkbox"/> Father 4. <input type="checkbox"/> Other family member (_____) 5. <input type="checkbox"/> I made it myself 6. <input type="checkbox"/> I bought it myself 7. <input type="checkbox"/> Others: _____

43.	Did anyone tell/advise you about menstruation before you got your first period?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
44.	(If yes) Who told/advised you about menstruation before you got your first period? (More than one answer is possible.)	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Sister/sister-in-law 3. <input type="checkbox"/> Other relative (_____) 4. <input type="checkbox"/> Friend 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Others: _____
45.	What has been your main source of knowledge about menstruation, particularly menstrual hygiene and management?	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Other relative (_____) 3. <input type="checkbox"/> Teacher 4. <input type="checkbox"/> Friends 5. <input type="checkbox"/> Media (i.e. radio, TV, newspaper, textbook) 6. <input type="checkbox"/> Others: _____
46.	Have you ever had any class session related to menstruation in your school?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
47.	Is there anyone with whom you would feel comfortable talking openly about menstruation?	1. <input type="checkbox"/> Friends/peers 2. <input type="checkbox"/> Mother 3. <input type="checkbox"/> Sister/sister-in-law 4. <input type="checkbox"/> Other relative (_____) 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Others: _____ 7. <input type="checkbox"/> No one
48.	At what age do you think most girls get their first period?	_____ years
49.	How long does the bleeding usually last during menstruation?	_____ days
50.	How often do you think most girls get their period?	_____/month
51.	What kinds of materials do you know of for catching menstrual flow? (<i>Tick as many as you recognize.</i>)	1. <input type="checkbox"/> Homemade cloth or pad 2. <input type="checkbox"/> Disposable pad/panty liner 3. <input type="checkbox"/> Other: _____
52.	Do you have (or know) any alternative name for menstruation? If yes: Please state what you call it.	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No _____

53.	Which of the following do you associate with menstruation? (<i>Tick all that apply.</i>)	1. <input type="checkbox"/> Foul odour 2. <input type="checkbox"/> Empowerment 3. <input type="checkbox"/> Impurity 4. <input type="checkbox"/> Unclean blood 5. <input type="checkbox"/> Womanly pride
54.	What is the cause of menstruation?	1. <input type="checkbox"/> It is a physiological process. 2. <input type="checkbox"/> It is a curse of God. 3. <input type="checkbox"/> It is punishment for a Sin. 4. <input type="checkbox"/> It is a gift of Nature. 5. <input type="checkbox"/> It is caused by a disease. 6. <input type="checkbox"/> Others: 7. <input type="checkbox"/> Don't know
55.	Are there any activities that you do not carry on during your period? (If yes): Which activities? (<i>Tick or list all those apply.</i>)	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No i. <input type="checkbox"/> Don't attend religious functions ii. <input type="checkbox"/> Don't go to school iii. <input type="checkbox"/> Don't cook v. <input type="checkbox"/> Don't do household work v. <input type="checkbox"/> Don't touch males vi. <input type="checkbox"/> Don't play or be physically active vii. <input type="checkbox"/> Don't eat certain foods (_____) viii. <input type="checkbox"/> Don't wash or bathe ix. <input type="checkbox"/> Don't use certain water sources x. <input type="checkbox"/> Don't use the toilet/latrine xi. <input type="checkbox"/> Sleep separately xii. <input type="checkbox"/> Others: _____
56.	Have you ever been absent from school or work due to menstruation? If yes: How often?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 1. <input type="checkbox"/> One day every cycle 2. <input type="checkbox"/> Two days every cycle 3. <input type="checkbox"/> Three days every cycle 4. <input type="checkbox"/> Four days every cycle 5. <input type="checkbox"/> More than Four days every cycle

	If yes: Why?	i. <input type="checkbox"/> Lack of privacy for cleaning/washing ii. <input type="checkbox"/> Lack of disposal system for pads/cloths iii. <input type="checkbox"/> Lack of availability of water supply iv. <input type="checkbox"/> Pain/discomfort v. <input type="checkbox"/> Fear of menstrual accident (leakage) vi. <input type="checkbox"/> Shame vii. <input type="checkbox"/> Socio-cultural beliefs viii. <input type="checkbox"/> Others:
--	--------------	--

Current menstrual hygiene practices		
No.	Question	Response Options
57.	What did you use to absorb the menstrual flow during your most recent period? If home-made, what material do you use to make it?	1. <input type="checkbox"/> Homemade cloth/pad 2. <input type="checkbox"/> Commercially-made sanitary pad 3. <input type="checkbox"/> Others: _____ _____
58.	How frequently do you change your sanitary pad or cloth?	_____ / day
59.	If home-made cloth used: How do you wash it?	1. <input type="checkbox"/> With soap and water 2. <input type="checkbox"/> With water only 3. <input type="checkbox"/> I dispose after single use
60.	If home-made cloth used: Where do you dry the cloth after washing it?	1. <input type="checkbox"/> In the shade outside 2. <input type="checkbox"/> In the shade inside 3. <input type="checkbox"/> In the sunlight inside 4. <input type="checkbox"/> In the sunlight outside 5. <input type="checkbox"/> Hidden under other clothes 6. <input type="checkbox"/> Hidden elsewhere 7. <input type="checkbox"/> Use disposable pads 8. <input type="checkbox"/> Others: _____
61.	If home-made cloth used: Where do you store your cloths in between uses?	1. <input type="checkbox"/> Near the toilet 2. <input type="checkbox"/> With other clothes 3. <input type="checkbox"/> Others: _____ 4. <input type="checkbox"/> Use disposable pads
62.	If disposable pad used: Where do you dispose of your used cloths or pads?	1. <input type="checkbox"/> Bury 2. <input type="checkbox"/> Burn with other waste

63.	How do you wash yourself during your period?	3. <input type="checkbox"/> Throw with other waste 4. <input type="checkbox"/> Throw in the toilet pan 5. <input type="checkbox"/> Others: _____ 1. <input type="checkbox"/> With soap and water 2. <input type="checkbox"/> With water only
64.	Do you bathe more often, less often, or as usual during your period?	3. <input type="checkbox"/> I don't wash myself during menstruation 1. <input type="checkbox"/> More often 2. <input type="checkbox"/> Less often 3. <input type="checkbox"/> As usual 4. <input type="checkbox"/> I refrain from bathing during my period
65.	Do you use toilets more often, less often, or as usual during your period?	1. <input type="checkbox"/> More often 2. <input type="checkbox"/> Less often 3. <input type="checkbox"/> As usual 4. <input type="checkbox"/> I refrain from using toilets during my period.
66.	Has anyone ever talked to you about how to deal with menstrual flow or about how to keep yourself clean during your period?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
67.	(If yes:) Who talked to you about this? (Tick all that apply.)	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Sister/ sister-in-law 3. <input type="checkbox"/> Other relative: (_____) 4. <input type="checkbox"/> Friend 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Management 7. <input type="checkbox"/> WASH Program (UNICEF/Government)

68. How important are each of the following items on this list to remain healthy:

Product	Related to Health	Not Related to Health
Soap		
Towels/gamchsa		
Buckets for cleaning/bathing		
Cell phone usage		
Water container/mug for toilet		
Toothpaste/toothbrush (Colgate)		
Sanitary pads/cloths for menstruation		
Cleaning rags/mop		

Mouth freshener (Chutki, Saunf, etc)		
Bleach/cleaning detergent (surf)		
Toilet		
Hand pump		
Boiling water/bleach/filter before drinking		
Washing hands with soap and water		

69. Describe your consumption patterns of the following items:

Product	How many do you own?	Who bought the item?	Where did he/she buy the item?	Buy Weekly	Buy monthly	Buy every few months	Buy once a year or less
Soap Bar Washing Powder (clothes) Shampoo Bleach/ (phenol)							
Towels/gamcha							
Buckets Indicate uses: (bathing, toilet, cleaning etc)							
Ladle for drinking water							
Mug for toilet							
Toothpaste							
Toothbrush							
Shaving cream or razor							
Nail clipper							
Sanitary pads (store-bought)							
Cleaning rags/ mop (store- bought)							
Broom							
Container for drinking water							

70. For the products bought outside the Garden, would you prefer to buy the product inside the Garden if it were available? Yes No

71. Indicate if you think the household should spend more or less money on any of the following items.

Item	Prefer to increase money spent (tick)	Satisfied with money spent (tick)	Prefer to decrease money spent (tick)
Personal hygiene products			
Household cleaning products			
Household upkeep (repairs)			
Clothing			
Transportation costs			
Alcohol			
Drinks (non-alcoholic)			
Communication (cell phone costs/ phone booth)			
Entertainment			
Snacks			
Savings (including weddings)			
Religious/Cultural festivals			

72.	Are you satisfied with your current access to water?	Y/N
73.	Are you satisfied with your current drainage facilities?	Y/N
74.	Are you satisfied with your current toilet facilities?	Y/N
75.	Have you ever built your own toilet?	Y/N
76.	Have you ever constructed your own water access point?	Y/N
77.	Have you seen water facilities, drainage systems, or toilets in places outside of your Garden? a. Were the conditions you saw better or worse than your own and in what way?	Y/N a. Better b. Worse c. Similar
78.	Do you feel better water and toilet facilities are necessary where you work/live?	Y/N
79.	Do you want better water and toilet facilities?	Y/N
80.	Who do you think is most responsible for provision of	a. Government better facilities? b. Management c. NGOs

		<ul style="list-style-type: none"> d. Labour unions e. Self f. Others
81.	Is anyone else responsible for the provision of better facilities?	<ul style="list-style-type: none"> a. Government b. Management c. NGOs d. Labour unions e. Self f. Others
82.	Do you feel that you are entitled by law to adequate water and sanitation facilities?	Y / N
83.	Have you heard of the Plantation Labour Act? (If yes:) Do you feel all of your rights are being upheld properly under management?	<ul style="list-style-type: none"> Y/N Y/N
84.	Who would you approach with concerns or complaints about your facilities?	<ul style="list-style-type: none"> a. Husband b. Father c. Son d. Welfare officer e. Manager f. Others: _____ g. No one
85.	Have you ever raised concerns over your facilities to management?	Y/N
	(y) a. What were your complaints and whom did you tell?	
	(y) b. How was your complaint handled?	
	(y) c. Was action taken as a result of your complaint?	
	(n) d. Why not?	<ul style="list-style-type: none"> a. I don't have any complaints about my facilities. b. I'm afraid of losing my job. c. I'm afraid my wages would be impacted.

		<p>d. I don't know who to approach.</p> <p>e. I don't think any action would be taken.</p> <p>f. Others: _____</p>
86.	Do you find management approachable?	Y/N
87.	Could you recognize a member of management of your tea Garden?	Y/N
88.	Have you ever spoken with a member of management?	Y/N
89.	Do you know how to contact the government if you have a complaint?	Y/N
90.	Do you feel the government should listen to your complaints?	Y/N
91.	Do you find the government to be approachable?	Y/N
92.	Have you ever tried contacting the government to make a complaint?	Y/N
	(y) a. Was action taken as a result of your complaint?	
	(n) b. Why not?	<p>a. It never occurred to me to do so.</p> <p>b. I wouldn't know where to go / who to approach.</p> <p>c. I don't feel it's government's responsibility.</p> <p>d. Other: _____</p>
93.	Do you feel entitled to government welfare schemes?	Y/N
94.	Are you aware of any labour unions in your area?	Y/N
95.	(If yes:) Do you attend any labour union meetings?	Y/N
96.	Do you feel unions have an effective voice in influencing management and/or government?	Y/N
97.	Does your husband raise concerns or make complaints to management on your behalf?	Y/N
98.	Do you feel you have the freedom to directly make complaints on your own behalf?	Y/N
99.	Do you feel more comfortable making complaints to men or women?	Men / Women / Either

100.	Do you think your gender limits your ability to vocalise your needs/rights?	Y/N
101.	Do you feel the management responds differently to men and women?	Y/N Y/N

Adolescent Girl Questionnaire:

Personal Number: _____

Date: _____

No.	Question	Response Options
1.	How far is the nearest toilet?	1. In and around my house
		2. Near the house (within a two- house distance) 3. Far from the house (more than two houses away) 4. Others: _____
	<p>If “In and around the house”:</p> <p>2. Is it in usable condition? Y / N</p> <p>3. Does it have a water seal? Y / N</p> <p>4. Does it have a leach pit? Y / N</p> <p>5. Do you use it? Y / N</p> <p>6. Did you pay for any part of it? Y / N</p> <p>7. How much? _____</p>	<p>If “Near” or “Far”:</p> <p>8. Do you want a toilet? Y / N</p> <p>9. (y) Are you willing to pay for any part of it? Y / N</p> <p>10. Where do you defecate? <input type="checkbox"/> Field <input type="checkbox"/> Neighbour’s toilet <input type="checkbox"/> School toilet <input type="checkbox"/> Hospital toilet <input type="checkbox"/> Others: _____</p>
11.	(If no to question 2:) Why do you not repair the condition?	<input type="checkbox"/> I don’t use it/don’t want to use it <input type="checkbox"/> It is the management’s responsibility <input type="checkbox"/> I don’t have the money <input type="checkbox"/> I prefer to spend money on different things <input type="checkbox"/> Others prefer to spend money on different things. <input type="checkbox"/> Others: _____
12.	Does your toilet exhibit the given properties?	<p>a. Unclean pans</p> <p>b. Foul odour</p> <p>c. Difficult to access because of the mud all around</p> <p>d. Not well enclosed for privacy</p> <p>e. Have a bucket and a mug</p>

		f. Have access to a water source to wash up after defecation g. Damaged pans
13.	How do you wash your hands after defecation?	1. With water only 2. With soap and water 3. With sand and water 4. I don't wash my hands after defecation
14.	Are there sufficient water access points in the Garden?	Yes No
15.	(n) Are you willing to pay for additional water access points in the Garden?	Yes No
16.	Is the nearest water access point in working order?	Yes No

17.	Does the hand pump you use exhibit any of the following sources of contamination? (Circle all that apply.)	a. Garbage around it b. Stagnant water c. Vicinity of a latrine d. Animals' drinking water from the same source. e. Clothes washed at the hand pump f. Others: _____
18.	Where do you get your water for drinking?	1. Tube well 2. Tap 3. Well 4. Others: _____
19.	How do you treat water before you deem it fit for drinking?	a. Boiling b. Water treated with bleach at a hand pump c. Filter it d. Others: _____
20.	How do you store water?	a. Mud pot b. Steel vessel c. Plastic bucket d. Filter e. Others: _____
21.	Is the vessel covered?	Y/N
22.	Do you use a ladle to transfer water?	Y/N
23.	Do you wash hands with soap before eating?	Y/ N

24.	Where do you get your water for bathing/ washing clothes?	1. Tube well 2. Tap 3. Well
25.	How far is the nearest water point?	4. Others: _____ 1. In and around my house 2. Near the house (within a two- house distance) 3. Far from the house (more than two houses away) 4. Others: _____
26.	Do you have access to a well enclosed bathing space?	Y / N
27.	Is the water you use for cooking boiled or treated (bleached, filtered) before use?	Y / N
28.	What cooking fuel do you use?	a. Firewood b. Gas c. Others: _____
29.	Have you ever suffered from a respiratory disorder?	Y / N
30.	How frequently have you suffered from respiratory disorders?	a. Very often b. Often c. Once in a while d. Rarely/ Never
31.	How frequently have you suffered from vaginal/urinary tract infections?	a. Very often b. Often c. Once in a while d. Rarely/ Never
32.	Have you been to a doctor for your specific female diseases? (urinary and vaginal infections, etc.)	Y / N
33.	What are the other common health problems you face?	a. Diarrhoea b. Anaemia c. Malaria d. Cold/fever e. Gastric Problems f. Body pains g. Others: _____
34.	Have you been to a doctor for any of these problems?	Y / N

35.	How often do you visit a doctor?	a. Very often b. Often c. Once in a while d. Rarely
36.	Where is the doctor that you visit?	a. Garden hospital b. NRHM Garden hospital c. Government hospital d. Private hospital
37.	How do you rate the hygiene and sanitation practices at the Garden hospital?	a. Very good b. Good c. Satisfactory d. Poor
38.	How do you dispose of waste material? (garbage, sanitary pads, feces of children, etc.)	a. Dig a hole and bury it b. Burn it c. Let it lie around the house. d. Dispose it in a trash collecting area e. Others: _____

Menstrual health & hygiene		
No.	Question	Response Options
39.	At what age did you start menstruating?	_____ years
40.	How did you feel when you got your first period?	1. <input type="checkbox"/> Excited 2. <input type="checkbox"/> Proud 3. <input type="checkbox"/> Embarrassed/Ashamed 4. <input type="checkbox"/> Scared/Nervous 5. <input type="checkbox"/> Confused 6. <input type="checkbox"/> No strong reaction 7. <input type="checkbox"/> Others: _____
41.	What protective material did you use during your first days of menstrual flow (on the occasion of your first period)?	1. <input type="checkbox"/> Home made cloth/pad 2. <input type="checkbox"/> Commercially-made sanitary pad 3. <input type="checkbox"/> Others: _____
42.	Who provided you with the above material?	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Older sister 3. <input type="checkbox"/> Father 4. <input type="checkbox"/> Other family member (_____)
		5. <input type="checkbox"/> I made it myself 6. <input type="checkbox"/> I bought it myself 7. <input type="checkbox"/> Others: _____

43.	Did anyone tell/advise you about menstruation before you got your first period?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
44.	(If yes) Who told/advise you about menstruation before you got your first period? (More than one answer is possible.)	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Sister/sister-in-law 3. <input type="checkbox"/> Other relative (_____) 4. <input type="checkbox"/> Friend 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Others: _____
45.	What has been your main source of knowledge about menstruation, particularly menstrual hygiene and management?	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Other relative (_____) 3. <input type="checkbox"/> Teacher 4. <input type="checkbox"/> Friends 5. <input type="checkbox"/> Media (i.e. radio, TV, newspaper, textbook) 6. <input type="checkbox"/> Others: _____
46.	Have you ever had any class session related to menstruation in your school?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
47.	Is there anyone with whom you would feel comfortable talking openly about menstruation?	1. <input type="checkbox"/> Friends/peers 2. <input type="checkbox"/> Mother 3. <input type="checkbox"/> Sister/sister-in-law 4. <input type="checkbox"/> Other relative (_____) 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Others: _____ 7. <input type="checkbox"/> No one
48.	At what age do you think most girls get their first period?	_____ years
49.	How long does the bleeding usually last during menstruation?	_____ days
50.	How often do you think most girls get their period?	_____/month
51.	What kinds of materials do you know of for catching menstrual flow? (<i>Tick as many as you recognise.</i>)	1. <input type="checkbox"/> Home-made cloth or pad 2. <input type="checkbox"/> Disposable pad/panty liner 3. <input type="checkbox"/> Others: _____
52.	Do you have (or know) any alternative name for menstruation? If yes: Please state what you call it.	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No _____

53.	Which of the following do you associate with menstruation? <i>(Tick all that apply.)</i>	1. <input type="checkbox"/> Foul odour 2. <input type="checkbox"/> Empowerment 3. <input type="checkbox"/> Impurity 4. <input type="checkbox"/> Unclean blood 5. <input type="checkbox"/> Womanly pride
54.	What is the cause of menstruation?	1. <input type="checkbox"/> It is a physiological process. 2. <input type="checkbox"/> It is a curse of God. 3. <input type="checkbox"/> It is punishment for a Sin. 4. <input type="checkbox"/> It is a gift of Nature. 5. <input type="checkbox"/> It is caused by a disease. 6. <input type="checkbox"/> Others: _____ 7. <input type="checkbox"/> Don't know
55.	Are there any activities that you do not carry on during your period? (If yes): Which activities? <i>(Tick or list all those apply.)</i>	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No i. <input type="checkbox"/> Don't attend religious functions ii. <input type="checkbox"/> Don't go to school iii. <input type="checkbox"/> Don't cook iv. <input type="checkbox"/> Don't do household work v. <input type="checkbox"/> Don't touch males vi. <input type="checkbox"/> Don't play or be physically active vii. <input type="checkbox"/> Don't eat certain foods (_____) viii. <input type="checkbox"/> Don't wash or bathe ix. <input type="checkbox"/> Don't use certain water sources x. <input type="checkbox"/> Don't use the toilet/latrine xi. <input type="checkbox"/> Sleep separately xii. <input type="checkbox"/> Others: _____
56.	Have you ever been absent from school or work due to menstruation? If yes: How often?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 1. <input type="checkbox"/> One day every cycle 2. <input type="checkbox"/> Two days every cycle 3. <input type="checkbox"/> Three days every cycle 4. <input type="checkbox"/> Four days every cycle 5. <input type="checkbox"/> More than four days every cycle

	If yes: Why?	i. <input type="checkbox"/> Lack of privacy for cleaning/washing ii. <input type="checkbox"/> Lack of disposal system for pads/cloths iii. <input type="checkbox"/> Lack of availability of water supply iv. <input type="checkbox"/> Pain/discomfort v. <input type="checkbox"/> Fear of menstrual accident (leakage) vi. <input type="checkbox"/> Shame vii. <input type="checkbox"/> Socio-cultural beliefs viii. <input type="checkbox"/> Others:
--	--------------	--

Current menstrual hygiene practices

No.	Question	Response Options
57.	What did you use to absorb the menstrual flow during your most recent period? If home-made, what material do you use to make it?	1. <input type="checkbox"/> Home-made cloth/pad 2. <input type="checkbox"/> Commercially-made sanitary pad 3. <input type="checkbox"/> Others: _____ _____
58.	How frequently do you change your sanitary pad or cloth?	_____ / day
59.	If home-made cloth used: How do you wash it?	1. <input type="checkbox"/> With soap and water 2. <input type="checkbox"/> With water only 3. <input type="checkbox"/> I dispose after single use
60.	If home-made cloth used: Where do you dry the cloth after washing it?	1. <input type="checkbox"/> In the shade outside 2. <input type="checkbox"/> In the shade inside 3. <input type="checkbox"/> In the sunlight inside 4. <input type="checkbox"/> In the sunlight outside 5. <input type="checkbox"/> Hidden under other clothes 6. <input type="checkbox"/> Hidden elsewhere 7. <input type="checkbox"/> Use disposable pads 8. <input type="checkbox"/> Others: _____
61.	If home-made cloth used: Where do you store your cloths in between uses?	1. <input type="checkbox"/> Near the toilet 2. <input type="checkbox"/> With other clothes 3. <input type="checkbox"/> Others: _____ 4. <input type="checkbox"/> Use disposable pads
62.	If disposable pad used: Where do you dispose of your used cloths or pads?	1. <input type="checkbox"/> Bury 2. <input type="checkbox"/> Burn with other waste

		3. <input type="checkbox"/> Throw with other waste 4. <input type="checkbox"/> Throw in the toilet pan 5. <input type="checkbox"/> Others: _____
63.	How do you wash yourself during your period?	1. <input type="checkbox"/> With soap and water 2. <input type="checkbox"/> With water only 3. <input type="checkbox"/> I don't wash myself during menstruation
64.	Do you bathe more often, less often, or as usual during your period?	1. <input type="checkbox"/> More often 2. <input type="checkbox"/> Less often 3. <input type="checkbox"/> As usual 4. <input type="checkbox"/> I refrain from bathing during my period
65.	Do you use toilets more often, less often, or as usual during your period?	1. <input type="checkbox"/> More often 2. <input type="checkbox"/> Less often 3. <input type="checkbox"/> As usual 4. <input type="checkbox"/> I refrain from using toilets during my period.
66.	Has anyone ever talked to you about how to deal with menstrual flow or about how to keep yourself clean during your period?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
67.	(If yes:) Who talked to you about this? (Tick all that apply.)	1. <input type="checkbox"/> Mother 2. <input type="checkbox"/> Sister/ sister-in-law 3. <input type="checkbox"/> Other relatives: (_____) 4. <input type="checkbox"/> Friend 5. <input type="checkbox"/> Teacher 6. <input type="checkbox"/> Management 7. <input type="checkbox"/> WASH Program (UNICEF/Government)

Menstruation in the school (FOR GIRLS IN SCHOOL)		
No.	Question	Response Options
68.	Where do you dispose of used cloths or pads when you are at school?	1. <input type="checkbox"/> Open field 2. <input type="checkbox"/> In the latrines 3. <input type="checkbox"/> In waste bins 4. <input type="checkbox"/> In pocket or pouch 5. <input type="checkbox"/> Go home to dispose 6. <input type="checkbox"/> Others: _____
69.	Do you feel more uncomfortable interacting with male students during your period than at other times?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No

70.	Do you feel comfortable in school during menstruation? If no, why not?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 1. <input type="checkbox"/> There is nowhere to dispose of used pad. 2. <input type="checkbox"/> There is no private place to change my pad. 3. <input type="checkbox"/> I have pain 4. <input type="checkbox"/> I feel awkward/strange
71.	If your menstrual problem interferes with your school attendance, how often does it do so?	5. <input type="checkbox"/> Others 1. <input type="checkbox"/> One day every cycle 2. <input type="checkbox"/> Two days every cycle 3. <input type="checkbox"/> Three days every cycle 4. <input type="checkbox"/> Four days every cycle 5. <input type="checkbox"/> More than four days every cycle
72.	Do you think menstrual problems interfere with your ability to concentrate or think clearly at school?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No

73. How important are each of the following items on this list to remain healthy:

Product	Related to Health	Not Related to Health
Soap		
Towels/gamcha		
Buckets for cleaning/bathing		
CellPhone usage		
Water container/mug for toilet		
Toothpaste/toothbrush (Colgate)		
Sanitary pads/cloths for menstruation		
Cleaning rags/mop		
Mouth freshener (Chutki, Saunf, etc)		
Bleach/cleaning detergent (surf)		
Toilet		
Hand pump		
Boiling water/Bleach/filter before drinking		
Washing hands with soap and water		

74. Indicate if you think the household should spend more or less money on any of the following items.

Item	Prefer to increase money spent (tick)	Satisfied with money spent (tick)	Prefer to decrease money spent (tick)
Personal hygiene products			
Household cleaning products			
Household upkeep (repairs)			
Clothing			
Transportation costs			
Alcohol			
Drinks (non-alcoholic)			
Communication (cell phone costs/phone booth)			
Entertainment			
Snacks			
Savings (including weddings)			
Religious/Cultural festivals			

Male Questionnaire:

Personal Number: _____

Date: _____

No.	Question	Response Options
1.	How far is the nearest toilet?	1. In and around my house 2. Near the house (within a two-house distance) 3. Far from the house (more than two houses away) 4. Others: _____
2.	Is it in usable condition? Y / N	If "Near" or "Far": 8. Do you want a toilet? Y / N 9. (y) Are you willing to pay for any part of it? Y / N 10. Where do you defecate? ___ Field ___ Neighbour's toilet ___ School toilet ___ Hospital toilet ___ Others: _____
3.	Does it have a water seal? Y / N	
4.	Does it have a leach pit? Y / N	
5.	Do you use it? Y / N	
6.	Did you pay for any part of it? Y / N	
7.	How much? _____	

11.	(If no to question 2:) Why do you not repair the condition?	<input type="checkbox"/> I don't use it/don't want to use it <input type="checkbox"/> It is the management's responsibility <input type="checkbox"/> I don't have the money <input type="checkbox"/> I prefer to spend money on different things <input type="checkbox"/> Others prefer to spend money on different things. <input type="checkbox"/> Others: _____
12.	Does your toilet exhibit the given properties?	a. Unclean pans b. Foul odour c. Difficult to access because of the mud all around d. Not well enclosed for privacy e. Have a bucket and a mug f. Have access to a water source to wash up after defecation g. Damaged pans
13.	How do you wash your hands after defecation?	1. With water only 2. With soap and water 3. With sand and water 4. I don't wash my hands after defecation
14.	Are there sufficient water access points in the Garden?	Yes No
15.	Are you willing to pay for additional water access points in the Garden?	Yes No
16.	Is the nearest water access point in working order?	Yes No
17.	Does the hand pump you use exhibit any of the following sources of contamination? (Circle all that apply.)	a. Garbage around it b. Stagnant water c. Vicinity of a latrine d. Animals drink water from the same source. e. Clothes washed at the hand pump f. Others: _____
18.	Where do you get your water for drinking?	1. Tube well 2. Tap 3. Well 4. Other: _____

19.	How do you treat water before you deem it fit for drinking?	a. Boiling b. Water treated with bleach at a hand pump c. Filter it d. Others: _____
20.	How do you store water?	a. Mud pot b. Steel vessel c. Plastic bucket c. Filter d. Others: _____
21.	Is the vessel covered?	Y/N
22.	Do you use a ladle to transfer water?	Y/N
23.	Do you wash hands with soap before eating?	Y/ N
24.	Where do you get your water for bathing/ washing clothes?	1. Tube well 2. Tap 3. Well 4. Others: _____
25.	How far is the nearest water point?	1. In and around my house. 2. Near the house (within a two-house distance) 3. Far from the house (more than two houses away) 4. Others: _____
26.	Do you have access to a well enclosed bathing space?	Y / N
27.	Is the water you use for cooking boiled or treated (bleached, filtered) before use?	Y / N
28.	What cooking fuel do you use?	a. Firewood b. Gas c. Others: _____
29.	Have you ever suffered from a respiratory disorder?	Y / N
30.	How frequently have you suffered from respiratory disorders?	a. Very often b. Often c. Once in a while d. Rarely/ Never
31.	What are the other common health problems you face?	a. Diarrhoea b. Anaemia c. Malaria d. Cold/Fever

		e. Gastric problems f. Body pains g. Others: _____
32.	Have you been to a doctor for any of these problems?	Y / N
33.	How often do you visit a doctor?	a. Very often b. Often c. Once in a while d. Rarely
34.	Where is the doctor that you visit?	a. Garden hospital b. NRHM Garden hospital c. Government hospital d. Private hospital
35.	How do you rate the hygiene and sanitation practices at the Garden hospital?	a. Very good b. Good c. Satisfactory d. Poor
36.	How do you dispose of waste material? (garbage, sanitary pads, feces of children, etc.)	a. Dig a hole and bury it b. Burn it c. Let it lie around the house. d. Dispose it in a trash collecting area e. Others: _____

37. How important are each of the following items on this list to remain healthy:

Product	Related to Health	Not Related to Health
Soap		
Towels/gamusa		
Buckets for cleaning/bathing		
Cell phone usage		
Water container/mug for toilet		
Toothpaste/toothbrush (Colgate)		
Sanitary pads/cloths for menstruation		
Cleaning rags/mop		
Mouth freshener (Chutki, Saunf, etc)		
Bleach/cleaning detergent (surf)		
Toilet		
Hand pump		
Boiling water/Bleach/filter before drinking		
Washing hands with soap and water		

38. Describe your consumption patterns of the following items: (one per household)

Product	How many do you own?	Who bought the item?	Where did he/she buy the item?	Buy weekly	Buy monthly	Buy every few months	Buy once a year or less
Soap							
Bar Washing Powder (clothes)							
Shampoo							
Bleach/(Phenol)							
Towels/gamucho							
BucketsIndicate uses: (bathing, toilet, cleaning etc)							
Ladle for drinking water							
Mug for toilet							
Toothpaste							
Toothbrush							
Shaving cream or razor							
Nail clipper							
Sanitary pads (store-bought)							
Cleaning rags/mop (store-bought)							
Broom							
Container for drinking water							

39. For the products bought outside the Garden, would you prefer to buy the product inside the Garden if it were available? Yes No

40. Aside from food, indicate the portion of your household income spent on each of the following items.

- (a) Large portion of income
- (b) Moderate portion of income
- (c) A small portion of income
- (d) Do not buy

Item	A	B	C	D
Personal hygiene products				
Household cleaning products				
Household upkeep (repairs)				
Clothing				
Transportation costs				
Alcohol				
Drinks (non-alcoholic)				
Communication (cell phone costs/phone booth)				
Entertainment				
Snacks				
Savings (including weddings)				
Religious/Cultural festivals				

41.	Are you satisfied with your current access to water?	Y/N
42.	Are you satisfied with your current drainage facilities?	Y/N
43.	Are you satisfied with your current toilet facilities?	Y/N
44.	Have you ever built your own toilet?	Y/N
45.	Have you ever constructed your own water access point?	Y/N
46.	Have you seen water facilities, drainage systems or toilets in places outside of your Garden? Were the conditions you saw better or worse than your own and in what way?	Y/N a. Better b. Worse c. Similar
47.	Do you feel better water and toilet facilities are necessary where you work/live?	Y/N
48.	Do you want better water and toilet facilities?	Y/N
49.	Who do you think is most responsible for provision of better facilities?	a. Government b. Management c. NGOs d. Labour unions e. Self f. Other
50.	Is anyone else responsible for the provision of better facilities?	a. Government b. Management c. NGOs d. Labour unions e. Self f. Others

51.	Do you feel that you are entitled by law to adequate water, sanitation, and hygiene facilities?	Y / N
52.	Have you heard of the Plantation Labour Act? If yes, Do you feel all your rights are being upheld properly under management?	Y/N Y/N
53.	Who would you approach with concerns or complaints about your facilities?	a. Husband b. Father c. Son d. Welfare officer e. Manager f. Others: _____ g. No one

54.	<p>Have you ever raised concerns over your facilities to management?</p> <p>If YES,</p> <p>a. What were your complaints and whom did you tell?</p> <p>b. How was your complaint handled?</p> <p>c. Was action taken as a result of your complaint?</p> <p>If NO,</p> <p>d. Why not?</p>	<p>Y/N</p> <p>a. I don't have any complaints about my facilities.</p> <p>b. I'm afraid of losing my job.</p> <p>c. I'm afraid my wages would be impacted.</p> <p>d. I don't know who to approach.</p> <p>e. I don't think any action would be taken.</p> <p>f. Others: _____</p>
-----	---	--

55.	Do you find management approachable?	Y/N
56.	Could you recognize a member of management of your tea Garden?	Y/N
57.	Have you ever spoken with a member of management?	Y/N
58.	Do you know how to contact the government if you have a complaint?	Y/N
59.	Do you feel the government should listen to your complaints?	Y/N

60.	Do you find government to be approachable?	Y/N
61.	Have you ever tried contacting the government to make a complaint? a. Was action taken as a result of your complaint? b. Why not?	Y/N a. It never occurred to me to do so. b. I wouldn't know where to go / who to approach. c. I don't feel it is the government's responsibility. d. Others: _____
62.	Who in your household should be the one to voice complaints to management or government?	a. Myself b. My father c. My wife d. My son e. Others
63.	Who would you prefer your wife to speak to if she has a complaint?	a. Myself b. Welfare officer directly c. Union leader d. Management e. Son/father f. Others
64.	Do you think women should directly lodge complaints to management independently of men?	Y / N
65.	Do you feel entitled to government welfare schemes?	Y/N
66.	Are you aware of any labour unions in your area?	Y/N
67.	(If yes:) Do you attend any labour union meetings?	Y/N
68.	Do you feel unions have an effective voice in influencing management and/or government?	Y/N

Section 2: Knowledge, attitudes and taboos

No.	Question	Response Options
69.	Have you heard of menstruation or monthly menses/period?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No (<i>If no, skip to next section.</i>)
70.	How often do you think most women get their period?	_____/month
71.	Do you feel comfortable talking openly with your wife or daughter about menstruation?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
72.	Do you think girls should be taught about menstruation at school?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No

	If yes, what should they be taught? (check all that apply)	1. <input type="checkbox"/> The biology of menstruation 2. <input type="checkbox"/> Hygiene management 3. <input type="checkbox"/> Cultural practices 4. <input type="checkbox"/> Psychological counseling 5. <input type="checkbox"/> Others
73.	Do you think females are unclean during menstruation?	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No
74.	What kinds of materials do you know of for catching menstrual flow? (Tick as many as you recognise.)	1. <input type="checkbox"/> Home-made cloth or pad 2. <input type="checkbox"/> Disposable pad/ panty liner 3. <input type="checkbox"/> Others: _____
75.	What is the cause of menstruation?	1. <input type="checkbox"/> It is a physiological process. 2. <input type="checkbox"/> It is a curse of God. 3. <input type="checkbox"/> It is punishment for a Sin. 4. <input type="checkbox"/> It is a gift of Nature. 5. <input type="checkbox"/> It is caused by a disease. 6. <input type="checkbox"/> Others: _____ 7. <input type="checkbox"/> Don't know
76.	Are there any activities that a woman should not carry on during her period? If so, which activities? (Tick or list all those that apply.)	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No i. <input type="checkbox"/> Don't attend religious functions ii. <input type="checkbox"/> Don't go to school iii. <input type="checkbox"/> Don't cook iv. <input type="checkbox"/> Don't do household work v. <input type="checkbox"/> Don't touch males vi. <input type="checkbox"/> Don't play or be physically active vii. <input type="checkbox"/> Don't eat certain foods (_____) viii. <input type="checkbox"/> Don't wash or bathe ix. <input type="checkbox"/> Don't use certain water sources x. <input type="checkbox"/> Don't use the toilet/latrine xi. <input type="checkbox"/> Sleep separately xii. <input type="checkbox"/> Others:

Female Additional Questionnaire

(supplementary questions applied in two out of the nine Gardens visited):

Personal Number: _____

Date: _____

No.	Question	Response Options
1.	Do you drink treated or untreated water?	a. Treated b. Untreated
2.	What do you use to transfer water?	a. Steel glass b. Ladle c. Mug d. Others
3.	How do you dispose of waste material? (garbage, sanitary pads, faeces of children, etc.)	a. Dig a hole and bury it b. Burn it c. Let it lie around the house. d. Dispose it in a trash collecting area e. Others: _____
4.	Do you connect proper garbage disposal to a healthy lifestyle? If yes why? If no why?	

5.	Product	How/ in what way do these products relate to health?
	Soap	
	Toilet	
	Sanitary pad/Cloths for menstruation	
	Boil water/bleach/filter before drinking	
	Wash hands with soap and water	

6.	How much do you spend in each category in a given month?	
	Food (outside of rations)	
	Health related items (soap, buckets, etc)	
	Sustenance items (clothing, house repairs)	
	Entertainment (TV, radio, cell phones, religious festivals, etc)	
	Savings	

7.	Are you aware of any SRC committees in the Garden?	Y/N
8.	If yes, what are the benefits to having these committees, what impact have these committees had?	
9.	Are you aware of a Mother's Club in the Garden? For Adolescents, Adolescent Club	Y/N
10.	Are you a member?	Y/N
11.	If yes, what do you think is the main benefit of the club?	

Male Additional Questionnaire (*supplementary questions applied in two out of the nine Gardens visited*):

Personal Number: _____

Date: _____

No.	Question	Response Options
1.	Do you drink treated or untreated water?	a. Treated b. Untreated
2.	What do you use to transfer water?	a. Steel glass b. Ladle c. Mug d. Others
3.	How do you dispose of waste material?(garbage, sanitary pads, faeces of children, etc.)	a. Dig a hole and bury it b. Burn it c. Let it lie around the house. d. Dispose it in a trash collecting area e. Others: _____
4.	Do you connect proper garbage disposal to a healthy lifestyle? If yes why? If no why?	

5. Product	How/ in what way do these products relate to health?
Soap	
Toilet	
Hand pump	
Boil water/bleach/filter before drinking	
Wash hands with soap and water	

6. Indicate if you think the household should spend more or less money on any of the following items.

Item	Prefer to increase money spent (tick)	Satisfied with money spent (tick)	Prefer to decrease money spent (tick)
Personal hygiene products			
Household cleaning products			
Household upkeep (repairs)			
Clothing			
Transportation costs			
Alcohol			
Drinks (non-alcoholic)			
Communication (cell phone costs/phone booth)			
Entertainment			
Snacks			
Savings (including weddings)			
Religious/Cultural festivals			

7. How much do you spend in each category in a given month?

Food (outside of rations)	
Health related items (soap, buckets, etc)	
Sustenance items (clothing, house repairs)	
Entertainment (TV, radio, cell phones, religious festivals, etc)	
Savings	

8.	Are you aware of any SRC committees in the Garden?	Y/N
9.	If yes, what are the benefits to having these committees, what impact have these committees had?	

Annexure III

Garden Checklist

Name of Garden _____ Date Visited _____

Name of Manager _____

Name of Assistant Manager _____

Name of Welfare Officer _____

Additional Contacts:

Position	Name

General Information:

Number of Permanent Workers: _____ Number of Temporary Workers: _____

Population of Garden: _____ Men: _____ Women: _____ Children: _____

Number of Labour Lines: _____

Number of Water Points: _____

Number of demonstration toilets constructed: _____ Date completed: _____

Number of UNICEF type toilets: _____

WASH Facilities:

Schools:

Number of Schools in Garden _____

Please write yes or no

School Name				
Access to water (y/n)				
Water source				
Number of toilets				
Separate M/FUsable condition				
Reason if unusable				
Water seal				
Leach pit				
Soap (quantity)				
Location of soap				
Bucket to utilize toilet				
Mug to utilize toilet				
Place to dispose used sanitary napkins				
Additional comments about schools:				

Hospital:

Participant in NRHM _____

What is the water source?	Source:			
Which source do you get drinking water from?	Source	Boil	Filter	Bleach
Do you boil/filter/bleach water?				
How do you store drinking water?				
Separate M/F toilets?	Y/N			
Separate M/F wash rooms?	Y/N			
Are soap, buckets, mugs available?	Soap	Bucket	Mugs	
Are the toilets and washrooms cleaned daily on a regular basis?	Y / N			
Disinfected floors?	Y/N			
Disinfected mattresses?	Y/N			
Disinfected bed sheets?	Y/N			
Separate M/F wards?	Y/ N			
Is there a 6-feet distance between the beds?	Y / N			
Are the female wards receptive to sunlight? Are there windows to air the room? Are they properly lighted?	Sunlight	Windows	Light	Fans
Are the fans working?	Comments:			
Are the hospital hand-pumps in working order? How often are they bleached?	Working: Y / N		How often:	
Are colour coded dustbins (black, blue, red, yellow and green) available for waste disposal?	Black	Blue	Red	Yellow Green

Is there an incineration facility for disposal of waste? If not, what alternative means of waste disposal do they follow?	Incineration: Y/N	Alternative means:
Are disposable syringes used?	Y / N	
Is there an ambulance service?	Y / N	

Contact	Name
Doctor	
Nurse	

Hospital Comments:

Creche/Anganwadi Centres:

Is there a crèche in the Garden? _____ Is there an Anganwadi Centre? _____

Sanitary toilet		Sanitary toilet	
Usable condition (specify)		Usable condition (specify)	
Soap		Soap	
Water access		Water access	
Bucket/mug		Bucket/mug	

Comments on Creche/Anganwadi Centres:

Shops:

WASH related products stocked: Tick if stocked and indicate price

Product	Shop 1	Shop 2	Shop 3
Soap (bar)			
Soap (liquid)			
Dish soap			
Washing powder			
Towels			
Bucket			
Mug			

Water container			
Toothpaste			
Toothbrush			
Shampoo			
Shaving cream			
Sanitary pads			
Razor			
Nail clipper			
Owner (m/f)			
Workers (m/f)			
Salt			
Top item sold from the list			
Top 3 items sold overall:	1. 2. 3.	1. 2. 3.	1. 2. 3.

Factory: Source _____

Fields:Source _____

Sanitary toilet	
Usable condition (specify)	
M/F	
Soap	
Water access	
Bucket/mug	

Sanitary toilet	
Usable condition (specify)	
M/F	
Soap	
Water access	
Bucket/mug	

Comments:

Annexure IV

Key Informant Interview Guide – Teacher (Female)

Respondent Name: _____

Position: _____

Phone: _____ E-mail: _____

Date of Contact: _____ Tea Garden: _____

1. Do you think the issue of female hygiene (menstrual hygiene management) is a problem among the girls you teach? Yes () No ()

If YES, Please elaborate. Do you have any specific experiences to share in this regard?

--

2. Do you think adequate facilities are available for adolescent girls who are menstruating in your school? Yes () No ()

If YES,

If NO,

<p>What are the facilities?</p> <hr/> <p>Do you think the available facilities are regularly used? Yes () No ()</p> <p>If NO: Why not?</p>	<p>What do you think is lacking?</p>
--	--------------------------------------

3. Is information on the menstrual cycle or issues of menstrual hygiene taught to adolescent girls as part of your curriculum? Yes () No ()

If YES,

If NO,

<p>What kinds of information and in what format?</p>	<p>What do you see as the main barriers to provision of such information?</p> <hr/> <p>Do you think it might be useful to add such information to the curriculum? Yes () No ()</p>
--	--

4. Do you think menstruation affects girls' school attendance and/or ability to concentrate in the classroom?

Yes () No ()

If YES, in what way(s)?

5. Have you ever missed a day of work due to menstruation?

Yes () No ()

If YES, How did menstruation come into play in your decision to stay home?

If YES, What facilities or support would you have needed to avoid missing work?

If YES, How were the classes and duties for which you are normally responsible handled on such occasions?

6. What do you think could or should be done to make the experience of menstruation in the school a more positive one for adolescent girls?

Key Informant Interview Guide – Government WASH Rep.

Respondent Name _____ Sex: M / F

Title _____ Phone _____ E-mail _____

Date of Contact _____

1. Is the government currently providing WASH facilities and programming in the Tea Gardens?
If YES, which specific facilities and programmes?

2. Do you feel the Tea Garden Community understands the importance of sanitation and hygiene? Y () N () Why do you feel this way?

3. Do you feel a sense of passivity and dependency from the Tea Garden Community with regard to water, sanitation, and hygiene facilities? Y () N ()

If YES, How so?

4. Do you feel the environment around the homes, fields, hospitals and schools in the Tea Gardens are kept clean and well-maintained? Y () N ()

What do you feel are the main reasons for this?

5. What are reasonable expectations from the people living in the Gardens to take care of their own WASH needs?
6. To what extent are Garden families aware of their rights protected by the Plantation Labour Act (PLA)?
7. Has the government taken any steps to ensure that the Tea Garden Community is educated on their rights?
8. How often does the government check to see if the PLA is being implemented in the Gardens?
9. What is the government response if the PLA is breached?
10. Can a member of the Tea Garden Community directly approach the government to make complaints/raise concerns? Y () N ()

If YES, what are the formal procedures set up for them to do so?

11. What steps has the government taken to make the people living in the Gardens aware of mechanisms to contact the government?
12. How often is the government approached directly by a member of the Garden Community regarding concerns or complaints?
13. What are common issues brought before the government by the Garden Community?
14. How does the government handle these concerns?
15. If a member of Garden Community does not generally approach the government, what are the likely reasons?
16. Do complaints ever come from women within the Gardens? Y () N ()
17. What provisions are there for ensuring that women's voices are heard by the government?

18. Do you consider menstrual hygiene management to be an important area of concern for WASH programmes to address? Y () N ()

19. What steps have been taken to address this area of WASH in Dibrugarh to date?

20. Have programmes to promote menstrual hygiene management been extended to the Tea Garden Communities? Y () N ()

If YES, Can you describe these initiatives?

If NO, Why not? Is this an important area for future programme development?

21. Does the government have the authority to intervene in areas of welfare where management has jurisdiction but is failing to provide adequate services? Or C cangovernment influence management?

22. Does the government feel equally accountable to Tea Garden labourers as to all other citizens?

23. How does the government ensure that those living in the Gardens but are not protected by the PLA, have adequate social services and WASH facilities?

24. Does the government work with Tea Garden Labour Unions? In what capacity?

25. Does the government work with ABITA? In what capacity?

26. In what capacity does the government work with UNICEF on WASH initiatives?

Key Informant Interview Guide – Mother’s Club Leader

Respondent Name: _____ Sex: M / F

Title: _____

Phone: _____ E-mail: _____

Date of Contact: _____ Tea Garden: _____

1. What is the purpose of the Mother’s Club in your Garden?
2. How was the Mother’s Club formed in your Garden and who is responsible for organizing the Club’s meetings and activities?

3. How are women informed about the Club and recruited ? Is membership open to anyone?
4. How many members does the Mother's Club currently have?
5. What specific issues does the Mother's Club work on or promote?
6. Has the Mother's Club ever done any work relating to issues of menstrual hygiene management in the Community?

If YES, What has been done?

If NO, Do you think it might be useful to incorporate such issues into your activities?

7. What impact has this Mother's Club had in the Tea Garden so far?

Key Informant Interview Guide – Manager

Respondent Name _____ Sex: M / F
 Title _____ Phone _____ E-mail _____
 Date of Contact _____ Tea Garden _____

1. Do you feel a sense of passivity and dependency from the workers with regard to water, sanitation and hygiene services? Y () N () If YES, How so?
2. What expectations do you have from the workers to take care of their own water, sanitation and hygiene needs, including maintenance of facilities?
3. What are the main reasons that some homes and school areas are not kept as clean and well-maintained as they could be?
4. Has the management provided all water and sanitation facilities under the PLA?
5. Do you feel that workers are aware of their rights under the Plantation Labor Act?
 Y () N () Is this awareness or lack thereof limited to a particular subset of workers?
6. Has the management taken steps to educate workers of their rights? Y () N ()
 If YES, please elaborate the initiatives:
7. How often does the management assess workers' living and working conditions?

8. What mechanisms are in place for workers to approach management if they have concerns or complaints about their facilities?
9. Does management ever receive complaints from the workers?
10. In what form do these complaints come?
 - a. From a group representing the workers, such as unions or NGOs?
 - b. Directly from the workers?
 - c. From staff that have heard from workers such as teachers/doctors?
 - d. Others?
11. Ideally what level of individual or group would you prefer to bring forth workers' complaints to management and in what manner?
12. What are the most common complaints that you receive from the workers?
13. What is the typical method in which complaints are handled by the management?
14. Does the management receive complaints from both men and women? Y () N ()
If YES, then what is the proportion of the complaints that come from women?
15. Is there a Mother's Club in this Garden? Y () N ()
If YES, who organizes the meetings?

If YES, what impact has this club had in the Garden?

Key Informant Interview Guide – Welfare Officer

Respondent Name: _____ Sex: M / F
 Title: _____
 Phone: _____ E-mail: _____
 Date of Contact: _____ Tea Garden: _____

1. What is the total number of beds in your hospital? How many beds are for females and how many for males?
2. (If at least 16): Are you aware of the WHO recommendations for 16 bed hospitals?
Yes () No ()

If YES, do you think this hospital follows those guidelines? Yes () No ()

16. Who monitors the health and hygiene conditions in your hospital? How regularly?
17. On a scale of 1 to 10 (with 10 being the highest), how do you rate the current hygiene and sanitation facilities for women in your hospital? 1 2 3 4 5 6 7 8 9 10
18. Do you have any suggestions of bettering the same?
19. How much does the management annually spend on the hospital? What percentage of it is spent on maintaining the hygiene and sanitation of the hospital?
20. Do you think this percentage should increase? Do you think this is an important issue to be addressed? Please elaborate.
21. Do you think government intervention and spending on health in Tea Garden hospitals desirable? Why?
22. Do you think women specific diseases are addressed by your hospital? If not, do you think they are important enough to be addressed? What steps do you suggest should be undertaken?
23. What facilities are in place to accommodate water, sanitation and hygiene needs of menstruating women inside the Tea Garden? If none, have females ever asked for such facilities?
24. Do workers ever contact you when they have complaints regarding their water, sanitation or hygiene facilities? If so, what are the common complaints and how are these complaints handled?

Key Informant Interview Guide – Labor Union Leader

Respondent Name _____ Sex: M / F
Position _____ Phone _____ Email _____
Date of Contact _____ Tea Garden _____

1. For how many years has your organisation been in existence?
2. What is the purpose of your organisation?

3. How are people informed about the organisation and recruited?
4. Does your membership include women? If YES, what percentage?
5. If NO, have women ever shown interest to participate?
6. Do you feel that most Tea Garden labourers are aware of their rights protected by the PLA?
If not, why not?
7. Do you ever advocate for women's issues/rights? If YES, please give some examples?
8. How often does your group approach management?
9. What role does ABITA play in your negotiations with management?
10. What are the most common concerns that are brought before management?
11. What is the response of management generally to your concerns?
12. What are some specific instances of success or failure in dealing with management?
13. Do you ever work with the government? Why or why not?

Key Informant Interview Guide – Female SRC Committee Member

Respondent Name _____ Sex: M / F
 Title _____ Phone _____ E-mail _____
 Date of Contact _____ Tea Garden _____

1. Why did you agree to serve on this committee?
2. How many people serve the committee? How many males, females and adolescents?
3. Do you think it is important to have both men and women serve on this committee?
Why/why not?
4. Do you feel the men and women on this committee are valued as equal members?
Y () N () If not, please elaborate.

5. Do you feel your personal contribution is valued equally to your male counterparts?
Y () N () If not, please elaborate.:

6. Do you vocalize the specific needs and rights of women to this committee?

7. What impact has this committee had in the Tea Garden so far?

Key Informant Interview Guide - Doctor

Respondent Name: _____ Sex: M / F

Title: _____

Phone: _____ E-mail: _____

Date of Contact: _____ Tea Garden: _____

1. How many beds are there in your hospital?

2. (If at least 16) Are you aware of the WHO recommendations for 16 bed hospitals?
Yes () No ()

- If YES, do you think your hospital follows the WHO guidelines? Yes () No ()

3. What hygiene/ sanitation regimes are followed daily in the hospital? (daily cleaning of toilets, disinfecting the floors, etc)

4. Who monitors the health and hygiene conditions in your hospital? How regularly?

5. On a scale of 1 to 10 (with 10 being the highest), how do you rate the current hygiene and sanitation facilities for women in your hospital? 1 2 3 4 5 6 7 8 9 10

6. Do you have any suggestions of bettering the same?

7. Are the monetary resources sufficient to maintain the hygiene and sanitation of the hospital?
Please elaborate.

8. What are your daily timings for treating patients?

9. How many patients do you see every day? What percentage of it are women?

10. Do women approach you with female specific diseases? What facilities do you offer to treat the same?
11. What are the five most common diseases women approach you with? What facilities do you offer to treat the same?
12. Are you satisfied with your enumeration? Y () N ()
If NO, why not?
13. In what ways does your enumeration reflect on your performance? (Either positive/negative)
14. Are you satisfied with the facilities the management/government provides you with?
If NO, why not?

Background Note on Internship Programme

Knowledge Community on Children in India (KCCI) initiative aims to enhance knowledge management and sharing of policies and programmes related to children in India. Conceived as part of KCCI, the objectives of the 2010 Summer Internship Programme were to give young graduate students from across the world an opportunity to gain field-level experience of and exposure to the challenges and issues facing development work in India today.

UNICEF India hosted 44 interns from Australia, Canada, Nigeria, Poland, Russia, United Kingdom, and United States of America to participate in the 2010 Summer Internship Programme. Interns were grouped into teams of four or five and placed in sixteen different research institutions across 9 states (Andhra Pradesh, Assam, Bihar, Delhi, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and West Bengal), studying field-level interventions for children from 31 May to 3 August 2010.

Under the supervision of partner research institutions, the interns conducted a combination of desk research and fieldwork, the end result of which were 12 case studies of interventions aimed at promoting the rights of children and their development. The case studies cover key sectors linked to children and development in India, and address important policy issues for children in the country. These include child health, nutrition, water and sanitation, education, child rights, and polio eradication.

Another unique feature of this programme was the composition of research teams comprising interns with multidisciplinary academic training and multicultural backgrounds. Teams were encouraged to pool their skills and knowledge prior to the fieldwork and devise a work-plan that allowed each team member an equal role in developing the case study. Group work and cooperation were key elements in the production of outputs, and all of this is evident in the interesting and multifaceted narratives presented by these case studies on development in India.

The 2010 KCCI Summer Internship Programme culminated in a final workshop, at which all teams of interns presented their case studies for a discussion on broader issues relating to improvements in service delivery for every child in the country. This series of case studies aims to disseminate this research to a wider audience and to provide valuable contributions to KCCI's overall knowledge base.